THE DISASTER RESEARCH CENTER
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Research Note #9

Some Research Questions and Planning Implications Raised
by Observations Made at a Flood Threat in Laredo, Texas,
and Nuevo Laredo, Mexico, September 25, 1964.

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INTRODUCTION

As a result of heavy rains in late September of up to five inches in parts

of Southwest Texas, the Rio Grande River and its tributaries rose to flood or

near-flood stage in Del Rio, Eagle Pass, and Laredo on the American side as

well as in the Mexican towns of Villa Acuna, Piedras Negras, and Nuevo

Laredo. Of paricular concern on Friday, September 25, 1964, was Laredo,

Texas, where Weather Bureau and International Boundary and Water Commission

officials predicted the water would rise to a 39-42.5 foot level. Since this was

9-12.5 feet above flood stage, the DRC dispatched a staff member to the scene.

Because there were only infrequent flights to Laredo, the field worker

had to take a bus from San Antonio, and arrived in the supposedly endangered

area at noon on Sunday, September 27. Both formal and informal interviews

were conducted in Laredo and Nuevo Laredo on Sunday, Monday, and Tuesday.

Organizations contacted in Laredo included:

> Civil Air Patrol
> 4th Army, Fort Sam Houston
> American National Red Cross
> Civil Defense
> Police Department
> Radio Station KVOZ

Organizations contacted in Nuevo Laredo included:

> Police Department
> City Government

Contrary to the original prediction, the waters of the Rio Grande had

crested at only 34.2 feet in the vicinity of Laredo. As a consequence, only four

homes were damaged by flood waters. In essence there had only been a threat,

not an actual community disaster. Even for the threat, the twelve hour warning

before the crest occurred had given city and organizational officials ample time to plan and execute such evacuation, shelter, and feeding operations as had been undertaken.

Since it was evident on Sunday that no community organization had undergone any major stress, the field work focused upon the alerting and preparation procedures. Initially, agencies on the American side were contacted, and Monday afternoon and Tuesday was spent examining organizational responses in Nuevo Laredo. Obtaining information in Nuevo Laredo was more difficult than in Laredo because of the language differences and the greater inaccessibility of city officials. The absence of major strain on community organizations did not seem to warrant a more extensive study, so the DRC staff member returned after four days.

The following pages point out some of the research questions and planning implications that emerged from a consideration of the limited data obtained in this field excursion. The questions and implications are divided into three categories, those pertaining (1) to CD organizations, (2) to other organizations, and (3) to community emergency social systems. In most instances, only questions and implications are posed, although occasionally hypotheses are advanced. The basic purpose of this report is to suggest some research variables to which field workers might be responsive, and to indicate some practical factors that might be considered in planning for the mobilization and activity of organizations and communities in large-scale emergencies. No attempt is made to present answers or detail recommendations, nor is any effort made to analyze the specific responses to this particular flood threat. The incident itself is merely used for illustrative purposes.

I. Questions and Implications for CD Organizations

1. Civil Air Patrol and ROTC cadets in Laredo seemed to perform the same function as do CD auxiliary or security corps in other U. S. cities. That is, they provided manpower for evacuation, shelter, communication, and transportation tasks. What alternative or additional sources of manpower are typically available for use by local CD organizations in community disasters?

2. The Laredo CD Director was head of a city agency, i. e., the Public Health Department. The County CD Director was a functionary in the Sheriff's office. In smaller cities, how is the speed and nature of the response affected by the fact that the person holding the position of CD Director frequently holds another and full-time job in an organization which becomes subordinate to Civil Defense during emergencies?

3. In Laredo, CD seemed to be equated with the Director as a person and/or with the Public Health Department. Among the possible variations, CD can be conceived of: (1) as a distinct organization, (2) as an organization with normal "peace time" duties as well as CD duties, or (3) as a person or small group of persons who occasionally "wear a CD hat." What are the consequences of these different conceptions during times of emergencies?

