Chapter 10

COMPARATIVE SIMILARITIES AND DIFFERENCES

How typically were the responses in Mexico City? To what extent can we extrapolate the findings from Mexico to the United States? This chapter considers these questions.

Generally speaking, there were comparative similarities and differences in the individual and group patterns which appeared after the earthquake. That is, many responses were identical or similar to those which would likely to be observed in a disaster in a community north of the border or even elsewhere in the world. However, certain aspects of the organizational and individual behaviors seemed to differ either quantatively or qualitatively from what has been typically found in past disasters in the United States. We will now separately discuss these two patterns, particularly what might account for the comparative differences.

Similarities

Very apparent are the many similarities between what we observed in Mexico City and what has been found in hundreds of studies of disasters in the United States (Barton, 1970; Dynes, 1974; Mileti, Drabek and Haas, 1975; Quarantelli, 1978; and Drabek, 1986). There are many similarities in behavior. Seemingly much of the emergency time response is not affected by different sets of sociocultural values and beliefs, sociostructural differences, or by situational contingencies in the two countries.

Thus, in both societies, for example, many volunteers to deal with disaster generated tasks appear both in the short and long run; individuals around impacted sites are the initial responders in search and rescue; the injured are not given triage; those needing shelter go to relatives; heavy use is made of mass media accounts for news about a disaster; victims learn relatively little from their experience; organizations with relevant tasks attempt to respond as quickly as they can; formal interorganizational ties prove problematical; authority/command structures are initially ignored in an effort to do something; emergent groups of all kinds appear; organizational role conflict is not a problem; resource allocation is more of an organizational problems than resource availability, etc.

If nothing else, the study in Mexico supports the universality of certain kinds of behavioral response patterns, both on the part of individuals and of organizations. Let us note eight of these

similarities, all of which cut across the individual-organizational distinction, in more detail, and suggest how extensive they are cross-societally.

a. Search and rescue. The great majority of search and rescue is undertaken by individuals and informal groups of citizens and is underway immediately after disaster impact. The vast bulk of survivors are found in the first few hours. Some localities get researched often. All this happened in Mexico City and typically happens in disasters in the United States (Mileti, 1975). The somewhat later and more organized extensive involvement of extending organizations in search and rescue activities has also been often observed in community disasters in the United States. This task is seldom the responsibility of any one specific organization, so many and varied groups that possess relevant personnel and resources undertake the task (see Drabek, Tamminga, Kilijanek and Adams, 1981). Very few are rescued or bodies found by later arriving search teams from outside the community. Similar search and rescue patterns have been reported in disasters elsewhere in the world including developing countries.

b. Convergence. In the capital of Mexico there was an initial mass convergence of personnel upon specific disaster sites, and a similar convergence of material and supplies quickly followed. This created numerous difficulties for the different extending and expanding organizations. The process especially created many difficulties in the integrated use of resources. The appearance of a convergence problem has been so often noted in studies in the United States that it has almost taken on the stature of a "law" among disaster researchers (especially since its first depiction by Fritz and Mathewson, 1957) and it has been reported in major disasters many places around the world (Drabek, 1986: 174-175).

c. Volunteering. The massive volunteerism and the manifestation of altruistic behavior that epitomized the response in Mexico City has also been frequently observed in the United States and elsewhere, although <u>not</u> everywhere. Some of the earliest disaster studies have reported this pattern (e.g. Barton, 1970). The problems of integrating the actions of individual and group volunteers with organizational activities has also been noted in many different disasters (Form and Nosow, 1957; Dynes, 1974) and has proved problematical in many places around the world (see Drabek, 1986: 196-197). However, both individual and group volunteering might be related to different socio-cultural values.

d. Sheltering. The patterns of shelter utilization that appeared in Mexico City also are similar to what has been observed in the United States (Quarantelli, 1984c). Although hundreds of thousands were homeless, and a large number of public shelters and camps were established, they were not utilized by the very many forced out of their homes, except for a few from the lower socio-economic strata. Victims moved in with relatives or provided their own shelters,

often in areas close to their damaged homes. These are very common patterns in major disasters almost anywhere in the world, and fail to appear only when an area is totally physically devastated as was true in the Friuli earthquake in Italy (see Geipel, 1982) or the Yungay, Peru avalanche (Oliver-Smith, 1977).

