

ARE THE NEWS MEDIA RESPONSIBLE FOR THE
DISASTER MYTHS? A CONTENT ANALYSIS
OF EMERGENCY RESPONSE IMAGERY*

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Disaster research scholars and emergency planners have often contended that the news media play a major role in creating and perpetuating various myths of natural disaster response. These myths include widespread panic flight, psychological dependency and vicious competition for necessities on the part of victims and physical convergence for the purpose of looting by non-victims. The evidence which ties the news media to these myths of community breakdown is largely indirect. Survey data reveal a generalized belief among members of the public that the above enumerated behaviors are typical reactions of people faced with a sudden crisis. These data also indicate that the news media are the principal source of information about disasters for most people. Lacking are detailed analyses which document the extent to which the myths of community breakdown actually appear in news coverage of natural disaster events. The present study, which focuses on the reporting of four earthquake events by two Southern California newspapers, attempts to address this issue. The results, though preliminary, suggest that some caution is warranted in making the generalization that natural disaster coverage disproportionately conveys a breakdown imagery of communities facing a major natural catastrophe.

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Students of natural disaster response have long distinguished between widely held public images of human behavior in such crises and actions which their own studies and observations have revealed (see Barton, 1969; Quarantelli and Dynes, 1972; Wenger et al., 1975; Wenger, 1980; Nilson et al., 1981). There is widespread belief in the United States that those faced with a violent disruption of everyday routines react in a irrational or exploitative manner. Survey data (Wenger et al., 1975) reveal that public flight and incapacitating psychological trauma are assumed to characterize the response of disaster victims. Looting and other forms of exploitation are believed to prevail among a sufficient number of non-victims to require heavy surveillance of the disaster affected area, perhaps even the imposition of martial law. The "breakdown" imagery, despite its ubiquity, has little basis in experience and is contradicted by a large body of social scientific research.

Panic and looting are rare in the aftermath of a natural disaster. Shock or dazed reactions are also uncommon and the few cases which do occur are not usually incapacitating or long term. Criminal activity declines rather than increases and martial law, the replacement of civilian with military control over a jurisdiction, has never been declared in the aftermath of an American disaster. Numerous case studies and other research over the years (Prince, 1920; Kutak, 1938; Wolfenstein, 1957; Fritz, 1961; Barton, 1969) have documented human response to crisis as controlled and rational. Both institutional and emergent response are rapid. The activities of emergent groups are particularly noteworthy. Rather than presenting a threat or burden to authorities, small ad hoc groups made up of residents of the disaster stricken area and volunteers perform vital emergency functions (e.g., rescuing the injured, providing first aid, clearing away debris). Among victims, goods and services are freely shared while a mood of optimism even euphoria prevails.

If popular scenarios of community breakdown after natural disasters are gross distortions of fact, why then do these myths have such tenacity in American culture? One might begin to address this question by determining where people obtain information about natural disasters and human response to them. Survey data (Wenger et al., 1975; Turner et al., 1979) indicate that the news media are, by far, the most important sources of disaster related information. Only a tiny fraction of the American people have had direct experience with a community level disaster. Motion pictures, fiction and non-fiction books, discussion with others and public information campaigns have not been particularly salient. While these findings tend to

implicate the news media in myth creation and perpetuation, little systematic research (Levine, 1977; McKay, 1983) exists which demonstrates the extent to which these disaster myths actually appear in news media accounts of disaster. It is this research gap I wish to address.

The present research also affords an opportunity to test various hypotheses regarding potential sources of disaster myths in the news. Quarantelli (1975) argues that some inaccuracies and distortions in coverage can be traced to the news media's reliance on official sources, mainly the police and local officials, for information during community crises. Based upon this observation, we might suggest that myth creation and perpetuation are functions of news organization definitions of what constitute "authoritative" sources and the differential propensity to present the viewpoint of officials rather than other potential sources of information. Gans (1979) and others point out that the same class of events may receive very different treatment by American journalists depending upon where in the world those events occur. Disasters which take place in the United States tend to receive more extensive and sympathetic coverage than those same events in other nations. Thus, we might expect the breakdown imagery of human response to disaster to be more prevalent in coverage of foreign disasters than domestic ones. This hypothesis implies that the value orientations of journalists in the form of assessments of newsworthiness and possible ethnocentric biases affect the character and quantity of news coverage.

We might also suggest that organizational resources and audience considerations affect the images of human behavioral response conveyed by the news media. Large metropolitan dailies which appeal to a sophisticated and cosmopolitan audience may be less likely to invoke the breakdown myths than small community oriented newspapers whose coverage of national and international events is filtered through a decidedly local perspective. Finally, a close examination of news content permits the recording and analysis of various format variables. These include the date of the report and event, where the report appears in the paper (e.g., page one lead, page one, remote location), the length of the article, its origin (e.g., wire service, staff writer, columnist, etc.) and treatment (e.g., as straight news, human interest, editorial, etc.). These variables are not tied to any hypotheses but may reveal patterns or regularities which could provide insight into how disaster news is reported. The main dimensions to be examined in addition to the overall prevalence of the myths or breakdown imagery in news coverage of disaster are the effect of location of the disaster event (foreign

vs. domestic), the sources of news information, and the orientation and resources of the medium.