4. In Laredo, the Mayor "turned over the reins" to the CD Director. Legally he did not have to do so. Is this more likely to occur when the CD Director is an integral part of the normal administrative structure of a city than when he is head of a semi-autonomous agency?

5. Laredo CD had no plans for a control center or for shelters but became involved in setting up both. CD moved in this direction because other community

organizations did not seem prepared to step in and carry out such functions.

Is there a tendency for CD to fill whatever breeches develop when other groups

do not act to carry out necessary tasks during an emergency?

6. Lardo CD is concerned about the closing of the border in the event of war

and the effect on the city of thousands of migrants who expect to escape to

Mexico. Laredo CD has no solutions, believes it has not been offered guidance

by regional or national CD, and is resigned to being powerless to solve the

problem locally. To what extent do community CD units visualize emergency

problems for which they do not actively seek guidance from higher echelons?

7. Laredo CD had no specific plans for war or natural disasters. However,

the very existence of even a skeletal structure seemed to help in the coordination

of a rather adequate community response to the high water threat. Are even

"paper" CD organizations more functional during times of stress than might

superficially appear to be the case?

8. As a result of the flood threat in Laredo, the local CD Director:

a. feels the need for more manpower and vehicles;
b. believes he can convince city officials of the need for a number
   of CD subordinates;
c. became aware that shelter officals should know Spanish;
d. intends to prepare elevation maps of the city;
e. is personally convinced that he should have a two-way radio
   in his car.

What specific, concrete facts, procedures, needs and so forth do CD or-

ganizations typically learn as a result of undergoing a disaster experience?

9. Prior to the flood threat, CD apparently was not positively viewed in the

community. After the event, there were some signs that it was more socially

acceptable to be associated with a symbol of Civil Defense in Laredo. To what

extent are even merely threats of emergencies a factor in changing the image of CD?

II. Questions and Implications for Other Organizations

1. Other earlier studies have indicated that there are some major group differences in American and Mexican responses to crises.[1] These also appeared in this potential disaster. There were similarities, but there were also noticeable differences in organizational reactions to the flood threat. For instance, although evacuation occurred in both Laredo and Nuevo Laredo, different organizations participated in the activity. Also, similar agencies in both cities did not perform the same functions. For example, personnel from the Nuevo Laredo Fire Department searched for dead bodies in the river, whereas this task is usually one for county officials in Laredo. Presumably, such variations reflect cross-cultural differences in values and social relationships that exist in American and in Mexican society. Apart from theoretical implications, observations of such phenomena clearly raise questions about the possible different consequences of varying structures for emergency planning and functioning.

a. City government. Although both cities are somewhat of the same size, each having a population of over 50,000, their political structure and resultant functions are somewhat different. Thus, in Nuevo Laredo there is no county government, a weak state government, and a strong Federal government which carries on many of the activities traditionally assumed by city agencies in the United States. Therefore, it was the Hydraulic and the Public Works Departments

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[1] R. A. Clifford, The Rio Grande Flood: A Comparative Study of Border Communities in Disaster, Washington, Disaster Research Group, National Academy of Sciences, 1956, and Charles P. Loomis, Social Systems, New York, Van Nostrand, 1960, p. 136.

both under the Federal government, which prepared sandbags during the threat. It was the Water and Sanitation Commission, a Federal department, which covered pipes and sewers in the face of a possible flood. Similarly, rehabilition and welfare in Nuevo Laredo is handled either by the Federal government, or by a club of upper class women who collect money and materials for welfare during the year. The Mayor did have under his control the fire, service, and maintenance departments for evacuation and debris removal, but in emergencies he would direct them through his Police Chief.