e. Security and access. As occurred in Mexico City, quickly establishing security around impacted sites is a typical disaster response. But usually too there is eventual disagreements, and disputes emerge involving organizations with other organizations and citizens with organizations over who has legitimate access to an area (Wenger, Quarantelli, and Dynes, 1989). This has also been reported elsewhere such as Italy, Sweden, Holland and Peru (Drabek, 1986: 230-231). Unplanned efforts to institute pass systems and circumventing of them by individuals and groups are likewise common in the United States. Although military control was not imposed in Mexico, whether the imposition of martial law or rule in disaster in some countries reduces these problems, is unclear.

f. Needed resources. Typically in almost all disasters in the United States, it is not the absence of but the integrated use of resources that is problematical (Dynes, 1974), as was also the case in Mexico. In fact, often there are more people, goods and equipment available than can be efficiently used. Occasional exceptions are when organizations need specialized equipment or personnel, as for instance in undertaking work on collapsed high rise buildings (Olson and Olson, 1987), or unusual demands on facilities (e.g., space to process very large number of dead bodies, see Hershiser and Quarantelli, 1976). Moreover, resources may be needed in societies which on an everyday basis are resource poor or lacking at the time of the disaster (Quarantelli, 1986).

g. Information distribution. The extensive heavy involvement of mass communication organizations in post impact reporting is almost universal in the world (Quarantelli, 1989). Heavy usage by the population of news and information transmitted by the mass media organizations has been noted in other societies such as Japan (Hiro, Mikami and Miyata, 1985). The dependence on mass media accounts by responding organizations to learn about the disaster, as occurred in Mexico City, has also been observed in the United States (Quarantelli, 1989: 17). To some extent this pattern would appear to be dependent on the existence of a completely evolved mass communication system, which is not the case for all contemporary societies, especially in the developing world.

h. Responsiveness. Both individuals and organizations in Mexico City attempted to do what they could as soon as possible after impact. There was not, as is also typical in the United States, a failure to respond because of being psychologically stunned, affected by role conflict, or otherwise being rendered passive by the disaster impact and its effects (Drabek, 1986: on individual behavior, see 133-142, on organizational behavior, see 158-160).

This is not to say all responded immediately or necessarily effectively but:

> people do not abandon their social histories when confronted with adversity--and organizational systems reflect it (Drabek, 1986: 158).

While there is no reason to think that this does not hold true in all societies, the data base on this is weak especially for developing countries, although our Mexican case is suggestive.

We are not saying that the patterns in Mexico City, even in the indicated dimensions, were identical to that which appear in disasters in the United States. However, with respect to these activities and others, there is a general similarity. Knowing what the pattern is in one society, allows a good prediction of what is likely to appear in the other society along the indicated dimensions.

Differences

While there were many observed similarities in responses, there were also some differences. These aspects may not be and are probably not unique to Mexico, but they are different from what might be anticipated in the United States, if not elsewhere. In some ways, what we will note can be thought of as being rooted in certain social characteristics of Mexican society which, however, Mexico may share with other social systems.

We will discuss six dimensions in which there were enough notable differences to lead us to at least question the full and direct transferability of our impressions and conclusions from the earthquake to disasters in the United States. These dimensions, in our analytical approach, have to do with certain structural, organizational, political, cultural, social class and social value characteristics which are partly different in Mexico and in the United States. Some of the response patterns and differences are rather substantial, but others are more dissimilarities in degree, than in kind.

We will attempt to clarify these points by first asking a general question, and then discussing what possible answers might be given. In part we also challenge whether certain analytical distinctions which we and other researchers often use might not be better qualified or limited in some ways.

(1) Does as much decentralized and uncoordinated behavior appear in disasters in the United States as we observed in Mexico?

As noted earlier, we found much decentralized and nonintegrated behavior. It was more than we <u>initially</u> expected in Mexico.

However, leaving that aside, a simple answer to the question is not possible. Our later analysis suggests we could anticipate more or less of a decentralized response in disasters in the United States, depending on the degree of urbanization or metropolitanization involved.

There are two issues which need to be raised concerning the way in which certain structural variables, commonly used in comparative studies, were involved in our findings. First, we initially assumed that the Mexican political system was more centralized than the political system in the United States. Second, we equally assumed that because of differences in the level of urbanization and industrialization that Mexico City would be less complex than urban areas in the United States.

