

International Journal of Mass Emergencies and Disasters
November 2011, Vol. 29, No. 3, pp. 181–202.

**New Frames on Crisis:
Citizen Journalism Changing the Dynamics of Crisis Communication**

Julie M. Novak
Wayne State University

and

Kathleen G. Vidoloff
University of Kentucky

Email: jmnovak@wayne.edu

On October 20, 2007, wildfires began in Malibu, California, and over the next 19 days, more than 20 blazes ignited throughout the region from Santa Barbara County to San Diego County. Cumulatively, the 2007 Southern California wildfires destroyed nearly 2,250 homes, burned more than 500,000 acres of land, and caused massive evacuations (Sutton, Palen, and Shklovski, 2008). In this study, our objective is to illustrate the role employed by RimoftheWorld.net as a first communicator and citizen journalism website, the role and patterns of information seeking by community members experiencing the wildfires, and the possible impact of citizen journalism on the understanding and framing of crisis. The findings may also improve crisis and disaster planning and response by providing heretofore underexamined and underutilized information about citizen journalism and new media platforms.

Keywords: Crisis Communication, framing, new media, citizen journalism

Introduction

On October 20, 2007, wildfires began in Malibu, California and, over the next 19 days, more than 20 blazes ignited throughout the region from Santa Barbara County to San Diego County. Cumulatively, the 2007 Southern California wildfires destroyed nearly 2,250 homes, burned more than 500,000 acres (200,000 hectares) of land, and caused massive evacuations (Sutton, Palen, and Shklovski 2008). The fires resulted in 300,000 evacuees, the largest evacuation in California history (McCaffrey and Rhodes

2009). Crises such as these wildfires occur unexpectedly; threaten to destroy lives, property, and infrastructures; and demand immediate and ongoing responses.

Those soon on the scene of a crisis include first responders (police officers, fire fighters, emergency medical technicians, and paramedics) and the media—*first communicators*. In recognition of the critical role played by the media, some security officials have begun to use the term first communicators to denote the fact that media play a role not unlike first responders (Bernstein 2004). Many scholars challenge these designations of first responders/communicators because they negate the actions of those individuals directly affected who begin to immediately pass-the-word to others and respond (Perry, Lindell, and Greene 1981; Scanlon 2006). In this study, we acknowledge police, fire workers, etc. as *official* first responders and the traditional media as *professional* first communicators, while suggesting that citizen journalists function as the first communicators with attributions of both directly affected individuals and professional media.

Citizen journalists, like professional journalists/reporters, define and portray an event as a crisis by using their individual frames to create initial media frames, which thereby influence all subsequent interpretations of the crisis (Weick 1988). The initial media framing of a crisis therefore also shapes immediate and influences ongoing responses by all individuals and official first responders. Moreover, managers of official first responders rely on media coverage for evolving information in order to make adaptive decisions about response strategies, logistics, and operations. They also rely on the media to inform the larger public about the event.

Besides directly affected individuals who pass-the-word, changing communication technology now enables citizen journalists to join the rank of first communicators. By using new media technologies, citizen journalists at least supplement—and perhaps replace—unidirectional, official media-to-public crisis communication with informal public-to-public and participatory mass communication. To date, the reasons for and descriptions of the type of information reported by citizen journalists and the information seeking behaviors of the users/participants of such information have been little studied by crisis communications scholars. Similarly, few have proposed any possible effects of such practices on the conceptual framework of framing. In this study, our objective is to illustrate the role employed by RimoftheWorld.net (ROTW) as a first communicator website, the role and patterns of information seeking by community members experiencing the wildfires, and the possible impact of citizen journalism on the understanding and framing of crisis.

Crises, Media, and Social Transformation

Crises occur unexpectedly, threaten to undermine taken-for-granted infrastructures and world views, and demand immediate and ongoing responses (Hermann 1963).

Seeger, Sellnow, and Ulmer (1998, p. 233) define crisis as “a specific, unexpected and non-routine ... event or series of events which creates high levels of uncertainty and threat or perceived threat to ... high priority goals.” Underscored by both definitions are the loss of orientation, sensemaking and normalcy, and an uncertain survival.

The central role of the media in crises and disasters has been explored by a variety of scholars using several perspectives (see Mileti and Fitzpatrick 1992; Quarantelli 1989, 1991; Wenger and Friedman 1986). This work has established that the mass media influences the unfolding perception and management of crises and disasters in several ways. Moreover, the media’s communication with the public is generally considered essential to an effective response (Quarantelli 1991; Vultee and Wilkins 2004). In crises, communication with the public goes well beyond the role of transmitting warnings and providing information to becoming part of the central dynamic of the evolving crisis. Both September 11, 2001 (9/11) and Hurricane Katrina provide powerful examples regarding how crises play out in the nation’s media (Greenberg 2002; Noll 2003; Seeger, Sellnow, and Ulmer 2003; Vanderford Nastoff, Telfer and Bonzo 2007). The media—through the channels of television, radio, Internet, as well as newer, developing technology—disseminated information about the two crises almost immediately. The early messages were powerful influences on the public’s ongoing understanding of these events (Rogers 2003).

Research has established that the media serve at least four crucial functions during crises. First, the media alert the public about warnings and ordered evacuations. A significant body of research has described the components of successful risk or warning messages within the context of a natural disaster or terrorist event and how different audiences respond to those messages (Mileti and Fitzpatrick 1992). Some studies suggest, for example, that women are generally more receptive to warning messages than are men (Spence et al. 2006). Younger people and those of higher socio-economic status are more likely to attend to risk messages. Language, cultural and ethnic barriers are often important to the reception of risk messages (Mileti and Sorenson 1990). Additionally, speed and breadth of diffusion of these messages are also important (Rogers 2003). These micro theories from research and past experience assist with the refinement of warning messages and dissemination.