Clearly all sorts of questions are involved in the possible differences in speed of mobilization, ease of communication, degree of coordination, and so forth, when the city government is relatively simple and very limited in scope, as against when it is far more complex and has broader responsibilities, as in the United States. It would seem that these are problems that could only be studied in a cross-cultural context. There are probably not enough formal variations among American city governments to allow any meaningful examinations of these matters.

b. Law enforcement agencies. There are differences in both organizational structures and resource capabilities between the protective forces that were available in Nuevo Laredo and those normally present in a comparable American city. The Nuevo Laredo Police Department consists of 75 policemen and 25 secret service agents. In addition, there are about 150 part-time "watchmen" in the city. The police cars have no radios and thus have to depart from and return to the police station after each call. Other equipment is also somewhat limited, even though the department supposedly has more administrative

responsibility over some public service agencies than do the police in Laredo. The order of priority in calling upon law enforcement officials in emergencies in Nuevo Laredo is: (1) the policemen, (2) the secret service agents, (3) the eight state police locally stationed, (4) the eight federal police locally stationed, (5) the firemen, and finally, (6) the military.

Given some non-comparability in structure and resources, it was not surprising to note differences between the Laredo and Nuevo Laredo law enforcement agencies in the tasks each carried out. The Laredo department participated in evacuation efforts, for example, but the Nuevo Laredo police did not. However, the multiple differences in this particular instance precludes going beyond the general observation that a different structure was correlated with different functions.

c. The Red Cross. The Red Cross in Neuvo Laredo, as in Mexico generally, functions primarily as a medical organization. It operates on the principle that the greatest need is in the field of health and medical care. Thus, the Red Cross administers and mans a hospital in Nuevo Laredo which offers free medical care and ambulance service. (There are only four private and one military hospital elsewhere in the city). The Red Cross does not operate shelters or provide food. At the time of the flood threat, one hundred families in Nuevo Laredo were evacuated to three school buildings. The people brought their own mattresses with them. The city provided food for breakfast. The Red Cross, in this instance, did prepare the food.

This is a clear example of a cross-cultural difference in organizational functioning. Of interest is the fact that no group provided what the Nuevo Laredo

Red Cross did not provide, i. e., bedding. It could be hypothesized that different cultural values affect whether any need which is not met by an organization will be met by another group or only through the convergence of individual mass behavior.

2. All of the American Red Cross personnel on the scene in Laredo were from the regional office in St. Louis. These persons generally see their duties as quite similar for each emergency in which they work. Therefore, to the extent that the American National Red Cross is involved locally, one can expect them to attempt to perform similar functions in each disaster.

However, what problems arise because of this when non-local-level personnel become involved with the local organization? Do national and/or regional Red Cross personnel have the same conception of tasks as do local chapter members? If there are differences, how are they reconciled?

3. A National Red Cross staff member in Laredo indicated that the role of the organization is to alert, evacuate and move in order of priority: 1) people, 2) furniture, 3) livestock, and 4) grain and buildings. To what extent does this normative order predict actual Red Cross behavior in disasters? Also, do the priorities of National and local Red Cross chapters generally coincide?

4. On Sunday evening, a free meal was being served in Laredo, presumably only for those persons who had evacuated. However, there was a substantial convergence of non-evacuated individuals and it appeared that the Army and the Red Cross might run out of food. Discussion ensued as to whether or not some people should be asked to step out of the waiting line. The Red Cross suggested that serving be continued until the food gave out. Organizational personnel made

reference to the possibility of a newspaper seizing upon the situation and stating

that the Red Cross had denied food to the needy. Thus, everyone in line was

served.

What are the circumstances under which organizations see themselves

forced to act contrary to what they consider their operating principles because

of perceived necessity of maintaining an image? Are some groups more vulner-

able to such behavior than others? How often does such behavior occur?

5. Prior to and during the threatening period in Laredo, one of the radio

stations periodically called Del Rio and Eagle Pass for weather information.

This station also asked people over the air to call in the amounts of rainfall they

were receiving in their neighborhoods. The audience response was reportedly

immense. Some of this information was then regularly relayed on to the local

Weather Bureau.

