

## CHAPTER 8

### THE 1986 SURVEY RESULTS ON INDIVIDUAL BEHAVIOR IN THE YEAR AFTER THE EARTHQUAKE

In this part of the volume we present our major survey findings obtained a year later, that is, around the anniversary of the disaster. As in the 1985 survey, the 1986 one focused on the behavior of individuals. While a few questions were repeated from the earlier survey (and practically all the background questions), most of what was asked was new (see Appendix III for 1986 survey questions).

Three topics are selectively discussed:

- (1) Longer run earthquake problems;
- (2) Attitudes about the handling of earthquake related problems; and,
- (3) Learning from the earthquake.

The logic of this presentation is as follows. It was assumed that the population had views about the shorter run problems that emerged as a result of the disaster and/or the longer run problems that appeared. Given these views about problems, we wanted to analyze their attitudes on how earthquake related problems were handled. In turn, we were interested in seeing what those who had undergone the earthquake thought they had learned from the experience, both in the short run and the long run.

#### Longer Run Earthquake Problems

##### a. Disruption of utilities.

In the first survey, many had indicated suffering disruptions of utility services immediately after impact. Similarly, our respondents in the second survey said they had difficulties in the same services in their homes in the year following the earthquake. For example, when asked directly if there had been problems, 31.9 percent of them reported interruptions or cuts in the water supply, 24.4 percent in telephone service (a figure that almost doubles when only those who had the service are considered), 22.3 percent in electric power, and 8.1 percent in mail delivery. LC and MC respondents had considerably more difficulty with the water supply than UC ones (respectively 31.4 percent, 33.3 percent and 12.5 percent). However, it is very important to note that when allowed to volunteer or choose themselves what problems they had experienced over the year, very few singled out problems in such

service deliveries (although the question was asked with respect to the entire city and not just the household). For example, no one mentioned as requiring immediate attention the disruption of electric power, and only one percent mentioned the phone service and but 3.4 percent difficulties with the water service!

In fact, the government was ranked very high on its handling of two of the interrupted services: thus, 56.6 percent thought the restoration of phone service was handled very well or well--only 3.3 percent thought it was handled very poorly; 54 percent said the restoration of the water service was handled well or very well with only 1.6 percent saying it was handled very poorly. The telephone company itself also received high ranking as to how well it was organized and its compassion for victims. A clear majority (53.2 percent) said it was now more organized and could react better to a future disaster. Clearly service disruptions of the kinds indicated were not a major source of dissatisfactions or complaints. That victims were not particularly disturbed by difficulties with the utility services is indicated by the fact that those who suffered the most disruptions were no more likely to have participated in disaster-related activities in the year after the earthquake than those who had no such problems.

It is also possible that the disruptions were not that important in the thinking of most residents, possibly because residents of Mexico City are accustomed to some irregularities in such services. In fact, in answering several different questions our respondents tended to observe that the earthquake had made pre-impact problems worse than before rather than that it created new ones (15.3 percent explicitly volunteered this idea, and 85 percent of our respondents said yes when asked directly if the earthquake had magnified previously existing difficulties and problems).

#### b. Other singled out problems.

As can be seen in Table 5, when respondents were asked a year after the earthquake what was the major problem most needing immediate attention, a wide variety of matters were mentioned. However, it is fairly clear that respondents did not always distinguish between earthquake related and other more endemic problems in Mexico City. Thus, it is not surprising that the three most singled out problems were housing (68.8 percent), restoration of schools and hospitals (6.1 percent) and unemployment (4.6 percent), with 21.2 percent saying that the earthquake made the housing shortage worst, and 14.5 percent saying the same about unemployment.

Put another way, even when certain problems were noted, many of our respondents did not make a sharp distinction between what was considered normal on an everyday basis and what might have been aggravated by the disaster. Consistent with this, nearly three out of five respondents (59.5 percent) felt the earthquake had made the economic crisis worst; a situation which in many ways Mexicans as

a whole considered to be a far more continuing and serious national problem than even a major, but one time, disaster in the country's capital.