Second, the media provides response information. In addition to informing the public about risks, the media help tell people how to reduce their risk. This may take the form of risk messages such as boil water advisories, sheltering in place, the availability of emergency medical services, and recommendations to avoid certain foods or locations. By disseminating response information, the media assist official first responders in shaping and coordinating the public’s actions and, thereby, expand response efforts and minimize harm and damage. In some cases, the media struggle to disseminate information during crises. For example, immediately following a 2002 railroad accident

in Minot, North Dakota, when five tank cars carrying anhydrous ammonia ruptured and a vapor plume covered the area, affecting 12,000 people, the usual media channels were unavailable (NTSB 2004). Due to a prior corporate consolidation, the radio stations were using preprogrammed materials that hindered disaster officials' ability to issue immediate response advice. Regardless, research documents that the public seeks and demands response information when confronted with an evolving crisis (Scanlon 2006).

Third, the media assist official first responders by updating their understanding of the event and with coordinating resources. Media organizations typically have an extensive capacity to monitor disaster events simply because they have more observers, recorders, and cameras on the ground. In fact, local media in the affected zone often are the first to notify government officials of a crisis. They are also able to cover the event at the community level from its earliest stages (Scanlon 2006). First responders, official and others, often turn to media reports as the most reliable and immediate information about how a disaster is developing (Auf der Heide 1989; Quarantelli 1989). Several media reports generated from inside the New Orleans Superdome helped alert senior FEMA officials to the seriousness of the situation. In other cases, local radio stations have broadcast directions to official first responders and volunteers about where to focus their sandbagging efforts during flooding (Sellnow, Seeger, and Ulmer 2003). In this way, media can facilitate coordination and logistics.

Finally, the media assist with reconstituting community. The media help maintain and reconstitute social connections, order, and a sense that the situation is returning to normal. Initially, the media serve as a kind of community bulletin board, helping families reconnect with displaced loved ones or helping members identify sources of relief and support (Pew Research Center Institute 2001; Sellnow et al. 2003; Vultee and Wilkins 2004). This function is most often associated with broadcast media, particularly radio (Quarantelli 1991). As immediate harm is contained and controlled, the media help to define and reconstruct the new "normal state" necessary for the development of post event routines and stability (Sellnow et al. 2003). Evidence from 9/11 indicates that using media to participate in crisis-related storytelling resulted in more civic actions (Cohen et al. 2003).

Although media bring extended resources to disasters and crises and move very quickly, the coverage often suffers from a number of deficiencies. First, the coverage is not always accurate (Quarantelli 1989; Wilkins 1989). Journalists often abandon existing norms and standards of fact checking (Thevenot 2005/2006; Vultee and Wilkins 2004). In particular, competitive pressures often encourage journalists to report rumor and innuendo as fact. Many of the early reports regarding the New Orleans Superdome were exaggerated and inaccurate for this reason. There is a pronounced tendency to sensationalize and to follow the agenda set by "pack journalism" (Lewis 2008). Similarly, traditional gatekeeping function of the media is often truncated during a crisis

(Quarantelli 1991). Blondheim and Liebes (2003) suggest that media coverage of disasters often becomes a disaster marathon, a live open-ended and ongoing “celebration” of the event, where unprepared and poorly informed journalists struggle to make sense of the event even as the public watches.

Anthropologist Victor Turner (1974) identifies crises as a phase in a larger process of “social drama” through which conventional understandings and pre-existing networks are reassembled into a new secular order. Turner identifies five stages of a crisis: normal order, breach or crisis, escalating tensions, climax, and resolution as the process of cultural change. Turner’s primary interest is in the processes of “liminality,” outside social conventions, in which existing cultural understandings are put in play and long-term social change may occur.

Other theorists interested in the chaotic behavior of social systems also have noted that crisis or bifurcation is a primary factor in radical social change and reorganization (Keil 1994; Seeger et al. 2003). In this way, crises and disasters may be renewing events where cooperation and healing emerge rather than strategic portrayals of causation and blame or image restoration (Seeger et al. 2005). Conversely, Douglas (1966, 1994), in several articles on hazards and accidents, stresses how cultural conventions reassert themselves. Affixing individual blame, for example, even though many (perhaps most) accidents have complex, organizational causation (Perrow 1999), is a cultural trope that exculpates the organization at the expense of the individual; the search for scapegoats after Katrina, for example, was just such an effort. Similarly, many communication scholars continue to identify traditional responses to crises, including portrayals of responsibility, scapegoating, denial or responsibility, justification, and related strategies (Allen and Caillouet 1994; Benoit 1995; Coombs 1995).

t Hart, Heyse, and Boin (2004) suggest that certain long-term trends in Western society will make crises more of a normal rather than exceptional state. By extension, the media and official first responders will find themselves more intertwined given their roles when events with potential for the moniker of crisis emerge. This coupled with changing communication technology (devices of immediacy such as hand-held video cameras, Flickr, and Twitter) and the emerging role of citizen journalists may alter traditional understandings and responses to crises. Crises include the potential for social change and the manner in which a crisis is framed can strongly influence the resulting change.

Framing and Media Technology

The concept of framing originated in psychological studies during the early 1900s (Guilford, 1926) and was later adapted by sociologists (Goffman 1974), communication scholars (Entman 1991, Iyengar 1991), and others. Starting in the early 1980s and to date,

some research highlighted the role of social constructivism in frame building and frame setting (Van Gorp 2007).

In 1999, Scheufele proposed a comprehensive framing model to conceptually integrate what he termed fragmented approaches in framing research. Scheufele's (1999) model integrates input-outcome conceptualizations with processes. Extant social norms and values, professional routines and pressures, and past experiences influence professional media reporters and journalists as they perceive, understand, interpret, and report on news events. These factors as inputs influence the media in their processes of frame building and the resultant media frames as outcomes. Subsequently, the frame setting process occurs through the dissemination of said media frames to individuals/the public. Individuals similarly employ their own frames when interpreting the disseminated media frames and subsequently enact effects of the media frames. Individual frames mediate the enacted effects of media frames. Media and individual frames can, therefore, be studied as dependent or independent variables

Media framing refers to the frames of reference provided by the media that audience members use to interpret and publicly discuss an event (Tuchman 1978). Gamson and Modigliani (1987, p. 143) define a media frame as "a central organizing idea or story line that provides meaning to a unfolding strip of events ... The frame suggests what the controversy is about, the essence of the issue." When the audience views or reads the media frames, meaningless and non-recognizable occurrences become a discernible event. Entman (1993) provide another explanation of how media provide frames for the public to interpret an event: "To frame is to select some aspects of perceived reality and make them more salient in the communicating text, in such a way as to promote a particular problem definition, casual interpretation, moral evaluation and/or treatment recommendation" (p. 55). For Entman (1991), "the essence of framing is sizing—magnifying or shrinking elements of the depicted reality to make them more or less salient" (p. 9). Entman does not simply focus on a central organizing theme; rather he highlights the elements of the depicted reality, which could extend to magnifying or shrinking attributions of the elements.