On the issue of centralization, most scholars of Mexican political life identify centralization as one distinctive feature of the evolution of that political structure (see for example most of the authors cited in Chapter 1). But there may be several dimensions of centralization, and not all of them will vary together. For instance, McLuckie (1977) in his study of disasters in three different societies---the United States, Italy and Japan---used centralization as a major explanatory variable. He pointed out that in the literature on political development, centralization was used in two different ways: first, to describe the structure of power, and second, to describe the pattern of decision making.

Using that distinction, the Mexico City situation might illustrate centralization in the structure of power, but given that context, there is considerable autonomy in decision making at lower levels of the government. While we could not fully document that this specific variant of "centralization" exists on a daily basis for Mexico City, we do know it does approximate what we observed during the early phases of the emergency period. The point being raised here is that centralization may not always be a useful concept on which societies can be compared. In some "centralized" societies, there still is considerable autonomy in decision making at lower governmental levels, especially in an emergency. This was true in Mexico, and probably is true elsewhere, especially in developing countries.

On the issue of structural complexity, sometimes there is a tendency to think of "developing" countries as structurally less complex across-the-board than are "developed" countries. (The very terms used---developed and developing reinforce that perception). Quarantelli (1986) has challenged this in terms of disaster preparedness planning. In fact, the Mexico City situation provides a good illustration of the point that structural complexity can exist within the context of less complexity in the overall societal structure. The complexity which existed in the metropolitan area of the capital of Mexico is a classic example of that proposition. The largest urban configuration in the world contains a federal

district with the capital of the nation located within its boundaries. Federal and district agencies have overlapping functional responsibilities. By any criteria, there is a very complex social structure in that situation.

Now there can also be substantial structural similarities and differences in the range of communities within a given society. If so, organized response in one locality could vary considerably from that in another. On one level, this complexity suggests that caution should be exercised in generalizing findings of organizational response from the Mexico City situation to all community responses in the United States. There is both more and less structural complexity than is true of Mexico City. Some less urbanized communities in the United States have far less complexity whereas some metropolitan areas may be even more complex.

The closest parallel to the capital of Mexico would be the Federal district in Washington, D.C., but there would still be considerable differences in a response situation. Local government within Washington possesses considerably more autonomy than is the case in Mexico City, and there is no counter part to the delegaciones. The role of the Federal government could be expected to be much different than what was observed in Mexico City. Given not only the issues of complexity and location, there is a mandate also that emergency response to disasters in the United States is primarily a local responsibility (although this does not deny that the system along many lines is one of "shared governance", see May and Williams, 1986). What DRC observed of the response in Washington, D.C. to other kinds of community crises, such as civil disturbances and potential disruptive massive assemblages of people in the 1970s, is supportive of the notion of a very decentralized planning and response pattern at the local community level.

But even noting these differences between Mexico City and Washington, D.C., there are nonetheless impressive similarities when organizational response behavior is compared. The organizations we studied in Mexico, both public and private, seemed to react and to have the same kinds of problems repeatedly reported for similar organizations reacting to disasters in the United States (Quarantelli, 1985d). We would argue that there are many universals in the behavior of organizations that cut across national social systems and this is true in disasters as well as other areas of social life. Some of these similarities in organizational behavior may be due primarily to similarities in organizational complexities which characterize cities around the world, regardless of their specific cultural setting.

In effect, we are saying that the large number and complex relationships of formal organizational entities in any metropolitan area may be more important in disaster preparedness and response than the sociocultural context in which such organizations are embedded. Preoccupation with differences in cultural values and

beliefs can obscure similarities in social structure. Thus, a disaster response in a similar disaster in Los Angeles, for instance, might show a similar decentralized pattern as was observed in Mexico City, but this would not necessarily be true of a small town in Ohio or Delaware. (Green, 1984, in an analysis of disaster oriented groups in rural and urban areas in the United States found those in the latter to be more decentralized in decision making than those in the former).
(2) Do we see as much extending and emergent organizational behaviors in disasters in the United State as we saw in Mexico City?