Table 5. Major Problem Needing Most Immediate Attention

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	%
Housing	68.6
Restoration of schools and hospitals	6.1
Unemployment	4.6
Water service	3.4
Reuse of space	2.6
Building reconstruction	1.9
Construction rules	1.6
Economic losses	1.3
Plans for the future	1.3
Medical care	*
Food for victims	*
Adoption of orphans	*
Distribution of money	*
Phone service	*
Street repair	*
Decentralization	*
Inflation	*
Need more private enterprise	*
Loss of documents	*
Public services	*
Health services	*
Lack of communication	*
* less than 1%	

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Here as well as elsewhere, there were also social class background differences, not all of which are self explanatory. For example, of those who mentioned it, 85.9 percent of the MC strata compared to 77.3 percent of the LC strata named the housing problem. LC persons (22.6 percent) were more inclined to note the problem of schools and hospitals than MC (13.2 percent) or UC (9.8 percent) individuals. Unemployment, when mentioned, was very slightly noted more often by the MC (24.7 percent) than by the UC (22.5 percent) or the LC (20.8 percent) respondents. More LC respondents (43.5 percent) than MC (37.7 percent) or UC respondents (35.6 percent) saw the disaster as affecting the economic crisis even more negatively.

c. Sheltering and housing activities.

We particularly looked at the question of earthquake related sheltering and housing since it was singled out as the major post recovery problem. While, as shall be seen, the details of our findings are complex, several themes run through them. Large, absolute number of residents moved from their homes in Mexico City in the year after the earthquake. While much of the moving seemed linked to the disaster, the relationship was often not a direct one. Neither movers nor hosts had many negative views about the problem; in fact, nonmovers tended to have somewhat more unfavorable attitudes about the handling of the problem.

Let us now detail some of these more general themes. For example, about 10 percent of all respondents claimed that in the year after the earthquake they left their own homes, at least temporarily, to live elsewhere. Nearly 85.5 percent of these leavers went to relatives; another 5.1 percent to friends. Middle class persons, followed by lower class individuals and then upper class persons were more likely to stay with relatives than friends. Public mass shelters were used almost exclusively by people from LC strata. This last is a pattern that has often been noticed in other disasters.

Psychological and/or economic factors may have been more important than a physical inability to use their own residences for those that relocated after the earthquake. This observation is derived from the fact that only 15.2 percent said they made a move because their own home was severely damaged or destroyed. This finding also has to be seen in the context of the previously noted fact that even prior to the earthquake of 1985, there was a deficit of about 60,000 housing units in Mexico City (see Pantelic, 1988). Nonetheless, in absolute numbers, for whatever reason, about two million residents of Mexico City left their homes for some time and that move was in some way related to the earthquake. If we use our figures, published estimates of 500,000 homeless as a direct result of the earthquake may have been an overestimation in terms of a physical necessity of a move, but an underestimation of the number of persons who left their homes for a period of time after the earthquake.

The duration of the move also was longer than might have been anticipated. While 27.2 percent of those who moved stayed elsewhere less than two weeks, 60.6 percent remained up to a month. However, only 7.2 percent remained elsewhere more than a month. Translated into absolute numbers around one million two hundred thousand people moved elsewhere for up to a month as a result of factors associated with the earthquake. But these data are not supportive of a Red Cross report a year after the disaster that 100,000 people were still without permanent homes (Hamilton, 1986: 6).

However, our figures of over a million persons moving elsewhere are relatively consistent with other data in our survey. Looked

at from the receiving or host side, about 11.2 percent (n=674) of our respondents reported that they temporarily sheltered relatives or friends in their own homes sometime in the year after the earthquake (for some reason, 75 respondents did not reply to the survey question on this topic). Single people were slightly more likely to have been sheltered or hosted by others than were married, divorced or widowed persons. However, as opposed to what movers to other houses had reported, the hosts of those who moved said nearly half (48 percent) came to them because they could not live in a damaged or destroyed home, and another 21.4 percent because the building moved to was safer. But those who received people in their own homes said two thirds (67.6 percent) stayed up to a month. This is only a slightly different figure (60.6 percent) than reported by movers, as indicated earlier.