It is important to specify, at the outset, that this analysis is one of image, not reality. The substantive focus is on the relative approximation of the news accounts examined to the breakdown image of disaster held by members of the public or to accounts of disaster reported by social scientists. It is not within the scope of this analysis to determine whether or not the news reports in the sample are faithful descriptions of reality. Nevertheless, one must remain cognizant that news reports are of real events and that the actual occurrences described will have some bearing on differences in news images.

Data and Methods

The images outlined, both those of community breakdown and of controlled and rational activity, characterize the impact and immediate aftermath phases of rapid-onset disasters. Earthquakes are typically the most unexpected and destructive of events in this class and reports of four earthquake disasters have been selected for analysis.

- (1) Alaska, March 27, 1964, 8.4 Richter magnitude, 115 deaths.
- (2) Imperial Valley, California, October 15, 1979, 8.6 Richter magnitude, no deaths or serious injuries.
- (3) Algeria, October 10, 1980, 7.3 Richter magnitude, 3,500 confirmed deaths.
- (4) Italy, November 23, 1980, 6.8 Richter magnitude, 3,000 deaths.

Our investigation of news images will be limited to print journalism, more specifically, to two Southern California newspapers, the *Los Angeles Times* and the *Santa Monica Evening Outlook*. While surveys have demonstrated that television news is most often cited as the primary source of disaster information, researcher access to local television news archives proved to be severely restricted. Thus, our choice of a more readily available newspaper sample.

The sample of events selected contains both foreign and domestic disasters, a local (to Southern California) event as well as more distant ones, quakes in which casualties and damage were extensive and one in which casualties were few and damage localized. Choice of the *Los Angeles Times* and *Santa Monica Evening Outlook* facilitated the comparison between a large circulation metropolitan newspaper and one oriented to a community audience.

A total of 146 reports (90 from the *Times*, 56 in the *Outlook*)

were collected and coded according to a scheme in which behavior images were classified on two dimensions, the Institutional-Emergent and the Adaptive-Maladaptive. The dimension Institutional-Emergent corresponds to a distinction recognized by students of collective behavior between action which is clearly guided by the prevailing norms of a society and action according to norms which are emergent, i.e., those which are not lodged in institutions and may even oppose or modify these norms (Turner and Killian, 1972). All behavior can be classified in this dimension (e.g., spontaneously initiated rescue activity, panic, looting and convergence are emergent behaviors while police or National Guard mobilizations, actions consistent with emergency planning and organized evacuations are institutional behaviors). The Adaptive-Maladaptive dimension represents the implicit or explicit evaluation by the journalist of the behavior reported. Journalists, like other members of the American public, share certain basic values which relate to the threat or actual occurrence of a major disaster. Those values include care for victims, restoration of essential community services, maintenance of public order and promotion of public morale (Dynes, 1970). We would expect actions consistent with these values to be evaluated positively, as adaptive. Those which challenged them would be regarded negatively, as maladaptive. Classification of the dependent variable according to these two dimensions yields four distinctive types of behavioral imagery.

	Institutional	Emergent
Adaptive	Organized normative activities which promote effective emergency response	Activities of collectivities in line with new effective emergency response
Maladaptive	Organized or normative activities which fail to promote effective emergency response	Activities of collectivities which block, delay or impede effective emergency response

Figure 1: Four Types of Behavioral Imagery.

The Institutional-Adaptive cell describes a behavioral imagery which is characterized by clear normative guidelines, usually action which occurs in the context of formal organizational roles and is judged as promoting adequate emergency response and recovery. Such actions in response to a major earthquake event might include the activation and successful execution of a corporate emergency plan, medical treatment for the injured or provision of shelter for the homeless. The Institutional-Maladaptive incorporates actions which are normative or carried out in an organizational context but due to human error, lack of coordination or misallocation are judged to block or impede effective response or an evacuation plan which exposed people to further danger.

The Emergent-Adaptive category includes images of behavior in which new collectivities form and new norms arise (or previously existing norms are applied in novel ways) calling for actions regarded as promoting an effective response effort. The spontaneous formation of *ad hoc* rescue groups, citizen assumption of traffic control or first aid functions, as well as actions consistent with the "therapeutic community" are examples of Emergent Adaptive behaviors. The Emergent-Maladaptive cell involves a portrayal of action which is regarded as detrimental to an adequate emergency response. Many of the social breakdown images identified by Wenger et al. (1975) and others (e.g., mass panic, looting, widespread psychological shock, vicious competition for necessities and unwarranted convergence on the disaster scene) can be classified as Emergent-Maladaptive.