At one level, there appeared to have been more extending and emergent behaviors in Mexico than has typically been reported in the United States. If so, what might account for the difference? There are a number of possibilities, but we think the major explanation lies in the nature of the large work organizations that exist in Mexico City.

It is possible that the seeming differences being noted here are partly a function of the way disaster reporting and researching is mostly undertaken in the United States. The Disaster Research Center, for example, has increasingly come to believe that there is a considerable underreporting or underdocumenting of emergent behavior in disasters. Organizations in retrospectively describing disaster activities or writing after action disaster accounts tend to report traditional and usual behaviors rather than what is seen as bureaucratically divergent, if not deviant behavior (Quarantelli, 1987a).

Disaster researchers too tend to look for regularized behavioral patterns rather than more infrequent and noncontinuing actions. Mass media accounts also, for a variety of reasons, will tend to miss much emergent behavior, for example, reporting on the later formal search and rescue efforts and having little if anything at all on the much more important informal search and rescue immediately initiated by survivors (see the content analysis touching on this point in Quarantelli and Wenger, 1990).

However, even if we accept the validity to some extent of the above methodological point, it does appear that extending and emergent behaviors appeared in Mexico more often than is typical in disasters in the United States. There are several possible explanations for this.

For one, there was very little prior planning for disasters in Mexico. Even though the level of disaster planning is still deficient in many cities in the United States (see Wenger, Quarantelli and Dynes, 1986), most of them have prepared better for disasters than did Mexico City, at least relatively speaking. Thus, it is possible that the considerable extending and emergent

response that appeared in the Mexican earthquake does not usually appear in the United States because of prior planning.

Also, in almost all the formal organizations we studied, work brigades to undertake disaster tasks were quickly formed. Their appearance was not the result of any preplanning. Rather they seemed to have emerged in part because many of the Mexican work organizations seem to be at the center of loyalty of many of their employees. Part of this difference may reside in a more "paternalistic" view of employees, having more to do with their "total" welfare than might be found in organizations in many other societies where work is a contractual time obligation. This difference is translated into the ability of non-disaster related organizations to mobilize their human and material resources rather quickly and effectively to perform needed disaster tasks. The more significant roles which extending organizations and emergent groups played in the emergency period in Mexico was in contrast to what might be expected in many other settings, especially in the United States. The contrast here is not to imply differences in helping behavior among different populations, but the fact that many work organizations in Mexico seemingly are a rather efficient social mechanism for mobilizing assistance.

Because of the differing political and economic systems, many organizations in Mexico are "governmental" that in many cities in the United States would be part of the private sector. This observation applies to a wide variety of enterprises and activities including transportation and some lifeline and medical services. Functionally similar but private groups in the United States might respond rather different than did the public governmental agencies in Mexico. Again of course many other countries around the world would more resemble Mexico in this pattern than they would the United States, and therefore might be expected to show the same kinds of response behaviors in disasters.

Certain distinctive patterns emerged in the organizational response pattern in Mexico City that should not be as readily expected in the United States. For instance, PEMEX played a major role in the disaster and undertook a wide variety of tasks, almost all on its own initiative. Because of its massive resources (and lack of significant damage to its own operations and facilities) it could act the way it did. Most communities in the United States generally lack such huge, resource rich organizations, and it is also difficult to see many even large corporations taking the lead role PEMEX did in the earthquake. Much of the corporate level disaster planning that is occurring in such areas as California seems to assume that the major responsibility of the organization is to restore its own functioning and take care of its own workers, rather than helping others in the larger community.

(3) Why are changes in disaster structures and functions with respect to disaster planning more likely to be the result of political considerations in Mexico than in the United States?

As indicated earlier many organizations in Mexico not only appeared to retrospectively recognize the value of disaster planning but went on to implement new relevant structures and functions. Clearly part of the impetus for change can be attributed to the fact that officials in Mexican organizations, if our informants were representative of a larger number of policy and decision makers, became aware in retrospect of the negative consequences of a lack of planning. They observed that their lack of prior planning had created serious difficulties for their groups and resulted in an inefficient response. Even where there had been some prior, although limited, internal emergency planning, the demands of the situation exceeded the capabilities of the organizations to respond. Most earthquake related tasks had to be improvised. Emergent ad hoc behavior was the norm. The lack of planning seriously hindered coordination among the responding groups. Organizational personnel not only lacked knowledge about the resources and capabilities of other groups, but they also did not know who to contact to gather that information and integrate their effort. The major exception to this is where groups had normal day-to-day contact with other relevant groups, which in some respects represented a form of unintended planning.