This establishment of what was essentially an informal feedback mechanism

by this organization raises a number of questions. Does involving the general

public in such activity make them more accepting and likely to respond to later

official warnings that might be issued by organizations doing this? What dis-

tortions might result in technical assessments of agencies arrived at from data

gathered and passed through non-technical communications channels of other

groups? What are the conditions which generate the development of such kinds

of information feedback mechanisms outside of the official organizational

structure for such purposes?

6. The Police Department in Laredo responded to the threat in various ways.

Friday and Saturday, 57 men were on double shifts (38 men at a time). Eleven

patrol cars were used from 3 p.m. to 7:30 p.m. on Friday to untangle a 15-block

traffic jam resulting from people crossing the International Bridge, many of whom had come to see the rising waters. At least 6 policemen were assigned to keeping persons back at a safe distance on shore from the rapidly rising Rio Grande. For a twelve-hour period starting Friday at 1 p.m. the Police covered an assigned area warning people of the high water and actually transporting them to shelters. Many persons also kept calling Police Headquarters for information and about the need for evacuation.

All this convergence behavior made it difficult for the police to perform other duties that they might normally have been expected to perform. Thus, they did not station men in shelters or around evacuated homes. Looting was reported at 3-4 a.m. Saturday. Three police cars sent to guard against further looting had to be subsequently assisted by two cars from the Sheriff's office and a number of Laredo AFB patrol cars. The police department behavior in this instance suggests that there are situations when organizations will lessen their emphasis on some traditional tasks because of the urgency of demands for the carrying out of other traditional tasks. What are the nature of the demands which will lead to such shifts in emphases? Are there differences between organizations in this? What are the circumstances that will bring an organization back to its normal and traditional activities?

III. Questions and Implications for Community Emergency Social Systems

1. A functional breakdown of which organizations did what in Laredo includes:
   a. Alerting and Technical Information: Weather Bureau and International Boundary and Water Commission (IBWC);
   b. Evacuation: Police, Sheriff, and Fire Departments;
   c. Shelter: Civil Defense, Schools, Air Force, and Red Cross;
   d. Food: Army and Air Force;
   e. Manpower Resources: Civil Air Patrol and High School ROTC;

    f. Operations of Control Center: Sheriff, Civil Defense, and City Officials;

    g. Information: Civil Defense and Mass Media;

    h. Social Control and Protection: Police, Sheriff, and Air Force Military Police;

    i. Rehabilitation: Red Cross.

It might be hypothesized that the occasion of a disaster calls into play certain activities that are to be performed independently of any specific organization available to perform them. Community strain during emergency arises when the community collectively defines a situation as calling for certain activities to be performed which are not being adequately performed at that time. Thus, community stress is the condition of forging out new patterns or innovations in response to the strain. The key general question to be examined in this connection is why does the division of functions among organizations take the pattern that it does in community emergencies?

2. Laredo officials called an 11 a.m. meeting on Friday before the predicted high waters were to reach the city. It was attended by representatives of both public and private organizations.

A general coming-together of this sort seems to occur in most community disasters (whether there has been prior warning or impact is unexpected). Who typically initiates such meetings encompassing community-wide emergency organizations? What are the general subjects of discussions and how are decisions made at such gathering? Where such meetings do not occur, what seem to be the consequences for the functioning of community emergency social systems?

3. At the 11 a.m. meeting in Laredo, there were some allegations of manifestations of friction between different political factions.

How do antagonistic local political lines or entities affect community

disaster operations? How intense does an emergency have to be to override

such differences and allow a measure of cooperation? Is political animosity

in a social system more likely to appear at later rather than earlier stages of

the community reaction?

4. One radio station in Laredo presented live broadcasts of both the 11 a.m.

general meeting and on-the-scene accounts of the high water at the International

Bridge.

Do live broadcasts add a sense of urgency or immediacy to a community's

definition of emergency? Does such public broadcasting of what is occurring

serve to weaken the appearance of inter-organizational conflicts which might

more easily be expressed in private meetings? Are there any dysfunctional as-

pects to such public airing of a potential threat and the steps the organizations

in a community are taking to meet it--e.g., the creation of a feeling that

"someone is taking care of the problems" leading persons and groups to slacken

their own responses to the emergency?