The concept of media framing has been widely used in many fields including anthropology, political science, sociology, business, and communication. It is generally recognized as a powerful analytical tool for understanding texts, their development, and interpretation. Tuchman (1978) suggested that framing is a central element to the news gathering, reporting, and consuming process. News stories, for example, are framed by the selection of key themes or ideas, by use of specific narrative techniques, by use of images or pictures, and by virtue of placement of the story. In a newspaper, readers may first look at pictures and use these images to interpret the story. Placement of a story above the fold for newspapers or at the start of the radio or television broadcast signals to audiences that the story is important. News gatherers and reporters use established frames

to construct news stories. Stories that are framed in conventional ways are more easily understood by consumers (Tuchman 1978). When media workers develop and present frames, the frames can include the conscious intent of the sender as well as unconscious intent and motives (Scheufele 1999).

Gamson and his colleagues have made extensive use of media frame theory to explore the ways in which media organize random events and information into the news format (Gamson 1984, 1989, 1992, 1995; Gamson and Modigliani 1989). These frames may be part of journalistic convention, values, unconscious assumptions, or biases (Hackett 1984; Ball-Rokeach et al. 1990). Previous research suggests at least five factors that may influence the process of media framing: “social norms and values, organizational pressures and constraints, pressures of interest groups, journalistic routines, and ideological or political orientations of journalists” (Scheufele 1999, p.109; Severin and Tankard 1979). Media framing can be expected to vary, therefore, as conventions of media shift, or as particular professional values become more or less salient.

Media framing can be expected to be particularly influential in contexts of high uncertainty where established and routine interpretative structures may not operate, such as in crisis situations (Weick 1988). In these circumstances, individuals may struggle to make sense of what is happening and look to the interpretive frame provided by others, such as the media. In this way, the “mental maps” provided by frames are particularly important when severe physical, social, and economic disruption occurs (Weick 1995). Cues such as background information, visuals, and amount of time dedicated to the report of a crisis will similarly influence how the story is framed or interpreted by the audience (Entman 1993).

Because frames apply both to presenting and comprehending news, it is important to differentiate between media frames and individual frames. This distinction follows Kinder and Sanders’ (1990, p. 74) distinction that frames service both as “devices embedded in political discourse” akin to media frames and as “internal structures of the mind” akin to individual frames. Gitlin (1980) and Entman (1993) also make such distinctions. According to Gitlin, frames “largely unspoken and unacknowledged, organize the world both from journalists who report it and, in some important degree, for us who rely on their reports” (p. 7). Entman (1993) differentiates media frames as “attributes of the news itself” and individual frames as “mentally stored clusters of ideas that guide individuals’ processing of information” (p. 53). Individuals such as media reporters and journalists employ social norms and values, beliefs, and experience when understanding and interpreting the news.

Van Gorp (2007) extends Scheufele’s (1999) attempt to integrate the broad range of perspectives on frames, their linkages, and the variety of research approaches by arguing the usefulness of adding culture and the presence of a “shared repertoire of frames in

culture” (p. 61) as an important linkage between news production and news consumption. Therefore, the meaning of a crisis and, subsequently, the many responses to a crisis manifest from a cultural interplay among the media and the recipients. As Gamson and Modigliana (1989) state, “media discourse is part of the process by which individuals construct meaning, and public opinion is part of the process by which journalists ... develop and crystallize meaning in public discourse” (p. 2). This processes of social construction and interacting shared cultural frames may seem so natural that they often remain invisible (Van Gorp 2007).

Additionally, every communication medium frames its messages. The development of new technologies of reporting may also influence the ability of the media to report on crises (Martin and Hansen 1998). Recently, digital recording using highly portable devices has allowed reporters to cover disasters in much more direct ways. Reporters who use such devices are not as tied to formal sources of information and may be able to more easily localize their stories (Scanlon 2006). Concurrently, these technologies have allowed for the development of citizen journalists who work independently reporting both in mainstream media and in web-based outlets. May (2006) pointed out that during Katrina, digital communication changed disaster communication: “The traditional top-down paradigm was replaced by a more dynamic flow of information that empowered citizens and created ad hoc distributive information networks. [These] ‘first informers’ enhanced the amount of information and number of sources, challenged the old gatekeepers of government and the traditional media, and exacerbated the pre-existing problem of sorting out truth amid chaos” (2006, p. xi). Thus the dynamics of framing may well be changing as the technology and media of reporting are changing. The significance of these technology effects for crises and social transformation have yet to be examined.

In this project, we provide an exploration and detailed examination of media frames as created by citizen journalists and valued/utilized by community members affected by the crisis. These frames became powerful sensemaking devices that influence both public perception and subsequent action. This study focuses on crisis and the dynamic interplay among citizen journalists, community members, framing, and the effects of new technologies.

Method

ROTW is a community website for residents in the San Bernardino mountain area of Lake Arrowhead. Scott Straley created the site as a resource for local information and a modern day “town square” after moving to the area in 2001. The usual content includes area news collected and submitted by residents, notices of community events, advertisements of local businesses, discussion forums, galleries of photographs, maps of the area, and links to local and government information websites. The site obtained its

visible profile and gained popularity as residents discovered it through word-of-mouth referrals during the Old Fire of 2003. During the October 2007 wildfires, ROTW dedicated its site and efforts to 24/7 coverage of the wildfires and served as a community clearinghouse for all information related to the wildfires. The site, autonomous and minimally capitalized, relied on citizen journalism via the Internet.