Analysis

Overall Results

A central focus of this study is the assumption made by many disaster research scholars that the news media project an inaccurate image of human response to disaster. News stories, they argue, emphasize social breakdown behaviors and institutional efforts to control these behaviors while the more rational and altruistic elements of human disaster response are largely ignored. If the news media present a breakdown imagery of human response to disaster, we would expect many reported actions to fall into the Emergent-Maladaptive cell since most of the disaster myths are actions of emergent collectivities. We might also expect many reported actions to be classified as Institutional-Adaptive as community emergency organizations and other institutional actors respond both to

the physical destruction caused by the earthquake and the widespread social disruption. Emergent-Adaptive actions, reflect the controlled and resourceful activities of small spontaneously assembled groups, would be few in number if the media project an image of response on the emergent level as confused, dependent and exploitative. Finally, reported instances of Institutional-Maladaptive behavior are more likely to appear after the first few days of coverage as the emergent period wanes and organizational response comes under closer scrutiny.

The data, when aggregated over all four events in the sample, are not consistent with the contention that the news media present an image of community breakdown and chaos in their coverage of earthquake disasters (Table 1). The image of human response to crisis is one in which a myriad of formal organizations, particularly governmental units, respond rapidly and effectively to reduce further casualties and damage. Nearly three quarters of all recorded actions contain such (Institutional-Adaptive) organizational response. Those actions which receive the most media attention are mobilization of personal and material resources (28 per cent), search and rescue activities (27 per cent) and official declarations and statements (25 per cent). Enforcement activities, a category which includes guarding, patrolling, cordons and restrictions, activities which one might expect to be salient if a social breakdown imagery was being conveyed, comprise only eight per cent of all mentions. Those instances in which organizations fail to respond adequately (Institutional-Maladaptive) by way of poor planning, misallocation of resources and so on receive scant attention in the sample as a whole.

The activities of emergent groups which in disaster situations include such collectivities as residents, victims, visitors, concerned persons outside the disaster area, volunteer rescue workers and non-victims who converge on the disaster site did not receive the extensive coverage accorded organizational actors. Approximately one fourth of all coverage was devoted to these groups. Within the emergent category, a disproportionate amount of coverage was devoted to adaptive actions (seventeen per cent) over maladaptive (six per cent). The types of behaviors reported within the Emergent-Maladaptive category were consistent with the disaster myths as described by Wenger et al. (1975) and Quarantelli and Dynes (1972). Panic or wild flight was mentioned most often (36 per cent) followed by physical convergence on the disaster site, mainly reports of looting and the curious surveying damage (21 per cent). Extreme psychological reactions or "shock" made up fifteen per cent of the Emergent-Maladaptive behaviors reported. The remainder included failure

to cooperate with authorities (nine per cent), information seeking convergence (nine per cent), circulation of rumor (six per cent), and vicious competition for necessities (three per cent).

Disaster scholars (Turner et al., 1979) have noted a tendency for the news media to: (1) express surprise in their reports when maladaptive behaviors fail to occur, or (2) to report organizational

Table 1: Behavioral Sequences by Event and Newspaper.^a

	Institutional		Emergent		Total Number
	Adap- tive	Mala- daptive	Adap- tive	Mala- daptive	
Alaska					
L.A. Times	.68	.01	.21	.05	202
SMEO	.66	.01	.27	.02	131
Total	.67	.01	.23	.04	333
Imperial V.					
L.A. Times	.75	.00	.16	.04	56
SMEO	.81	.14	.05	.00	21
Total	.77	.04	.13	.03	77
Algeria					
L.A. Times	.78	.02	.00	.16	45
SMEO	.81	.08	.00	.08	36
Total	.79	.05	.00	.12	81
Italy					
L.A. Times	.65	.16	.09	.11	57
SMEO	.62	.14	.10	.05	21
Total	.64	.15	.09	.09	78
Domestic	.72	.01	.23	.04	391
Foreign	.74	.10	.05	.11	155
All Coverage	.73	.04	.17	.06	546

^a Sequences in which evaluation of action was categorized as "neutral" or actors were "not ascertainable" constituted four per cent of the sample.

actions which imply that maladaptive behavior would occur were it not for the social control measures invoked. Approximately four per cent of the reported actions in the sample contained such references. Of these, slightly over half (52 per cent) were reports that troops, sheriff's deputies and other law enforcement personnel were guarding property in the impact area against looting. Twenty-four per cent were observations that people remained calm during or immediately after the event or that there had been no panic. The remainder of these reports included mention that martial law would be or had been declared (forteen per cent), official appeals for calm (five per cent) and reports that businesses in or near the impact area were not overcharging for needed supplies (five per cent).

The overall results are not suggestive that the disaster myths or social breakdown images are predominant in news media coverage of earthquake disaster. The overall results reveal an image of disaster response in which emergency period organizational efforts to provide relief are swift and effective. Emergent groups, rather than impeding organizational response or merely posing burdens, are portrayed as acting purposively and rationally. This conclusion must remain highly tentative, however, due to an extremely skewed sample distribution. The Alaska earthquake received far more extensive coverage than the other events in the sample, and consequently, the overall results must be interpreted with considerable caution.

Foreign and Domestic Event Coverage.

Much more revealing than the overall results is the contrast between foreign and American earthquake disaster coverage. A review of Table 1 reveals that maladaptive actions on the part of both emergent collectivities and organizations were substantially more likely to be reported in coverage of foreign disasters than domestic ones. Further, Emergent-Adaptive actions constituted 23 per cent of all references in American disasters, but only five per cent in the two foreign events. The frequency of references to Institutional-Adaptive actions was similar for both foreign and domestic earthquake coverage.