5. Seemingly relevant factors in Laredo which defined the high waters as a

possible threat or not included:

    a. Previous experience with a highly damaging flood in 1954;
    b. Mass media reports earlier in the week of flooding and damage up the
       river from Laredo, especially in Del Rio;
    c. Conflicting predictions from Nuevo Laredo and Laredo about the
       height the water was to attain; and
    d. Predictions of high water from official sources, i.e., the Weather
       Bureau and the IBWC.

Local people almost inevitably in their interviews and comments touched

on the "54 flood". It clearly was a major reference point or symbol in the

historical "memory" of the city. To what extent do such "historical memories"

affect the development of community emergency social systems? Do they tend to slow down or speed up the group response to a new threat? In what ways are such collective symbols used as a device measuring for what may or may not happen in the later emergency?

Laredo and Nuevo Laredo radio stations gave conflicting predictions about the probable height of the flood. In part, this resulted from the fact that Mexican officals measured from their side of the river (which is deeper) and used the metric system. Because of the bilingual ability of the Laredo population this information was apparently being circulated concurrently with the not altogether consistent information being issued by the American stations. It might be hypothesized that such ambiguity in communication would lead to a tendency to accept the less threatening information. The massing of spectators on and around the bridge and at the river bank suggests that many persons did not take the warnings too seriously. The question is suggested, to what extent can a community emergency social system emerge if large blocs of the population do not define the situation as at least potentially dangerous?

The combination of mass media reports of floods elsewhere and the predictions of high water from responsible sources undoubtedly made some officials more willing to accept the flood threat than would otherwise have been the case. How much reliance is placed by public officials on the mass media? What happens if there is a difference between the information being presented by the media and by other sources? What difference does it make if a community relies on many, although possibly discordant, sources as compared with a few but probably consistent sources?

6. Several aspects about the limited evacuation in Laredo stood out. Officials appeared on television to explain that certain areas did not have to be evacuated because they were on the periphery of the possibly endangered zone. All those requested to move were in the lowest socio-economic neighborhoods. Of the approximately 400 families who were asked, about 50 did not evacuate.

What, if any, public confusion is likely to follow from a formal announcement that it is not necessary to evacuate when nearby residents can be seen moving? Are agency and governmental officials more ready and willing to request people from the lowest socio-economic levels to move than they would be to ask others of different social classes to do the same thing? Could the failure to evacuation suggestions by some persons and families be a consequence of their perception of the particular organizations making the requests?

7. In Laredo, the Red Cross, CAP and Civil Defense among others, used the control center. Other organizations tended to work from their usual base of operation. Still others sent representatives to the control center while generally working from their own headquarters.

What determines who uses the general control center during emergencies and the purposes for which it is used? It might be hypothesized that the more traditional community organizations do not rely as much on, or so heavily use, the general control center as do less traditional, more informal, or less well-established groups. Will there be a basically different pattern to the community emergency social system if heavy use is or is not made of such a center? What are the consequences for community response if one is never established?

8. CAP and ROTC high school students were used as manpower for evacuation

moving supplies, transportation, and communication. However, they could be used only for a limited time. Thus, much of the CAP activity on Sunday of returning shelter supplies was accounted for by the fact that the CAP personnel had to return to school the next day.

Use of such volunteers always poses problems in emergencies. For example, what are the consequences of letting relatively inexperienced personnel man part of the communications at a control center? How well can such persons be integrated with experienced role encumbents in established organizations? More generally, how effective is it for a community in an emergency to attempt to use young and inexperienced volunteers who have responsibilities in other parts of the institutional structure?

Answers to all of the above questions would undoubtedly substantially advance our knowledge not only of disaster reactions, but of organizational, community, and societal responses to crises.