In November 2008, we conducted face-to-face, in-depth interviews with the founder and the three staff members, only one of whom received even minimal compensation from website operations. Following the interviews, we invited local residents, specifically those affected by the wildfires and who had accessed the website during the 2007 wildfires, to complete an on-line questionnaire. We disseminated the questionnaire by posting an invitation on the ROTW website. Thus our data inform us about the experiences of residents who were ROTW website producers/users. The questionnaire was a combination of closed and open-ended questions, which probed information needs and uses during the wildfires; media usage; and assessments of media source timeliness, accuracy, relevance, and usefulness. In addition to the respondents' usage and assessment of ROTW communications, their usage of traditional channels was also assessed. The open-ended question probed how they were affected by the fires, what they wanted to know during the fires, the information available/accessed/posted on the ROTW website, and their advice for officials in future events.

Between April-May 2009, 144 respondents accessed the questionnaire and 122 completed it. Demographic information describing the participants include gender, age, nationality, income, type of residence, location of home in fire affected area, and evacuation information. The survey participants included 85 (70%) women comprising two Asian Americans, 74 Caucasians, one Mexican American, and eight who did not disclose or listed "other". There were also 37 (30%) men of which there were 32 Caucasians, one Mexican American, and four who did not disclose or listed "other"). The ages of the participants ranged from 22 to 73 years. Forty-two individuals (34%) reported an annual income of \$59,000 or less; 22 individuals (18%) reported an annual income between \$60,000 and \$74,000; 19 (16%) individuals reported an annual income between \$75,000 and \$99,000; and 29 individuals (24%) reported an annual income over \$100,000. One hundred and nine individuals (89%) reported their property as their primary residence, nine (7%) reported that the property was a second residence, and three (2%) reported "not applicable". Ninety-five individuals (78%) reported that their residence was located in a fire-affected area, 25 (20%) reported that the property was not affected and two (2%) reported "not applicable." One hundred and three individuals (84%) reported that they did evacuate; 17 (14%) did not. Ninety-eight individuals (80%) reported receiving a mandatory evacuation notice, 12 (10%) received a voluntary notice, and 11 (9%) did not receive an evacuation notice. For the analysis in this paper, we give particular attention to the data collected from the responses to the open-ended questions.

Results

ROTW started in 2001 as a website for community information, yet Straley, the founder and architect of the site, credits the Bridge Fire in 2002 followed by the Grand Prix and Old Fires in 2003 as the events that really launched the website and its mission to provide emergency coverage for local residents. During those fires, Straley posted first-hand reports of press conferences and digital pictures of the fires and damaged/undamaged properties. Additionally, he posted information and pictures provided by other residents. Local residents who did not evacuate also emerged as citizen journalists as they served as eyewitnesses and first-hand reporters (Palen et al. 2007). According to Straley, word-of-mouth referrals during the fires transformed the site “from one that would get 50-100 page views in a day to 300,000-400,000 page views in a day.” Researchers similarly report the increased prominence of citizen journalism and social media in the disaster arena (Sutton et al. 2008).

During the 2002 and 2003 fires, what became evident to Straley and other mountain residents was the poor job of localizing the information by “off-the-mountain—L.A. and regional—media and to some extent even the small local newspapers.” Straley, along with three core staff members (both paid and unpaid), summarized coverage by traditional media as “worthless” for local residents and evacuees due to the lack of specificity and timeliness coupled with inaccuracies and sensationalism. Straley recalled “they [the traditional media] knew there was a fire, they could see it from L.A., and they would drive to where there was fire and shoot video, but they didn’t know where they were most of the time, so they would mislabel things. And they would exaggerate the extent of the fire.” Another staff member added, “the only thing that was truthful was there was a fire burning in the mountains. It had no content. Nothing the locals needed to know.”

When ROTW switched to emergency operations at the start of the 2007 fires, they became a clearinghouse for local information as provided by local residents. They posted alerts and transcriptions of official first responder (fire, medical, police, sheriff) scanners; comments and reports from their contacts among public information officers; field photographs and observations of houses and properties; and interviews of and emails from community residents. ROTW was able to post photographs of the fronts of buildings using landmarks owners would recognize. A local resident, also an employee of the utility company, gave ROTW information about “blocks of individual addresses and saying such and such is fine or such and such are destroyed.” Evacuated owners obtained this information days before receiving official notice. One staffer highlighted the importance of their operations and technology relative to their news cycle, “from the time we initially hear of something happening to the times it’s available for people on the web is less than five minutes, quite often it’s like two or three minutes.” During the fires, the

website experienced two million views a day and numbered twenty-two on the list of most searched sites on Google.

Initially, the official first responder agencies expressed displeasure at ROTW's posting of raw information rather than official press releases or conferences. However, they simultaneously acknowledged ROTW's helpful role in meeting the voluminous requests for ongoing information. Moreover, ROTW has been informed that incident command centers "have the site [ROTW.net] up and running because they're able in one spot to look and see what CHP [California Highway Patrol] is doing, what the sheriffs are doing, what the fire departments are doing. They [each agency] are listening to their own radio network, but they're not talking to the other networks. It has to go through all these official channels before it comes back to them and they find out anything."

An analysis of the online structure created and maintained by ROTW and the online action as reported by those who used the site during the 2007 California wild fires suggests that ROTW, an example of citizen journalism using new media, supplied information and communication valued by local residents in contrast to that provided by professional media and official first responders. Specifically, the respondents noted that ROTW provided unfiltered information about the status of their community wildfire and the present, with impact for future, responses. They sought information that served the usual functions of crisis communication, while also emphasizing specific characteristics of the information as critical.

This information was characterized as 1) comprehensive information about the ongoing fires, official first responder actions, and community responses and resources; 2) specific and accurate information about the fires and its affect on individual and community properties, 3) timely around-the-clock (some real time and frequently updated) information; and 4) message boards providing the opportunity for community members to provide information and to engage in social networking and support. The information and communication were collected and posted by ROTW staff and local residents. Residents remaining in the affected areas provided on-site information, while local residents and their friends and families could contribute to message boards. Further explication of these four information categories follows.

Obtaining (and Providing) Comprehensive Information

ROTW served as a clearinghouse of all fire-related news. Users could find information ranging from warnings and evacuations to information about responses and clearances to return. Rather than accessing official warnings from one source and response recommendations from various governmental and non-profit organizations, ROTW, as one respondent wrote, posted "everything... You name it, you could find it on ROTW." Users wanted and found "information on where the fire was headed, its scope,

size, firefighting resources being used” and even the “extent of the progress of fire, areas directly affected, possible return-to-home dates, sources for mail, instructions on clean-up upon return, services available to evacuees.” Users perceived the website as “an excellent way to stay connected with what was happening on the mountain in regards to our homes, jobs, friends, and what to always expect.” Besides comprehensiveness, the respondents highlighted the specificity and accuracy of information provided by ROTW.