A very striking finding about both those who moved in with others and those who hosted them is that persons in neither category have very negative attitudes about this disaster problem. For instance, those who temporarily moved---that is primarily went to relatives---were often less negative than persons who had not gone elsewhere sometime in the year after the earthquake. This is true whether actions, views of organizations or activities are involved.

For example, movers judged the immediate governmental response to the earthquake as not effective less often than did nonmovers (18.7 percent to 19.8 percent); a year later, only 14.1 percent of movers rated the ensuing actions of the government as ineffective whereas 20.1 of the nonmovers did so. Movers did not want more information about the earthquake situation than did nonmovers (41.9 percent to 53.6 percent wanted more). Movers, compared to nonmovers, did not evaluate the Mayor's Office, the military or the police as less organized (the respective figures are 13.2 percent to 17 percent; 7.6 percent to 16.3 percent, and 13 percent to 24.2 percent), and they did not have a more negative image of the President of Mexico or of IMSS (the Social Security Agency). In fact, movers had fewer negative views than nonmovers regarding how poorly the government had informed citizens about the disaster (31.3 percent to 37.7 percent), how poorly it handled housing support (16.7 percent to 26.4 percent), how poorly it moved offices (20.9 percent to 24.6 percent), how poorly it handled demolition and debris clearance (15.5 percent to 16.8 percent), how poorly it dealt with sheltering victims (12 percent to 21.8 percent), and how poorly it dealt with housing inspection (29.8 percent to 29.9 percent).

While many of the percentage differences are small, the pattern is consistent--movers clearly are not as negative as nonmovers regarding a great number of governmental actions. Those that moved were even less negative in their judgment that the new housing distribution had been unjust (34.7 percent of movers compared to 40.9 percent of nonmovers).

In addition, those who went to live with others do not stand out as a particularly disgruntled category of persons. Even though they moved in the aftermath of the earthquake, and reported they had more problems with electric, water, phone and mail services than nonmovers, they were not especially prone to blame anyone or to have strongly unfavorable views of anything done. Only on a very few points were negative views expressed. For example, movers, compared to nonmovers, did think the Mexican government handled foreign aid poorly (62.4 percent to 49.1 percent), and they also believed that the housing problem should have the highest priority for attention (75.5 percent to 67.8 percent). And movers did have decreased confidence in the government compared to nonmovers (67.8 percent to 56.7 percent among those who had less confidence). But these were about the only exceptions and stood out because they were so different from the general pattern.

Movers were more likely to participate in disaster related activities than nonmovers (77.7 percent to 53.5 percent), although it appears that most of the difference may be that movers, more than nonmovers, engaged in immediate search and rescue. But those who moved gave only slightly greater attention to planning for future disasters and had very little increased knowledge of general disaster planning or the national system of civil protection. Movers and nonmovers were almost identical in their knowledge of emergency phone numbers (52.4 percent to 52.5 percent). Nonmovers were actually more likely to have a first aid kit than movers (49.5 percent to 42.1 percent). Put another way, movers did not especially seem to have learned much from their disaster experience.

The attitudes and behavior patterns of those who hosted people in their homes were similar to those who relocated. Along a few lines, those who sheltered relatives were somewhat more negative compared to those who did not take anyone into their homes. For example, those who hosted others were more critical of the immediate governmental response to the earthquake (24.8 percent compared to 19.1 of those who sheltered no one). A year later, the same negative attitude continued (24.7 percent compared to 19.4 percent). They also thought the President was less organized, etc. However, 40.2 percent of those who sheltered others, compared to 50.7 percent of those who did not, thought the government had handled foreign aid poorly. Those who had hosted others were less likely to have thought of moving out of the city than those who took no one in their homes (68.2 percent to 76.7 percent). There was no difference between those who sheltered and those who did not regarding the fairness of how the new housing had been distributed. Similarly there were no differences on how the police or the military were viewed, or how organized or unorganized the President of Mexico had been in his response, or how well the Mayor's office had acted. Also, there were no significant differences in views on how the government handled housing inspections, sheltering, demolition and debris clearance, housing

support or providing information. Those who sheltered were a little less likely to think that the earthquake had increased trust in people than those who had not sheltered someone (16.7 percent to 20.5 percent).