While coverage of adaptive organizational response was similar for domestic and foreign coverage, both in overall frequency and type of actions portrayed, the actors differed substantially. In American earthquake disasters, the largest proportion of news coverage (25 per cent) is devoted to the activities of local civilian authorities, especially community emergency organizations (e.g., police, fire, civil defense) and local government. Actions by the federal government were the next

most frequently mentioned (twenty per cent), followed by state officials (fifteen per cent). Newsworthy actors in foreign disasters are the national governments of the disaster stricken countries (32 per cent) and the governments of other nations (25 per cent), especially the United States, which provide aid for emergency relief and recovery. In foreign disasters, local or provincial and regional authorities (equivalent to local and state governments in the U.S.) made up just eight per cent of the actors mentioned in L.A. Times and Evening Outlook reports.

The news media report approximately the same percentage of Institutional-Adaptive actions in foreign and domestic earthquake disasters, but there appears to be a far greater propensity to report incidents in which these efforts go awry in foreign events (ten per cent) than in domestic events (one per cent). Institutional Maladaptive actions include the lack of preparedness or hazard mitigation, problems with relief administration and organizational exploitation (mainly black marketeering in needed supplies). Eighty-eight per cent of these actions in foreign events were problems with relief administration (e.g., lack of coordination among agencies resulting in confusion and delays, misallocation of resources and accusations of favoritism or graft in setting response priorities). The organizational actors held responsible for this reported bungling were members of the national government in coverage of the disaster in Italy. Former colonial authorities in Algeria were criticized for poor planning and reconstruction after an earlier quake disaster there which, according to reports, increased the hazard during the 1980 event. In coverage of the two domestic events, the few reports of organizational failure centered on inadequate preparedness measures which led to greater property losses than were deemed necessary.

Perhaps the most dramatic difference between coverage of domestic and foreign disasters is in referenc to positive actions by emergent groups or Emergent Adaptive behaviors. This difference is particularly pronounced when coverage of the two foreign events is contrasted with Alaska coverage. Twenty-three per cent of all references in coverage of Alaska's "Good Friday" quake were to actions and orientations of victims, survivors and other concerned persons which promoted group safety, relief of suffering and community recovery. Combined references to such actions in coverage of the foreign disasters amounts to only five per cent of all behavioral sequences. These actions, which in coverage of the Alaska quake disaster, included spontaneous evacuations (24 per cent), search and rescue efforts (56 per cent), and positive values and orientations (nineteen per cent) were performed mainly by residents of the stricken

area (rather than volunteers or concerned persons from outside the disaster zone). Coverage of the Algeria and Italy quake disasters included victim initiated evacuations and rescue efforts but failed to contain a single reference to high victim morale or positive orientations.

The number of Emergent-Adaptive actions in coverage of the Imperial Valley, California, earthquake was much lower than for coverage of the Alaska event although the distribution of these behaviors was similar for both American disasters. It must be emphasized, in accounting for the difference, that these two events were very different disasters. The Alaska event was the most destructive earthquake to hit North America since 1906. Although casualties were relatively low for such an intense tremor, the extensive damage to roads, bridges, utilities and other facilities left many towns isolated for several days. Thus, victim initiated relief and recovery efforts were no doubt highly visible. There is also an image of Alaska as America's last "frontier" region and Alaskans as hardy, self-reliant individualists. These images probably also contributed to the high frequency of Emergent-Adaptive actions. The Imperial Valley tremor was of moderate intensity (6.8 Richter magnitude), the damage was localized and there were no deaths or serious injuries. The situation was apparently within the capacity of local community emergency organizations and there was little news media attention paid to the activities of emergent groups or outside agencies. The Alaska and Imperial Valley events also generated very different responses by news organizations. The news "net" (Tuchman, 1978) for the Alaska earthquake was much more extensive with published reports and wire photos from staff writers, wire service personnel, published letters, exclusives and so on. The Imperial Valley earthquake, by contrast, was covered entirely by staff writers for the L.A. Times and one wire service for the Evening Outlook. The intensity, extent of damage and human toll in foreign earthquake disasters appears to have little to do with coverage of the adaptive actions of emergent groups. Despite high death tolls and extensive regional damage in both Algeria and Italy, these actions received the least attention of any action-actor type, only five per cent of all mentions.