The expressed desire to prepare better for the future is a typical organizational afterreaction to disasters almost anywhere in the world. However, what seemed to differentiate the post impact recovery situation in Mexico City from what typically occurs in the wake of most disasters was that there was the "political will" to do something at the highest levels of the government. It was more than just recognition that planning could make a difference.

In the Mexican context, there appears to have been a perception that in a future similar disastrous occasion, the negative political consequences could create destabilizing factors for the total social system and serious problems for the continuance in power and government of the ruling party, the PRI. As we noted earlier in Chapter 3 in presenting the political and governmental context, there were certain inherent stresses and strains in the Mexican social system. Whether the concern that another disaster could be so dysfunctional was a correct perception or not could not be examined by our study, but the belief seems to have supported a "political will" to do something as bureaucratically drastic as creating a new disaster oriented organization (changes and modifications in disaster planning at organizational levels below the very top could also be explained in the same way).

The perception was supported by certain public demonstrations and anti-regime crowd behavior in the aftermath of the disaster even though our survey studies showed little across-the-board negative

views of the government and its actions in the earthquake. But even symbolic actions, such as public protests, can be used in very important ways in the development of collective behavior and social movements directed at an existing government (see Turner and Killian, 1987: 286-308). So the perception that the earthquake effects were being used by opposition groups was in that sense not inconsequential. The "political will" for action was related to the operative political context.

Of course disaster occasions in the United States are not devoid of political overtones, although the matter has been little addressed in the American research literature except for the use of international disaster relief as a "political weapon" (for the absence of studies see Taylor, 1978; for a discussion of the politics of aid distribution, see Glantz, 1976; Committee on International Disaster Assistance, 1978). The decision on whether or not to have a federal declaration of a disaster are sometime influenced by political considerations. The massive convergence on major disaster sites of governmental officials from the President of the United States to the local village officeholders is not wholly guided by humanitarian or even governmental efficiency concerns. And even the most recent changes in the federal disaster relief act which structures much of the national response to a major disaster can be attributed to factors operative in the political system of the society.

Political considerations are even more explicit and apparent outside of the emergency time period, in particular disaster mitigation and recovery activities, for example (see Wyner, 1984; Rubin and Barbee, 1985). So even though disaster researchers have not undertaken much systematic research on the question, politics do seem to play an important role in some disaster planning and response aspects in the United States.

Nevertheless, political considerations were even more prominent in the Mexico City earthquake than they are comparatively likely to be in disasters in the United States. That is, it is difficult to see parallel consequences in both countries for disaster planning. The threat to national stability and their power that the PRI saw in Mexico is not an equally viable scenario north of the Rio Grande. As such, political aspects are far less likely to be a factor in the development of disaster planning at any governmental level, federal, state of community. (It is however interesting that some recent institution of disaster planning in certain parts of the private sector in the United States and Europe, among corporate entities such as nuclear power and chemical companies, does have some overtones of mitigating threats to the economic stability and political powers of the private sector segments involved, see for example, Lagadec, 1982; Shirvasta, 1987; Rosenthal, Charles and Hart, 1989).

However, this is not say that political considerations might not come to loom large in any given major disaster or catastrophe in the United States. While not likely, it is not totally improbable. In fact, because blame assignment for impact aftereffects are more likely in the United States than in Mexico, as we shall discuss below, it is possible to visualize a possible convergence of political considerations and the seeking of some people or groups to blame for some disaster outcomes.

The structural, organizational and political aspects we have discussed seem more applicable at the macro rather than the micro level. When we turn to individuals and households, other aspects, such as different cultural norms, social class beliefs and social values seem more important in an explanation of the observed comparative differences.

(4) While there was identification of many problems, why did less blame assignment occur in Mexico City than appears to be the case in disasters in the United States?

In contrast to what is usually observed in the United States, the population in Mexico City expressed little dissatisfaction with organizational performances in and after the earthquake. Also, citizens did not change their evaluations over time and did not express dissatisfaction even in connection with the most singled out problem--that of sheltering the victims of the disaster.