Again, while many of the percentage differences are very minor, the overall picture is consistent. Those who sheltered or hosted others were not particularly negative. While this is understandable about aspects of their own behavior, it is less obvious why someone or some groups were not blamed or at least given negative evaluations for what happened with respect to the problem of sheltering and housing after the earthquake.

Consistent with what we have repeatedly found elsewhere in our analysis, there were some social class differences. For example, 15.8 percent of our MC respondents compared to the LC (21.2 percent) and UC (28.3 percent) respondents thought that the government did not have the housing situation under control immediately after the earthquake. One year later, even more MC respondents (19.4 percent) thought the government did not have full control of the situation. But UC judgments that the government still did not have control over the housing problem had fallen to 3.6 percent, and among LC respondents, it had dropped to 16.4 percent. This indicates that the MC went from being the least critical of the government response to being the most critical.

However, and what is more important, both right after the earthquake and a year later, a clear majority of our respondents did believe the government had control over the housing problem. These figures do raise questions about the political and ideological statements after the disaster that the earthquake had radicalized the lower strata of Mexican society; a position supposedly illustrated by some of the unruly demonstrations that took place in the post impact period in some of the neighborhoods of the capital city.

#### d. Other participation in post-disaster activities.

A majority of our respondents (55.9 percent) said they undertook some longer run post impact earthquake related tasks. The range of activities was even broader than those carried out in the immediate post impact period (the two weeks after the disaster). On the whole, such persons did not differ substantially in their attitudes from those expressed by nonparticipants, although on particular items there were some minor differences.

For example, participants wanted more information about the disaster (56.7 percent to 47 percent), and they were somewhat apt to judge the government response in the short run (22.1 percent to 16.7 percent) and in the long run (21 percent to 17.5 percent) as less efficient, than did nonparticipant. They also had diminished confidence in the government as a result of the earthquake; at

least among those who changed in their attitudes, participants had lost more confidence than nonparticipants, 66.3 percent to 48 percent. This percentage difference is one of the sharpest in the whole survey. (However, to keep this in context, overall a majority--52 percent--said the earthquake made no difference in the confidence they had in the government with 20 percent saying it had increased and 26 percent decreased).

On the other hand, participants did not see the housing problem as needing more attention than did nonparticipants (68.3 percent to 68.9 percent). They did not judge the Mayor's Office as less organized to cope with a new disaster (16.5 percent to 16.7 percent). They had almost an equally positive view of the government handling of sheltering earthquake victims (46.8 percent to 43 percent), and an equally negative view of the government handling of the NAFINSA fund (47.8 percent to 48.7 percent). (NAFINSA was a fund consisting of donations for earthquake victims). Participants had just about the same increase in trust in other people as did nonparticipant (80.3 percent to 78.6 percent). Those who participated in post-disaster activities actually were very slightly more favorable about military and police actions than nonparticipant.

Overall, the picture is clear: those who participated or volunteered in longer run post impact earthquake related activities and those who did not were substantially the same in their attitudes about a variety of matters and groups. But it is not apparent why we found no significant differences. It could be speculated that this is because the participants numbered about half of the population with the sheer numbers involved cancelling out differences. More probable our survey questions did not tap aspects about which there were differences. Whatever the reason, there was far less difference between those who volunteered in the long run with respect to earthquake related matters and those, who as we indicated earlier, had volunteered in the short run.