While coverage of emergent actions in American disasters emphasized the controlled and rational actions of emergent groups over the impulsive and irrational, the reverse is true for coverage of foreign disasters. Eighty-five per cent of all emergent actions reported in the two American quake disasters were adaptive, fifteen were maladaptive. In coverage of the foreign events, 29 per cent of emergent actions were adaptive

and 71 per cent were maladaptive. The character of reported Emergent-Maladaptive actions also varies along the foreign-domestic dimension. Those who act in an irrational, impulsive or exploitative manner in foreign events are overwhelmingly residents, victims or survivors (88 per cent). The most frequently reported action of this group is panic or wild flight (47 per cent) followed by extreme psychological reactions (24 per cent) and physical convergence on the disaster site (eighteen per cent). The remainder of Emergent-Maladaptive actions in foreign events was divided between failure to cooperate with authorities (six per cent) and vicious competition for necessities (six per cent). Thus, the overall image of emergent groups in the foreign earthquake disasters is one of impulsive flight and psychological dependency. These people, largely victims rather than exploiters, are portrayed as taking practically no active role in relief and recovery. On the contrary, they appear in news reports to present only a burden to the organizations which offer emergency aid. The image of emergent groups in American disasters is one of resourcefulness and self-reliance. In the few instances in which maladaptive behavior does occur, it takes the form of panic (25 per cent), physical convergence (25 per cent), information seeking convergence (nineteen per cent), rumor (thirteen per cent), failure to cooperate with authorities (thirteen per cent) and extreme psychological reactions (six per cent). While a majority (56 per cent) of those portrayed as acting in an inappropriate manner are victims or local residents in American disasters, the remainder (44 per cent) are reported to be outsiders (e.g., visitors to the area, the families and friends of those in the disaster impact area and those who converge on the site motivated by curiosity or criminal intent).

When we shift the unit of analysis from the reported action to the individual report or article, a rather remarkable difference between foreign and domestic disaster coverage is revealed. In coverage of the Algerian and Italian earthquake disasters, 64.2 per cent of all articles contained at least one reference to maladaptive action. In coverage of the two American disasters, just 12.7 per cent of all reports contained such references. Clearly, the social breakdown imagery is quite prevalent in news coverage of foreign disasters. In domestic earthquake disasters, however, these images are substantially muted or, as in the case of Alaska, a very different set of images prevail—resourcefulness, efficiency and solidarity in disaster response at both the institutional and emergent levels of action.

Metropolitan and Community Orientations

The rationale for exploring the community or metropolitan

orientation of a newspaper is to determine whether a large metropolitan daily differs from a small community oriented paper in the propensity to convey the disaster myths or social breakdown imagery. To base this distinction solely on an orientation, however, belies an important structural factor which is also operating i.e. the size and resources of the organization. We would expect a metropolitan oriented newspaper to have a large reportorial and editorial staff, research facilities and foreign bureaus, resources which a smaller news operation would not have. It also seems plausible to suggest that journalists working for a metropolitan newspaper are better trained and more experienced observers than their counterparts on the staffs of community papers. In short, the greater organizational resources and the metropolitan orientation are expected to account for fewer references to breakdown behaviors.

The L.A. Times offered more extensive coverage of the Alaska and Imperial Valley quake disasters both in terms of the number of articles and length of reports (see Table 2). In coverage of the two foreign disasters, the L.A. Times offered only two more reports in each case but these reports were more lengthy than those which appeared in the Evening Outlook. In its coverage

Table 2: Number of Reports and Actions Recorded in the Los Angeles Times and Santa Monica Evening Outlook By Event.

	L.A. Times		Santa Monica E.O.	
	Reports	Actions Recorded	Reports	Actions Recorded
Alaska (3-27-64, 8.4 Richter Mag.)	64	202	39	131
Imperial Valley, CA (10-15-79, 6.8 Richter Mag.)	10	56	5	21
Algeria (10-10-80, 7.3 Richter Mag.)	8	45	6	36
Italy (11-23-80, 6.8 Richter Mag.)	8	57	6	21
Total	90	160	56	209

of all earthquake events, the Evening Outlook was dependent upon the major wire services, United Press International and Associated Press for three-fourths of its reports. Only eleven per cent of the Evening Outlook reports were written by staff writers. The Los Angeles Times coverage, by contrast, depended to a far greater extent on staff writers whose reports made up forty per cent of all articles while Associated Press and United Press International reports made up forty-four per cent of coverage in the Times. The L.A. Times has its own wire service which produced six per cent of all coverage and over half of its coverage of the two foreign disasters.

L.A. Times and Evening Outlook coverage of the Alaska earthquake disaster was, on the whole, quite similar. Table 1 reveals that the breakdown on the Institutional-Emergent and Adaptive-Maladaptive dimensions are much alike, although the Evening Outlook was somewhat more likely to report Emergent-Adaptive actions than the Times. A more detailed examination of the Emergent-Adaptive category indicates that the Outlook reported sending and receiving messages, offers of food, clothing and shelter and the appropriate utilization of emergency services by victims and survivors to a greater extent than did the L.A. Times. The L.A. Times placed less emphasis upon these actions by emergent groups and featured positive victim values and actions taken by concerned persons from outside the disaster impact area including volunteers (e.g., rescue workers, amateur radio operators, etc.). Institutional and Emergent-Maladaptive actions reported in Alaska are difficult to compare due to the small number of references to these behaviors.