There seem to be certain findings in the study which point to significant cultural differences which are worthy of additional consideration. First, we found in our research a relative absence of fault finding, blame, or attribution of problems to what specific organizations, or, more abstractly the government did or did not do in the aftermath of the earthquake. From the perspective of many in the United States, the reaction would seem rather passive, non-challenging of authority, if not almost a simple manifestation of a fatalistic attitude of "what will be, will be". Certainly research in the United States has indicated that disaster victims tend to be more active in their reactions to disaster-related difficulties and quick to blame organizations for failures to solve problems (see, e.g., Barton, 1970; Dynes, 1974; Mileti, Drabek and Haas, 1975; Drabek, 1986).
In fact, in disasters of much less magnitude and impact than the Mexican earthquake, individuals in the United States have reacted far more strongly and negatively to what happened. Also, there is a tendency for proactive rather than just reactive responses to even just the potential possibility of a disaster in certain communities in the United States, as reflected by the numerous emergent citizen groups that have surfaced in recent years to deal with threats of and not actual impacts of disasters (Quarantelli, 1988a). These differences, as well as others in the two societies as far as disasters are concerned, could be primarily attributed

to some of the ways they differ in some of their sociocultural values and beliefs.

What seems striking in our Mexican study is the lack of criticism of the major actors in the emergency response, namely the Presidency and the DDF while the military and police received less positive evaluations. It is quite possible that those more negative evaluations were rooted in predisaster attitudes towards the police and the military, rather than being derived exclusively from their activities in the emergency. While there were pockets of dissatisfaction which were expressed in the form of public demonstrations which received considerable mass media attention, our data suggest that such dissatisfaction was neither deep nor widespread. Perhaps the more paternalistic stance of the Mexican government, which a number of observers have noted, provides a buffer against the assignment of blame.

By contrast, we would expect in the United States more widespread criticism of various agencies and entities in the emergency response or in the immediate recovery period. In fact, in two recent very major disasters in the United States, the Loma Prieta earthquake and Hurricane Hugo, there was considerable public criticism of the federal government, the lead federal agency in both responses, namely the Federal Emergency Management Agency (FEMA), and various other federal, state and local governmental groups involved in the emergency and immediate recovery efforts.

This difference in the two societies may, of course, be due to cultural differences in the expectations of governmental services or even more broadly what might be expected of life. For example, some students of Mexico have contrasted some cross-cultural differences:

> When [Reavis] contrasts the Mexican and American views of life, death and the world he does it sharply and with rhythm. After listing what Americans do (they "believe that for every problem there is a solution, that nothing is beyond human understanding", ...Mr. Reavis then presents his view of the Mexican way ("Mexicans do not do any of these things," he writes, "because they don't believe in them. They don't believe that life is fair, or that it makes any sense at all")..."Mexicans don't necessarily want to change" (Castaneda, 1990 in a review of the book Conversations With Moctezuma: Ancient Shadows Over Modern Life in Mexico).

Another possibility is suggested by some recent general work on political cultures. It creates a typology of five ways of life--egalitarianism, fatalism, individualism, hierarchy, and autonomy

(Thompson, Ellis and Wildavsky, 1990). If in general and ideal type terms Mexicans might be categorized as fatalistic and people in the United States as individualistic, this would have implications in their respective cultural expectations of disasters and how their governments ought to respond to them.

(5) Why are social class differences in reactions and responses in the United States not as sharp as they were in Mexico?

The variable of social class was more important than we anticipated prior to the study. If there was one background factor in both population surveys that stood out, it was social class. It affected a wide range of phenomena, for example, from the degree of initial earthquake impact that was suffered to how the individual felt about a variety of disaster related tasks activities that the government had undertaken during the year. While socioeconomic factors were not important in everything, they seemed to differentiate to a degree on most matters.

In one sense the observation that social class was an important differentiating factor should have, at least for sociologists, almost been expected. Notwithstanding that certain political ideologies deny their existence, social classes exist in all societies. However, again in contrast to particular ideological beliefs that suggest the opposite, there are substantial differences in how overtly they manifest themselves in life styles and behavioral patterns in various social systems (Kerbo, 1983; Wright, 1985). The characteristics of the social class patterns in the United States have been described in various ways (Rossides, 1976; Gilbert and Kahl, 1982), but in all conceptions there are significant differences between different strata, even though there is a tendency to deny that social hierarchies and inequalities exist (Gans, 1973).