#### e. Some positive views.

Not only was there a general absence of negative views about many aspects of the disaster, but some rather positive views of the social consequences of the earthquake also surfaced. For example, consistent with what some researchers have previously found (e.g., Quarantelli, 1985a), the persons in our survey reported that family ties were strengthened as a result of the experience of the disaster. About 30.7 percent of our respondents said they had better relations within the family after the earthquake than they had before the earthquake; only 1.4 percent reported a worsening of family ties--the rest said they had not changed. Just about three out of every five respondents (60.5 percent) also thought that the experience of the earthquake had increased the trust people had in other citizens.



There was a social class difference among those who thought trust had increased. It was strongest among LC respondents (82.4 percent) than among our MC (77.4 percent) and UC (74.4 percent) individuals. Overall another 40 percent said it made no difference; only 12.3 percent thought that the earthquake experience resulted in diminished trust. Interestingly, single more than married persons (65.9 percent to 56.2 percent) had developed greater trust. There was no significant gender difference on this perception.

#### Attitudes About the Handling of Earthquake Related Problems

##### a. Views about general and specific governmental activities.

It is of interest that a majority of our respondents believed the government grew more effective during the year after the disaster. While 31.9 percent viewed the governmental response as very effective in the immediate days after the earthquake, the figure rose to 44.1 percent for the year. In contrast, there was little change among those who saw little effectiveness (19.5 percent for the immediate post impact period and 19.5 percent for the year period).

Although there was not much consensus on what was handled especially well in the immediate post impact period with very many activities being mentioned, the rescue of survivors and the handling of traffic and security were the two tasks most mentioned. Insofar as the year long period is concerned, again there was little consensus or a singling out of specific activities. But handling the housing needs and problems of earthquake victims was mentioned most of all. (Although when specifically asked about how just--and not simply the handling of--the distribution of new housing had been, 40.3 percent said it was not just, 29.8 percent just, 16 percent mixed, and 13 percent did not know).

Our respondents were also specifically asked about 15 different earthquake-related tasks that the government had undertaken in the year after the disaster. With regard to only one activity--the handling of foreign aid--was there a majority who thought the activity was poorly (31.1 percent) or very poorly (20 percent) handled. (This is consistent with findings reported by Comfort, 1986 who found that while there were positive views about the offering of international aid, most respondents had little information on how to get it and even fewer actually received anything). Nearly a majority (48.1 percent) had the same unfavorable view about governmental honesty in the administration of the NAFINSA account, that is the money set aside for disaster victims. Somewhat over a third (37.1 percent) thought that citizens had been poorly informed on how the recovery was progressing. Women were slightly more negative than men in their evaluations on these matters.

There were also some differences between social class strata ranking and negative attitudes on the three problems indicated, but they were not significant. UC respondents were only slightly more likely to be negative than MC or LC persons about the handling of foreign aid; there was a somewhat stronger inverse association between higher social class ranking and how poorly the government was judged to have handled information distribution about the earthquake. On the other hand, the handling of the NAFINSA account was slightly more negatively viewed by LC individuals (49.7 percent) than by MC (47 percent) and UC (45.1 percent) persons.

However, on the other dozen activities, negative evaluations (that is, agreement with statements that the activity was poorly or very poorly handled) averaged only 9.1 percent. Looked at from the other side, we can see that a number of governmental tasks were especially positively assessed. For example, 60 percent thought that the restoration of schools and hospitals was well or very well handled; 56.6 percent said the same for telephone restoration; 54 percent for restoration of water services; 49.2 percent also ranked highly the demolition of buildings and the clearance of debris; 48.7 percent said the same about the passage of laws to increase the earthquake resistance of buildings; and, 45 percent praised the handling of the providing of shelters for the homeless.