Obtaining (and Providing) Specific and Accurate Information

Many users noted inaccuracies and sensationalism in the coverage by reporters from larger, professional media outlets such as those affiliated with San Diego or Los Angeles. These regional outlets provided the daily news for the local community, yet the reporters were unfamiliar with the specific mountain communities immediately affected by the fires and in the frontline of the raging fires. Echoed by many respondents, they commented on how professional sources were “very vague and we could never tell what was really going on.” “We had no accurate information from radio or TV. Even if you caught a picture on TV and recognized where the newscaster was standing, he/she was not familiar with the area and even at times would state the streets and communities inaccurately.” Moreover, they seemed to “look for horrible things and named areas that just don’t exist.” “Getting first hand information [from ROTW] was very comforting because the media blew everything way out of proportion.”

The comments about ROTW almost unanimously contrasted with those written about professional media and their reporters. Exemplar comments stated, “ROTW posted accurate information from people who had an understanding of the mountain communities, locale, terrain, and environment;” and “They gave information on actually what was happening in my area, not a blanket statement like those on radio and TV;” and “They were familiar with the area whereas the TV stations had no idea where different mountain communities are located.” Writes one ROTW user, “Because I was at home ... I was able to give exact information about the fire ... we could provide actual addresses of homes burned and saved.” ROTW provided specific information and photographs about areas burned, including actual street names and houses. Besides specificity and accuracy, the respondents also noted ROTW’s unparalleled ability to provide timely and even real-time information.

Obtaining (and Providing) Timely Information

Noted by the majority of respondents were the time delays and frustratingly long intervals between official reports on the ongoing fire fighting efforts and destruction. In contrast, as one community member noted ROTW was the source that provided “immediate information of the start of the fire and evacuation notices. I was at work and

knew about it [the fire] within five minutes. It gave me time to get home, spend four hours getting packed, inventory the house and evacuate. My house burned that night.” ROTW consistently posted information from an official first responder agency faster than the agency itself. Besides immediacy, ROTW was able to coordinate “real time information from eye witnesses, scanner monitors, and experienced people.” Users had access to “scanner transmissions from the first responders and officials on the scene,” real-time “updated logs from fire department communications” and “links to other related sources.” ROTW regularly posted real-time information unlike official first responder agencies, which vet information before release, or professional media outlets, which publish stories using the vetted information.

Facilitating Community Support and Networking

During crises the media help maintain and reconstitute social connections, order, and a sense that the situation is returning to normal. Initially, the media serve as a kind of community bulletin board, helping families reconnect with displaced loved ones or helping members identify sources of relief and support. In the past, this function has most often been associated with broadcast media, particularly radio (Quarantelli 1991). However, the Internet appears to function equally well in this capacity. After the attacks of 9/11, a third of Internet users posted or read comments on an electronic bulletin board, in a chat room, or on an email listserv (Jefferson 2006; Pew Research Center Institute 2001). Moreover, the reduction of radio stations’ locally originated programming may negatively affect radio’s capacity to maintain this function. As immediate harm is contained and controlled, the media help to define and reconstruct the new “normal state” necessary for the development of post event routines and stability.

The responders noted how ROTW served such a role during the wildfires. They highlighted the importance of social connections and networking that occurred via the website and characterized the interactions as immediate, interactive, and ongoing. ROTW provided “the opportunity to keep in touch with community members that I have grown close to and make sure they were safe.” It also “provided me with the ability to network with others going through the same ordeal.” Some evacuees felt relief when they were able to connect with residents remaining in the affected areas who offered to check on and care for pets left behind.

Discussion

This study provides four important contributions. The findings 1) reveal the role of the cultural in the development of a master frame, 2) extend the crisis and disaster literature by providing insights into role of citizen journalists and their influence on framing, 3) characterize how disaster framing has changed over time with new

technologies and how framing may vary across different events as well as different media platforms, and 4) may improve crisis and disaster planning and response by providing heretofore underexamined and underutilized information about citizen journalism and new media platforms.

Culture and the Master Frame

The residents of the San Bernardino mountain area of Lake Arrowhead live in a defined geographical area, which meaningfully shapes their community and individual identities. The residents regularly talk about the geographical uniqueness and beauty of their mountainous home. They also talk about their conscious decision to live on the mountains, the benefits and the struggles of living on the mountain and apart from the social norms and ebb and flow of contemporary life. Many residents chose to return to the mountain after living “off-the-mountain” for years. Moreover, many are reminded daily of their decision to live on the mountain as they drive to and return from jobs off-the-mountain by one of two roads. Residents perceive themselves as a self-contained and self-reliant community, and they similarly see themselves as self-reliant individuals. This concept of self-reliance operates as a cultural archetype.

As did the Bridge Fire in 2002 and the Grand Prix and Old Fires in 2003, the wildfires of 2007 accentuated the community’s perception of a divide between mountain residents and those off-the-mountain. These fires and the experienced social drama and reassembled secular order (Turner 1974) served to strengthen their strong sense of a well-defined community and a shared perception of wildfires as a community crisis, a local event (Weick, 1988). In this way, the cultural archetype—the perception of themselves as a self-reliant community made up of self-reliant individuals—served as a central theme which when combined with a congruent reasoning device—they want all available information to make their own decisions and implement their own responses—created the master frame (Van Gorp 2007). The mountain residents wanted any and all information, unfiltered and raw, about the fires with respect to their community and its residents. They, self-reliant and from a self-reliant community, could best understand, interpret, and act during the evolving crisis if they had access to raw information. They underscored the uselessness of other frames and the inabilities of professional media to report meaningful information or stories about the fires on their mountain.

By bringing culture into the framing process, we have identified the master frame. This master frame determines what information and defining characteristics of the information will be magnified and what will be minimized (Entman 1991). In this case, the citizen journalists produced/used the raw, unfiltered information that functioned as media has typically functions in crises to announce warnings, provide response

information, assist first official responders, and help maintain and reconstitute community.