Coverage by the two newspapers of the Imperial Valley, California, earthquake was dissimilar in important respects. While Institutional-Adaptive and Emergent-Maladaptive actions received similar attention, behaviors categorized as Institutional-Maladaptive and Emergent-Adaptive were quite discrepant. The Outlook reported a number of actions involving organizational negligence in connection with severe damage sustained by the Imperial County Services building. Local officials were quoted as saying that seismic safety had not been a high priority in the buildings construction, nor had earthquake insurance been acquired despite a history of damaging earthquakes in the area. These reports which were critical of organizational planning and preparedness constituted fourteen per cent of the actions recorded in the Outlook. Neither these organizational problems nor others were mentioned in the L.A. Times. The activities of emergent groups received scant attention in the Outlook (five per cent) while the L.A. Times reported a range of these

actions including search, rescue and restoration activities, spontaneous evacuation and dangerous structures and positive victim orientations (sixteen per cent of all references).

The difference in coverage by the L.A. Times and Evening Outlook of the Imperial Valley earthquake invites speculation about the role of organizational factors in the news gathering process. The L.A. Times offered ten reports in the disaster produced by ten different staff writers. The Evening Outlook's coverage consisted of five reports, all from United Press International. In each of these articles, the origin indicated was El Centro, leading one to speculate that all were written by a single reporter who did not venture outside this one stricken community. A comparison of the two newspapers in terms of organizational and emergent references is also instructive. Ninety-five per cent of all Outlook coverage and 75 per cent of L.A. Times coverage featured organizational actions. Emergent behavior made up twenty per cent of L.A. Times coverage featured organizational actions. Emergent behavior made up twenty per cent of L.A. Times coverage and only five per cent of Outlook references. These observations suggest that news media attention to the activities of emergent groups is dependent upon a large allocation of staff reporters to the disaster scene. That is, when only one reporter is assigned to cover a disaster, there is a tendency to remain close to officials who are regarded as "reliable" and "authoritative." Only when several reporters are assigned can there be a sufficient division of labor to permit coverage of emergent groups among whom there are neither clearly identifiable spokespersons and leaders nor well defined disaster functions.

Both newspapers relied heavily on wire services in their coverage of the quake disasters in Italy and Algeria. All of the reports which appeared in the Outlook originated with United Press International. The L.A. Times which has its own wire service, relied on that agency for 41 per cent of its foreign coverage, on the Associated Press for 31 per cent and on Times staff writers for most of the remainder. Coverage of the substantive categories was quite similar for the two news media with the exception of the Emergent-Maladaptive category. Table 1 reveals that in both the Algeria and Italy disasters, the L.A. Times reported twice as many emergent actions deemed maladaptive as the Evening Outlook. Panic flight was the most frequently reported behavior in both the Times (46 per cent of Emergent Maladaptive references) and the Outlook (50 per cent). Psychological shock was reported in the Times to have occurred in both foreign disasters (31 per cent of references in foreign disaster coverage) while this behavior was not

mentioned in the Evening Outlook. Although the Times reported more maladaptive actions among emergent groups than the Outlook, the latter contained the only report in which such behavior was the main topic. This report, written by a UPI journalist, contained the headline "Starving Algerians Loot Stores Amid Death Scene." At the outset of the report, looting and disorder were made to appear rampant requiring a declaration of martial law in the disaster zone and orders for troops to shoot looters on sight. In the middle of this article, looting was described as "sporadic" and the report did not indicate that arrests for looting were made (S.M.E.O., 10-14-80). It is difficult to assess the possible effects of variables like number of reporters assigned or the priorities in coverage for foreign events. Since wire services were responsible for a great majority of reports, it is difficult to determine how many reporters were actually on the scene or how those who were present established their priorities.

There is no evidence that the social breakdown imagery is more prevalent in disaster coverage by community oriented newspapers than in those with a metropolitan orientation. In coverage of foreign earthquake disasters, the L.A. Times actually reported more breakdown behaviors by emergent groups than did the Evening Outlook. In coverage of domestic events, especially local ones which are easily accessible, the greater resources of the metropolitan medium (e.g., more reporters available for assignment, greater division of labor, more "angles," etc.) may contribute to reports which contain more references to the activities and orientations of emergent groups.

Official and Non-Official Sources

This dimension has been selected to explore the relationship between news sources and behavioral imagery. Sources are those individuals or agencies which provide journalists with information on the situation being investigated. Official sources include representatives of all levels of government, the major private relief agencies, public utility companies and university or institute affiliated earth scientists. These news sources are organizational actors with emergency period functions and scientific experts who are called upon to provide authoritative information on the disaster agent, in this case, the magnitude, epicenter and other geological aspects of the earthquake. Non-official sources include organizational actors without emergency functions (e.g., business people in the disaster impact area, churches, labor unions, etc.), unaffiliated eyewitnesses, victims, residents of the disaster area and journalists reporting the event.

Quarantelli (1975) has suggested that the perspective of official

sources is disproportionately represented in news media coverage of local crisis events. The "command-post" point of view, as he refers to it, reflects the activities and assessments of local social control agencies, particularly the police and city officials. While Quarantelli's work examines local media coverage of local events, he nevertheless highlights two points relevant to the present study which examines earthquake events of regional impact and are the occasions for local and extra-local mobilization. First, the one-sided official view of disaster response means that other perspectives are largely ignored, and second, that official accounts of events will not only feature organizational activities and assessments but will portray these actions as efficient and effective.