The overall pattern is clear and consistent. Residents of Mexico City varied somewhat in their evaluation of governmental activities, but they were in general considerably more positive than negative. It is also noticeable that, for the most part, the more visible and concrete actions were given positive evaluations. Furthermore, in line with what has been noted a number of times now, our respondents, whether in volunteered replies or when asked directly, generally avoided very negative or very unfavorable assessments. It is not that they did not notice or mention problems, difficulties, inefficiencies, delays, etc.; rather there seemed to be an unwillingness to assign blame or hold particular organizations specifically responsible. In our later analysis we shall consider to what extent this orientation might reflect Mexican cultural values and/or reactions to what the government and other organizations had actually done.

Contrary to what some others have written, we obtained very little evidence that the government was the object of much disdain and rage (e.g., Gavalya, 1987). Now it is true, for example, on the earthquake anniversary a year later, that a group called the Council of Earthquake Homeless Families, estimated at 10,000 people undertook a protest march (Kultenbrouwer, 1986: 4). But numerically these were the very small exceptions among the population. In fact, the very same day there was another street rally of around 50,000 PRI supporters who expressed their solidarity with the homeless and approval of the government's reconstruction program (Mullen, 1986: 4).

Thus, while undoubtedly there were complaints about the recovery effort, and while probably some vocal elements that complained received attention from the press and others, there is no indication in our survey findings that such feelings were at all extensive in the community. However, from a symbolic point of view the demonstrations against the government may have sent a "message" to the public authorities, indicating that at least some groups were using the earthquake to express their general dissatisfaction with the regime). As we shall indicated later, concern over possible political unrest as a result of the disaster may have contributed to the establishment of disaster planning in the year after the earthquake.

b. Attitudes about particular organizations.

Respondents were asked their views about a dozen organizations, especially how organized and how humane they were in their disaster-related actions, and whether or not the groups were better prepared a year later to cope with a new natural disaster.

Only an average of 5.7 percent of our respondents evaluated the groups as a whole as disorganized or very disorganized. A great part of that percentage is traceable to the unfavorable views held of only two of the organizations, namely the police and the military. Some groups, such as the Mexican Red Cross and the Mexican City fire department, were negatively viewed by extremely few people (conversely 86.9 percent thought of the fire department as being very organized and 83.7 percent thought the same of the Red Cross).

Negative evaluations of the humanitarian dimension follow the same pattern. Only an average of 4.6 percent of all our respondents saw the groups as nonhumanitarian or very noncompassionate, with the majority of this percentage attributable to a very negative perception of the same two groups that are consistently unfavorably evaluated, that is, the police and the military. Conversely, for example, the President of Mexico is seen as compassionate or very humanitarian by 62.1 percent of our respondents; the corresponding figure for the IMSS, the Social Security Institute, is 81.3 percent. These findings do support the statements of some observers that relief agencies were generally viewed with gratitude (e.g., Gavalya, 1987).

Also, all organizations which were asked about in the surveys, were seen as better able to handle a disaster a year after the earthquake than before the disaster. Even the military (better=38.3 percent and less=15.5 percent) and the police (better=32 percent and less=23.1 percent) were thought on balance to have improved. Eight of the groups were evaluated by more than 50 percent of our respondents as having become better prepared during the year after the disaster. The generally rather positive

view of the mass media expressed in the 1985 survey is even more strongly asserted in the 1986 survey. In fact, 56.2 percent expect a future disaster will be even better covered by the mass media organizations; only 8.1 percent expect a worst performance.

These evaluations did not seem to be affected by whether the respondents had been volunteers or not. As seen in Table 6 which follows, there were no significant differences in the direction of the evaluations of those in either category. Different assessments were made about the probable performance of various groups, but overall all organizations were seen as likely to do better or at least as well in a future disaster.

Table 6. Evaluation of Volunteers and Nonvolunteers  
on Whether Specific Organizations Would Perform  
Better, the Same, or Worse in a Future Disaster.