Influence of Citizen Journalists on Framing

To date there has been little research on the role and influence of citizen journalism on crisis framing. Our analysis reveals how citizen journalists using media technologies framed the 2007 Southern California crisis. ROTW staff, who did not evacuate, acted as citizen journalists by posting comprehensive, specific and accurate, and real-time or regularly updated information for local individuals to construct their own interpretation of the wildfires and make decisions about their subsequent actions. The website maintained by ROTW also permitted mountain citizens who did not evacuate to function as citizen journalists by accepting and posting their information contributions. Additionally, mountain residents, whether or not they evacuated, participated in the construction of shared interpretations by interacting and dialoguing with each other through the website.

Citizen journalism largely collapses the traditional distinction between media frames and individual frames. Distinctions between frame building and frame setting become less relevant also. Citizens become both the producers and the consumers of the media; they are the frame builders and the frame setters (Scheufele 1999). In ROTW's coverage of the wildfires, practices of the professional media—such as gatekeeping, story development, and editing—as well as factors of influence such as media routines and pressures were nearly nonexistent. Alternative frames that could have focused on culpability for the fire or featured heroes/victims received little attention.

Although most of the respondents indicated that they periodically checked other media sources, they mostly dismissed the coverage and rejected the frames of those professional media. The availability of crisis coverage that conforms to the master frame limits the receptivity to and adoption of the interpretations framed by professional media. Citizen journalism appears to dilute official frames of crisis by providing information that fits the master frame and is more comprehensive, specific, and timely than that used or shared by traditional media.

Citizen journalists are likely to be on the ground and in the field with first hand access to the unfolding crisis. In the case of these wildfires, the citizen journalists were reporting information about their own mountain communities—their businesses, homes, and community buildings and their colleagues, friends, families, and pets. Having this personal and in-depth knowledge enabled them to provide more comprehensive and specific information about the locations of the fire and property damage in contrast to that provided by professional media. They were a clearinghouse for all information, including warnings, bulletins, and notices from the many official first responders and governmental

agencies. Additionally, citizen journalists appear to provide more real-time information than professional media. ROTW posted real-time information such as verbatim transcripts from official first responder scanners and photographs of the fires and affected properties, which included identifying information such as house numbers and street signs.

In summary, citizen journalism appears to be changing the production and consumption of media frames and adding the importance of message characteristics as part of the framing process. This study suggests that citizen journalism may dilute the dominance of professional media and official interpretations of crises. Moreover, citizen journalism may bolster the influence of culture and the perspective/interpretations constructed/consumed by interacting individuals directly affected by the crisis.

Influence of Media Technologies on Framing

Our analysis also reveals the importance of media technologies and media platforms. As previously highlighted, ROTW was able to provide crisis status/response information in a more comprehensive, specific and accurate, and timely manner than professional media outlets. At the same time, ROTW engaged and facilitated the interaction of those directly affected by the crisis. Of note, the use of the Internet increased the ability of citizen journalists to disseminate newly available information and quickly correct misinformation with each post of a new discussion thread or webpage. Although professional media do provide coverage, move quickly, and bring extended resources to disasters and crises, the coverage often suffers from a number of deficiencies (Scanlon 2006). Professional media seem unable to compete with the defining characteristics exhibited by ROTW in its crisis communication—local, on-the-ground, comprehensive, dedicated 24/7, and interactive.

When comparing the Internet to television, Schneider and Foot (2004, p. 138) noted that the Internet provides several advantages: “more depth, a greater number of perspectives, archives of visual images, and more firsthand accounts through personal Web sites or ‘blogs’ and online discussion groups.” As May (2006) observed during the Katrina disaster, digital communication is changing disaster communication. Citizens empowered with digital communication are creating dynamic and interactive ad hoc distributive information networks and thereby partially supplementing and partially replacing the traditional top-down paradigm (Schneider and Foot 2004). Sutton, Palen, and Shklovski (2008) similarly found such changes during Katrina and the Southern California wildfires when they examined the emergent uses of social media. Not only did an Internet-based website serve as a clearinghouse of crisis information, it provided a social support for those affected by the wildfires.

Influence of Citizen Journalism on Disaster Planning and Response

Based on the information obtained from ROTW, some respondents shared how they decided to stay and defend their homes rather than evacuate. Recently, the US Forest Service began exploring whether the Australian "Stay and Defend or Leave Early" may, at times, be appropriate in the U.S. (McCaffrey and Rhodes 2009). Although overwhelmingly rejected in the spring of 2009 by the Californian firefighters union in favor of the "Ready, Set, Go" approach, which typifies traditional approaches to fire management and characteristically includes mass evacuation of populations threatened by wildfire, some homeowners will and do employ "Shelter in Place" and "Stay and Defend" approaches.

Those homeowners and other community members who chose to remain in fire threatened areas played a notable role in media coverage and fire management. A couple of respondents who evacuated the area reported, "Although I was upset that some residents chose to remain on the mountain –didn't think it was right—some posted pics [pictures] of our homes that had not been damaged." Similarly, another wrote, "Because of others who did not evacuate, actual addresses of homes burned and saved were posted. Also people were able to contact us via ROTW to take care of pets left behind. Animal control was overworked, unorganized and very rude."

Such findings suggest an increasing role of citizen journalism in the area of disaster media coverage and response. Citizen journalists, with their local and in-depth knowledge of local communities, can provide comprehensive and detailed information about areas affected by a crisis for use by official first responding agencies. Due to the lack of affiliation with formal organizations, citizen journalists are able to disseminate and, if needed, retract and correct information more quickly than established, hierarchal organizations. By partnering with citizen journalists, official first responders could focus more completely on the logistics and operations of the emergency response in order to mitigate additional harm and damage. The changing dynamics of crisis communication suggest that government agencies, official first responder organizations, and professional media may do well to consider how the citizen journalists affect their communication with publics. Additionally, government agencies and official first responder organizations would benefit from including considerations of citizen journalism in broader institutional and organization planning and management for disaster response.