However, socioeconomic differences conceptualized in any of the variety of different ways social scientists conceptualize them, have almost never been incorporated into studies by disaster researchers, at least by those from the United States. In fact, Taylor notes (1978: 276) that it is probably a valid criticism that the research "has been primarily undertaken on white, middle-class persons and groups". (For the rare exceptions regarding social class, see, e.g., Drabek and Boggs, 1968; Turner, 1976: 182-183; and Quarantelli, 1980: 126). Reconfirming this, Drabek (1986) in his recent inventory of the literature cites only about a half dozen studies that use socioeconomic variables in their data analyses. While some foreign theoretical criticisms of what has been called the North American disaster research tradition have alluded to the lack of socioeconomic factors in the studies done (see for example, Schorr, 1987, for summaries of this point of view expressed by German critics), very few studies done anywhere have used social class as either a descriptive or analytical variable.

The Mexican study clearly suggests that much more attention ought to be paid to social class differences among victims, again for both theoretical and practical purposes. From a theoretical point of view, using social class differences both descriptively and analytically should provide a much more powerful research variable than standard demographic and categorical dimensions such as sex, age, education, occupation, etc., which are not as intrinsically sociological as the socioeconomic status of the person. From a practical viewpoint, for example, emergency managers who have a homogeneous social class population may have rather different sets of disaster related problems of a social nature to deal with, than those in a community with a very heterogeneous social class composition.

Second, we have already commented on the fact that social class was an important explanatory variable in the study. There is some consensus among social scientists in both countries that social class distinctions are sharper in Mexico than in the United States, and that they therefore probably are more influential in affecting overt attitudes and behaviors. One study found, for example, that beliefs about social class differences are sharper in Mexico than in the United States (see, e.g., Tarres, 1987) and another concluded that there was a greater fatalistic attitude among lower class Mexicans (see Ross, Mirowsky and Cockerham, 1983). Still other research in Mexico unrelated to disasters is supportive of our finding that lower class respondents in our survey were less negative about the government than persons in other class categories (see, for example, David, 1976; 1979).

Also, as an indication of how Mexican researchers view the matter, we can note that the Instituto de Investigacion de la Comunicacion, the organization which conducted the population surveys for DRC, used socioeconomic dimensions regularly as a matter of course to stratify and weigh their samples toward the higher strata in their studies, since they deem class differences crucial for marketing and public opinion polling (personal communication). Certain kinds of hierarchical differentiations are also often used by survey and marketing researchers in the United States, but they are generally treated primarily as an issue of income and not lifestyle.

In our discussion in Part III of this volume where we reported the survey data, we documented and stressed that social class differences consistently were involved in many of the attitudes and behaviors of the individuals we studied. Do such social differences exist in disasters in the United States and what does the Mexican data tell us about what we might not have been seeing in responses in our society ? In part this is a very difficult question to answer because social scientists in this country, although not all of them, have often downplayed class distinctions, and researchers in the disaster area have generally ignored these social hierarchical factors in their descriptions and analyses (with the few exceptions we noted earlier). Our best assessment

is that social class differences are not as significant in disaster phenomena in the United States as they are in Mexico (see, Aspe and Sigmund, 1984), but they are more important than has been recognized up to now.

This may appear to be an effort to equivocate on the matter, but that is not our intent. Instead we are saying that the findings in Mexico point out that researchers must pay more attention to social class differences in disaster responses than we have up to now; we must do so because it will give us a much better understanding of why people act and think the way they do. Taking social hierarchical differences into account will allow us to better describe and analyze what occurs to human beings in disasters. Social class to some extent has to do with the exercise of power. A disaster context is one in which power and influence should come more to the fore (Brown and Goldin, 1973: 66-105).

On the other hand, in terms of our general understanding of the United States society, we have no reason to think that the differences are or will be as important as they were in Mexico. It is up to future research to establish the degree of their importance. It is not whether they are significant; we can assume this they are. The question is how much they influence actions and perceptions in disasters. (Other than to mention it, this is not the place to discuss that when we are talking of social classes we have in mind a much broader conception of social hierarchies than is used by those researchers in the United States who sometime do employ limited kinds of socioeconomic dimensions such as income levels or occupations in their analyses).