Among the officials who are typically approached for disaster response information are representatives of social control agencies (e.g., the police, sheriff, highway patrol and National Guard). The emergency functions of these agencies include the restriction or control of certain types of emergent behavior, especially activities connected with physical convergence on the disaster site (e.g., looting, observation of damage, unauthorized entry, etc.). Featuring the activities of social control agencies usually means that the behaviors these agencies are charged with controlling will be mentioned in news coverage, whether or not they actually occur. Since other officials often echo the concerns of social control agencies, we might expect a higher proportion of emergent actions to be maladaptive if these actions are reported from the perspective of officials.

Journalists relied on official sources for 76.4 per cent of all actions reported in L.A. Times and Evening Outlook coverage of the four earthquake disasters in the sample. The category of action in which officials provided the largest proportion (87.4 per cent) of information was the Institutional Adaptive. Here institutional actors and spokespersons for organizations served as news sources for activities conveyed to the news audience as important contributions to resolution of the crisis. For institutional response which was evaluated negatively, just 42.9 per cent of the sources of this information were officials. Reported Institutional-Maladaptive actions usually had their origin in sources outside the established emergency response system; in clergymen, political opposition leaders, victims and journalists covering the event. Officials were named as sources for just 36 per cent of the Emergent-Adaptive actions reflecting the fact that most of these activities are reported as eyewitness accounts or testimony from victims and residents.

Much of the social breakdown imagery, as we indicated earlier, falls into the Emergent-Maladaptive category. Panic flight,

disaster shock, looting and other types of physical convergence are behaviors about which we would expect journalists to inquire and officials to feel compelled to report as being controlled or guarded against. In short, we would expect most reports of Emergent-Maladaptive behaviors to have officials as their sources. This was indeed the case as 64.3 per cent of these activities had their origin in official sources. Consistent with Quarantelli's hypothesis that coverage of crisis reflects a command-post or social control perspective, law enforcement agencies and local officials were the most frequently cited sources for social breakdown behaviors (50 per cent of all sources identified). Eyewitnesses, participants and journalists were named as sources in 21 per cent of the reported instances of Emergent-Maladaptive actions. The results were similar in foreign and domestic coverage.

Sources of news information clearly play a major role in shaping the character of disaster news coverage. The heavy reliance of journalists on officials for emergency period information can be traced to long standing news gathering procedures. Elected officials and administrators are prized news sources during non-crisis periods as well as during community or regional emergencies. Many journalists, particularly those covering "beats" which include city hall or other agencies have established relationships with public officials upon whom they rely for a steady stream of information deemed to be of interest to news audiences. So it should not be surprising that these established news sources receive disproportionate coverage in a community crisis. Most journalists are not experts on the events they cover and face rather stringent deadlines, especially on a breaking story like a natural disaster. So journalists are most likely to approach various officials who have been reliable sources in the past for information which is "factual" and "authoritative" and which allows them to meet pressing deadlines. There appears to have evolved a symbiotic relationship between the press and public officials in which journalists obtain privileged access to newsworthy information, and officials can shape the tenor of events in which they participate to project an image of competence and control.

Format Variables

Several characteristics of news media coverage of earthquake disaster were recorded, not to examine existing hypotheses but to reveal various patterns or regularities which might contribute to an understanding of news images of emergency response. These included the date of the report and event, where the article appeared relative to other news (e.g., page one lead,

page one, other locations), the length of the report and whether activities appeared as "hard news" or as "human interest" items.

Recording the dates of the earthquake event and report revealed more about the obsolescence of news than societal response imagery. Disasters, even major ones which claim thousands of lives and cause extensive damage, are newsworthy for only a few days. News of the Alaska quake disaster, labeled the most significant earthquake in North America since 1906, all but disappeared from the pages of our newspapers after the fifth day. It is also clear that foreign disasters must be considerably more serious than those which occur in the United States to be considered newsworthy. The two foreign events in our sample which involved thousands of deaths generated approximately the same number of reports as the Imperial Valley tremor in which no one was killed or seriously injured.

The distribution of reported actions by emergent groups and organizations over the days of coverage adds an additional dimension to our earlier discussion of foreign and domestic disaster reporting. For American disasters, the brief but intense coverage tended to make the emergency period appear very short. Coverage of the Alaska disaster included 103 reports (64 in the L.A. Times and 39 in the Evening Outlook) which appeared over periods of five days in the L.A. Times and four days in the Evening Outlook. This pattern contributed to an image of rapid response, especially by institutional actors, and an efficient one as well. Reports of the two foreign earthquake disasters appeared over a longer period of time in both newspapers (five to seven days) but numbered only one or two articles each day. This pattern tended to portray a more prolonged emergency period. Also contributing to this image of foreign disasters is the appearance of maladaptive actions at both the emergent and institutional levels throughout the period of coverage. To the extent that maladaptive actions appeared in accounts of the American disasters, they were reported in the first day or two contributing to an image of early resolution.