Conclusion

During the 2007 Southern California wildfires, RimoftheWorld.net facilitated crisis communication for affected mountain residents. As an exemplar of citizen journalism during the wildfires, ROTW prompted a rethinking of the influence of media on the

understanding and framing of crisis, the role of culture in the framing process, the effect of new technologies, and the implications for future crisis planning and response. Clearly, citizen journalism appears to be changing the dynamics of crisis communication.

Acknowledgements

We would like to pay special thanks to Scott Straley and staff of Rim of the World.net.

References

- Allen, Myria W. and Rachel H. Caillouet. 1994. "Legitimation Endeavors: Impression Management Strategies Used by an Organization in Crisis." *Communication Monographs* 61: 44-62.
- Auf der Heide, Edwin. 1989. *Disaster Response: Principles of Preparation and Coordination*. Portland OR: Book News.
- Ball-Rokeach, Sandra J., Gerard J. Power, K. Kendall Guthrie, and H. Ross Waring. 1990. "Value-framing Abortion in the United States: An Application of Media System Dependency Theory." *International Journal of Public Opinion Research* 2: 249-273.
- Benoit, William L. 1995. *Accounts, Excuses, and Apologies*. Albany: University of New York Press.
- Bernstein, Melvin. 2004. "Contributions of the National Center for Food Protection and Defense." National Center for Food Protection and Defense Annual Meeting. November 1, Atlanta, GA.
- Blondheim, Menahem and Tamar Liebes. 2003. "From Disaster Marathon to Media Event: Live Television's Performance on September 11, 2001 and September 11, 2002." Pp. 185-197 in *Crisis Communications: Lessons Learned from September 11*, edited by A. M. Noll. Lanham, MD: Rowman and Littlefield.
- Cohen, Elisa L., Sandra J. Ball-Rokeach, Joo-Yound Jung, and Yong-Chan Kim. 2003. "Civic Actions after September 11: A Communication Infrastructure Perspective." Pp. 31-43 in *Crisis Communications: Lessons learned from September 11*, edited by A.M. Noll. Lanham, MD: Rowman and Littlefield.
- Coombs, W. Timothy. 1995. "Choosing the Right Words: The Development of Guidelines for the Selection of the Appropriate Crisis-Response Strategies." *Management Communication Quarterly* 8: 447-476.
- Douglas, Mary. 1966. *Purity and Danger*. London: Routledge and Kegan Paul.
- _____. 1994. *Risk and Blame: Essays in Cultural Theory*. London: Routledge.
- Entman, Robert. M. 1993. "Framing: Toward Clarification of a Fractured Paradigm." *Journal of Communication* 43: 51-58.

- _____. 1991. "Framing U.S. Coverage of International News: Contrasts in Narratives of the KAL and Iran Air Incidents." *Journal of Communication* 41: 6-27.
- Gamson, William A. 1984. *What's News: A Game Simulation of TV News*. New York: The Free Press.
- _____. 1989. "News as Framing: Comments on Graber." *American Behavioral Scientist* 21: 39-62.
- _____. 1992. *Talking Politics*. New York: Cambridge University Press.
- _____. 1995. Hiroshima, the Holocaust, and the Politics of Exclusion. *American Sociological Review* 60: 1-20.
- Gamson, William A. and Andre Modigliani. 1987. "The Changing Culture of Affirmative Action." Pp. 137-177 in *Research in Political Sociology* (Vol. 3), edited by R. G. Braungart and M. M. Braungart. Greenwich, CT: JAI Press.
- _____. 1989. "Media Discourse and Public Opinion on Nuclear Power: A Constructionist Approach." *American Journal of Sociology* 95: 1-37.
- Gitlin, Todd. 1980. *The Whole World is Watching: Mass Media in the Making and Unmaking of the New Left*. Berkeley: University of California Press.
- Goffman, Ernest. 1974. *Frame Analysis: An Essay on the Organization of Experience*. Cambridge, MA: Harvard University Press.
- Greenberg, Bradley. 2002. *Communication and Terrorism*. Cresskill, NJ: Hampton.
- Guilford, J.P. (1926). "Spatial Symbols in the Apprehension of Time." *The American Journal of Psychology* 37:420-423.
- Hackett, Robert A. 1984. "Decline of a Paradigm? Bias and Objectivity in News Media Studies." *Critical Studies in Mass Communication* 1: 229-259.
- Hermann, Charles F. 1963. "Some Consequences of Crisis Which Limit the Viability of Organizations." *Administrative Science Quarterly* 8: 61-82.
- Iyengar, Shanto. 1991. *Is Anyone Responsible? How Television Frames Political Issues*. Chicago: University of Chicago Press.
- Jefferson, Theresa L. 2006. "Using the Internet to Communicate During a Crisis." *The Journal of Information and Knowledge Management Systems* 36: 139-142.
- Keil, L. Douglas. 1994. *Managing Chaos and Complexity in Government*. San Francisco: Jossey-Bass.
- Kinder, Donald R., and Lynn M. Sanders. 1990. "Mimicking Political Debate with Survey Questions: The Case of White Opinion on Affirmative Action for Blacks." *Social Cognition* 8: 73-103.
- Lewis, Mike. 2008. "Breaking News in a Public Health Crisis." Pp. 257-271 in *Crisis Communication and the Public Health*, edited by M. W. Seeger, T. L. Sellnow and R.R. Ulmer. Hampton Press: Cresskill, NJ.
- Martin, Shannon E., and Kathleen A. Hansen. 1998. *Newspapers of Record in a Digital Age: From Hot Type to Hot Link*. Westport, CT: Prager.