(6) Why did the pattern of volunteering in Mexico seemed to differ from what is typically seen in disasters in the United States?

There was a greater involvement of group volunteers such as student groups, unions and work place groups, citizen organizations, and political groups in the disaster response than would normally occur in the United States. For various reasons they engender a degree of "loyalty" and sense of solidarity among their members. Because of this, much of this volunteer activity facilitates the appearance of emergent groups, that is cohesive group activities in contrast to parallel actions by a number of individual volunteers. Research observations suggest that this particular pattern is less likely to occur in the United States though it is not unknown (e.g., DRC found in the Ft.Wayne, Indiana flood of a few years ago that teams of students from particular high schools constituted the core of the group volunteers that worked on building the levees to protect the town).

The pattern of volunteering was more complex than anticipated. There was considerable differentiation in the volunteering that occurred. In absolute numbers there were many volunteers both in

the immediate post impact period and during the year following the earthquake. On the other hand, the vast majority of residents of Mexico City never got involved in volunteering activity of any kind in the first three weeks. In the emergency time period males did more volunteer work than females, but upper class persons volunteered at a rate considerably higher than lower class individuals. Later volunteers were not differentiated on those two social characteristics. The relatively younger but not the youngest undertook the most early volunteering, and volunteers generally were not from the most devastated areas after the first few hours.

This differentiated pattern of volunteering is not what on-the-scene popular beliefs or mass media stories suggested. More important, the findings strongly indicate that the current research literature on volunteering in disasters may be too simplistic in its observations. Apart from the existence of a very complex and differentiated pattern of volunteering behavior, specific generalizations are challenged by the results of this study. For example, only in a very limited sense was there a "mass assault" (as it has been called, see Drabek, 1986: 223) of individuals in this disaster. The very young have sometime been singled out as a potential great pool for individuals who could work at disaster relevant tasks (Quarantelli, 1981) or have been emphasized in mass media accounts (Phillips, 1987), but they were not a major source for volunteers in this earthquake disaster.

There are a number of implications from the complex and differentiated pattern of volunteering we found (as we have described it earlier there was not just the individual volunteering we are discussing at this point, but also the volunteering that occurred because persons were members of groups such as unions that as collective entities volunteered). At the theoretical and research level, for instance, it is clear there needs to be much greater work done on clarifying and specifying the who, when, what, and where of volunteering (for an effort to typologize volunteers including group ones, see Dynes and Quarantelli, 1980). In fact, the very concept of volunteer requires considerable theoretical attention so meaningful differentiated research on the topic can be undertaken. At the practical or operational level, it is also obvious that planning for the mobilization and use of volunteers needs to be far more sophisticated than it has tended to be, for example, in recognizing that volunteers in the early phases may be more socially differentiated than volunteers in the later or recovery stages of massive disasters such as occurred in Mexico City.

We have in this last part of the chapter stressed some of the more important social differences between the United States and Mexico in order to indicate the use of caution in using our findings in one country being directly applied to another. However, as we indicated in the first part of the chapter, there are similarities in response patterns in the two societies. Now even learning that

something can not be easily transferred from one society to another can be a valuable lesson, although we do think there are more positive and direct lessons that can be applied from the Mexican disaster to preparing for and responding to disasters in the United States.

Of course social scientists have long pointed out that different societies have rather varying sets and patterns of sociocultural values and beliefs. Such factors are involved in everything from the way nature is approached, to the conceptions of reality that are accepted, to what is deemed the proper goals and ends human beings should strive for, to what is taken for granted and what is seen as open to being questioned, etc., to mention but a few matters which have been the object of description and analysis. For example, research has established that something such as chronological time is socially reconstructed in all societies and that, for example, what is defined as "slow" in one country or culture is "fast" in another, etc., (see, e.g. Levine, 1988; McGrath, 1988).

Given that variability, there is often the attempt to look for other variables, especially structural ones on which comparisons can be made. For example, level of industrialization, degree of structural complexity, degree of political centralization, as well as other measures are often used as bench marks for comparisons. Some of our observations and findings raise more general questions about the importance of certain cultural values and of the uniformity of structural comparisons for disaster research purposes.