Despite their short news life, major earthquake disasters may be prominently featured as lead articles or remain on page one over a period of days. The Alaska disaster was accorded lead story status with bold headlines in the L.A. Times for four consecutive days. On March 29, 1964, the Times added four additional pages to its first section (labeled pages 1A-1D) which contained story continuations from page one, maps of the impact region and annotated photographs. The Evening Outlook accorded the Alaska disaster headline and lead story status just one day (March 28, 1964) but non-lead stories continued to appear on page one for two additional days. Overall, the L.A. Times offered

four lead articles on the Alaska disaster, 37 page one reports and 23 in other locations. The Evening Outlook contained one lead article, twelve page one reports and 26 items in other parts of the paper. Early reports in both papers, those which appeared during the first and second days after impact, were lengthy and comprehensive detailing a broad spectrum of activities and assessments. Later reports tended to be shorter, more summary in character and introduce human interest elements absent in the first reports.

Examination of the various types of reports including hard news, feature articles, editorials, illustrations and annotated photographs proved to be important in the analysis of behavioral imagery. Feature reports merit special attention because they offer a departure from official assessments, mobilizations and other "hard news" which forms a great majority of all coverage. It is in the feature or "human interest" reports that a more detailed examination of emergent groups and actions is offered, usually from the viewpoint of survivors, local residents and other non-official sources. For example, in coverage of the Alaska earthquake, only eighteen per cent of all reports were classified as feature articles but these contained 47 per cent of all Emergent-Adaptive actions. Feature reports also contained 43 per cent of all references to Emergent-Maladaptive behavior in Alaska coverage but the number of such cases was quite small (in the entire Emergent-Maladaptive category there were just fourteen recorded actions). These findings suggest a relationship between reporting in the feature or human interest mode and the visibility of emergent behavior. Perhaps, as we suggested earlier, emergent groups and their activities are lower on the reportorial agenda than the highly visible organizational actions and actors which make up the standard subject matter of "hard" news. It seems at least plausible to argue that emergent group activities are popular topics for human interest items and appear only after the more pressing issues and activities are sufficiently covered.

Summary and Conclusions

The result of this study suggest that some caution is warranted in making the generalization that natural disaster coverage disproportionately portrays a breakdown imagery of communities facing a major natural catastrophe. In all disasters examined, the restorative actions of organizations were the most prevalent images conveyed in news coverage in newspapers. These actions, which comprise 73 per cent of all those reported in the sample,

contribute to an image of local, regional and national mobilization, mainly through specialized emergency organizations and other agencies which set aside routine activities to bring the crisis under control.

We discovered that the social breakdown imagery is significantly more likely to appear in coverage of foreign disasters than those which occur in the United States. While institutional efforts to alleviate suffering and recover from the disasters are equally visible in foreign and domestic event coverage, failures in those efforts are more often reported in newspaper coverage of foreign disasters. News images of emergent behavior varied markedly on the foreign-domestic dimension. In American disasters, the activities of victims, residents of the disaster area and other non-institutional actors were portrayed as controlled and rational, contributing to community recovery. In foreign disasters, emergent behavior appeared irrational, dependent or exploitative often requiring the intervention of social control agencies.

These results suggest a possible ethnocentric bias in coverage of foreign disaster response, a phenomenon noted by Gans (1979) as one of the "enduring values" in American journalism. This line of explanation, however, requires much more thorough analysis than provided in this study. The data also suggest an alternative explanation which accounts for differences in newspaper coverage of foreign and domestic events in terms of routine news processing. Perhaps this difference in coverage simply demonstrates a propensity for journalists covering American disasters to inject more human interest elements based upon direct observation and interviews with a variety of sources, while limited staffing forces reporters in foreign bureaus to stick to hard news items and reports from official sources.

The resources of the newspaper medium rather than its orientation to a metropolitan or community news audience appear to result in relevant differences in coverage of local disaster events. Having a larger news staff to assign leads to a more varied imagery of behavioral response. That is, the larger the number of journalists assigned and the greater their division of labor, the broader the focus in terms of actions, actors and viewpoints especially the actions of emergent groups and viewpoints of non-official sources.

Perhaps the most important determinants of disaster news imagery are the sources who provide newspaper journalists with information as the event unfolds. We found that newspaper journalists rely heavily on officials for information on a wide range of response actions, both those of their own organizations

and the activities of emergent groups. The well established relationship between journalists and officials offers an avenue of explanation for the prevailing image of rapid and effective response at the institutional level. Disaster response by emergent groups, when reported from the perspective of officials, often appears to pose only a burden to organizational actors. As the number of news sources expands to include a variety of non-official sources, the resulting images of emergent activities are more consistent with, and complementary to, those of community organizations.

The results of this study can only be described as preliminary. A larger and more varied sample of events must be analyzed before the conclusions drawn can be regarded as valid. Nevertheless, these results suggest that the newspaper news media, in their coverage of domestic crises, may be more consistent with social scientific findings than previously believed. The social breakdown images, identified by many scholars as myths, appear mainly in coverage of foreign disaster response. Disasters which occur outside the United States are, of course, much more numerous than domestic ones. Perhaps the prevailing public views of disaster response stem from a continual barrage of foreign disaster news and these images of chaos are simply generalized to all natural catastrophes, domestic as well as foreign.

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