- May, Stephen. 2006. "First Informers in the Disaster Zone: The lessons of Katrina." Proceedings of The Aspen Institute: Queenstown, Maryland. Retrieved from (<http://www.gwu.edu/~smpa/docs/Katrina%20lessons.pdf>)
- McCaffrey, Sarah M., and Alan Rhodes. 2009. "Public Response to Wildfire: Is the Australian 'Stay and Defend or Leave Early' Approach an Option for Wildfire Management in the United States?" *Journal of Forestry* 107: 9-15.
- Mileti, Dennis S., and Colleen Fitzpatrick. 1992. "The Causal Sequence of Risk Communication in the Parkfield Earthquake Prediction Experiment." *Risk Analysis* 12: 393-400.
- Mileti, Dennis S., John H. and Sorensen. 1990. *Communication and Emergency Public Warning*. ORLN-6609. Washington, DC: Federal Emergency Management Administration.
- National Transportation Safety Board. 2004. "Derailment of Canadian Pacific Railway Freight Train 292-16 and Subsequent Release of Anhydrous Ammonia Near Minot, North Dakota." January 18, 2002. NTSB/RAR-04/01. Washington DC: National Transportation Safety Board.
- Noll, A. Michael, ed. 2003. *Crisis Communications: Lessons Learned from September 11*. Lanham, MD: Rowman and Littlefield.
- Palen, Leysia, Sarah Vieweg, Jeannette Sutton, Sophia B., and Amanda Hughes. 2007. *Crisis Informatics: Studying Crisis in a Networked World*. Presented at the Third International Conference on e-Social Science, October 7-9: Ann Arbor, Michigan.
- Perrow, Charles. 1999. *Normal Accidents*. 2nd ed. New York: Basic Books.
- Pew Research Center Institute, Pew Internet and American Life Project. 2001. "The Commons of Tragedy: How the Internet was Used by Millions After the Terror Attacks to Grieve, Console, Share news, and Debate the Country's Response." Retrieved from (<http://www.pewinternet.org/Reports/2001/The-Commons-of-the-Tragedy-How-the-Internet-was-used-by-millions-after-the-terror-attacks.aspx>).
- Quarantelli, E. L. (Henry). 1991. "The Mass Media in Disasters in the United States." Proceedings of the IDNDR International Conference, Japan.
- _____. 1989. "The Social Science Study of Disasters and Mass Communication." Pp 1-19 in *Bad Tidings Communication and Catastrophe*, edited by L.M. Walters, L. Wilkins and T. Walters. Hillsdale, NJ: Erlbaum.
- Rogers, Everett. M. 2003. "Diffusion of News of the September 11 Terrorist Attacks." Pp. 17-30 in *Crisis communications: Lessons Learned from September 11*, edited by A. M. Noll. Lanham MD: Rowman and Littlefield.
- Scanlon, Joseph. 2006. "Unwelcome Irritant or Useful Ally? The Mass Media in Emergencies," Pp. 413-429 in *Handbook of Disaster Research*, edited by H. Rodriguez, E.L. Quarantelli, and R.R. Dynes. New York: Springer.

- Schneider, Steven M., and Kirsten A. Foot. 2004. "Crisis Communication and New Media." Pp. 137-153 in *Society Online: The Internet in Context*, edited by P. N. Howard and S. Jones. Thousand Oaks, CA: Sage.
- Scheufele, Dietram A. 1999. "Framing as a Theory of Media Effects." *Journal of Communication* 49: 103-122.
- Seeger, Matthew W., Timothy L. Sellnow, and Robert R. Ulmer. 1998. "Communication, Organization and Crisis." Pp 123-277 in *Communication Yearbook* (Vol. 21) edited by M. E. Roloff. Thousand Oaks, CA: Sage.
- _____. 2003. *Communication and Organizational Crisis*. Westport, CT: Praeger.
- Seeger, Matthew W., Robert R. Ulmer, Julie M. Novak, and Timothy Sellnow. 2005. "Post-Crisis Discourse and Organizational Change, Failure, and Renewal." *Journal of Organizational Change Management* 18: 78-95.
- Sellnow, Timothy, and Matthew Seeger, and Robert R. Ulmer. 2003. "Chaos Theory, Informational Needs and the North Dakota Floods." *Journal of Applied Communication Research* 30: 269-292
- Severin, Werner J., and James W. Tankard. 1979. *Communication Theories*. New York: Hastings House.
- Spence, Patric R., David Westerman, Paul D. Skalski, Matthew Seeger, Robert R. Ulmer, Steven Venette, and Timothy L. Sellnow. (2006). "Proxemic Effects on Information Seeking After the September 11 Attacks." *Communication Research Reports* 22: 39-46.
- Sutton, Jeannette, Leysia Palen, and Irina Shkovski. 2008. "Backchannels on the Front Lines: Emergent Uses of Social Media in the 2007 Southern California Wildfires." Proceedings of the 5th International ISCRAM Conference, May 4-7: Washington, D.C., USA.
- 't Hart, Paul, Liesbet Heyse, and Arjen Boin. 2004. "New Trends in Crisis Management Research and Practice." *Journal of Contingencies and Crisis Management* 9: 181-188.
- Thevenot, Brian. 2005/2006. "Myth-Making in New Orleans." *American Journalism Review* 27(6): 30-36.
- Tuchman, Gaye. 1978. *Making News*. New York: Free Press.
- Turner, Victor W. 1974. *Dramas, Fields, and Metaphors: Symbolic Action in Human Society*. Ithaca, NY: Cornell University Press.
- Van Gorp, Baldwin. "The Constructionist Approach to Framing: Bring Culture Back In." *Journal of Communication* 57: 60-78.
- Vanderford, Marsha L., Teresa Nastoff, Jana Telfer, Sandra Bonzo, S. E. 2007. "Emergency Communication Challenges in Response to Hurricane Katrina: Lessons from the Centers for Disease Control and Prevention." *Journal of Applied Communication Research* 35: 9-25.

- Vultee, Fred and Lee Wilkins. 2004 *News as a Public Service: Thinking through Coverage of Disasters and Terrorism*. Retrieved December 20, 2006 (<http://hrc.missouri.edu/events/agro04/other/disasters.pdf>).
- Weick, Karl E. 1988. "Enacted Sensemaking in Crisis Situations." *Journal of Management Studies* 25: 305-317.
- _____. 1995. *Sensemaking in Organizations*. Thousand Oaks, CA: Sage.
- Wenger, Dennis, and Barbara Friedman. 1986. Local and National Media Coverage of Disaster: A Content Analysis of the Print Media's Treatment of Disaster Myths. *International Journal of Mass Emergencies and Disasters* 4: 27-50.
- Wilkins, Lee. 1989. "Bhopal: The Politics of Mediated Risk." Pp. 21-34 in *Bad Tidings: Communication and Catastrophe*, edited by L. M. Walters, L. Wilkins, and T. Walters. Hillsdale, NJ: Lawrence Erlbaum.