	Better	The Same	Worse
Organization:			
DDF by volunteers	38.0	45.5	16.5
by nonvolunteers	43.8	39.5	16.7
Military by volunteers	38.1	46.9	14.9
by nonvolunteers	38.4	45.5	16.1
Police by volunteers	29.4	48.3	22.3
by nonvolunteers	35.2	40.6	24.1
Telephone company by			
volunteers	56.1	33.7	10.2
nonvolunteers	49.4	38.6	11.9
Red Cross by volunteers	68.0	30.2	1.8
by nonvolunteers	59.1	37.7	3.1
Fire department by			
volunteers	69.0	29.8	1.2
nonvolunteers	60.2	36.2	3.5
IMSS by volunteers	57.0	36.0	7.0
by nonvolunteers	48.3	44.2	7.4
Health service by			
volunteers	54.4	40.6	5.0
nonvolunteers	47.8	46.0	6.3

What organizations actually did undertake in the year after the earthquake and whether they actually became better prepared was not something we systematically looked at in our study (although

we report our impressions elsewhere in this volume). But we can say that our findings clearly indicate that the Mexican population in the year after the earthquake developed more favorable views of these groups and believe they would be better able to cope with a new disaster. That is the social reality we found.

Given our earlier discussion of the position and role of the President of Mexico in the country, the survey findings of how he was perceived by citizens in the second survey are interesting.

Table 7: Perceptions of the President of Mexico  
A Year Later

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a. How well organized was he in his response?:	%
Very organized	18.9
Organized	36.0
Partly organized and disorganized	6.6
Neither organized or disorganized	23.1
Disorganized	9.0
Very disorganized	6.4
b. How compassionate was he in his response?:	
Very compassionate	23.6
Compassionate	38.5
Partly compassionate and partly not	6.1
Neither compassionate or not	18.4
Not compassionate	7.4
Very non compassionate	5.9
c. How organized was he compared to a year earlier?:	
Better organized now	43.1
Same as before	42.6
Less organized now	14.3

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Clearly, the President of Mexico continued to be positively viewed by a majority of the survey respondents. Only a small minority, about 15 percent, thought he had been disorganized or noncompassionate in his response to the earthquake or had become more disorganized in this response during the year. Of course in absolute numbers this translates into millions of citizens who viewed the President negatively. But overall the disaster had little effect on how he was viewed by the residents of Mexico City.

Social class differences on perceptions continued to reflect the predisaster situation. In general, LC respondents saw the President as more organized and more humanitarian than did MC and UP respondents. It is in the MC strata that one finds the most of the relative few who perceived him as less organized a year later than at the time of the earthquake.

In terms of our discussion in an earlier chapter of this volume, there did not seem to have been any public erosion of the position and role of the President as a result of the disaster. At least in percentage terms, he continued to have rather high ratings from a majority of the population. Numerically of course there were many dissatisfied citizens although they seemed to have maintained such attitudes and evaluations from the predisaster setting rather than having acquired them as a result of the earthquake.

### Learning From the Earthquake

#### a. Sensitivity to future disasters.

Given its geographic location, Mexico City is subject to frequent minor tremors from both near and distant earthquakes. It is therefore of interest that about two fifths of our respondents (40.2 percent) reported that in the year after a major earthquake, they felt more tremors than they had before the disaster. This is consistent with other studies which indicate that persons who directly experience disasters become more sensitive to cues of dangers than they had been before the occasion (Drabek, 1986: 323-327). However, somewhat puzzling is that about a fourth of those responding in our survey (25.3 percent) said that they felt less tremors during the year than they had before. (We of course do not know if there actually had been more or less tremors that could have been noticed by human beings in the year period after the earthquake--in fact since any such data would have to be location specific, in any genuine sense it is not obtainable information).

Whatever the sensitivity to cues of danger, there is little question that those who had resided in Mexico City at the time of the earthquake felt less safe a year later than they had before the disaster. For example, nearly half (46.1 percent) expressed concern about the safety of relatives and friends from future damaging earthquakes. However, at the behavioral level the concern was less pronounced. Thus, only about a fourth (24.9 percent) were more afraid to go to the movies and/or theaters after the earthquake than before. Although here again a sizable minority, 19.6 percent, were less afraid than before the disaster. Nearly half (44.3 percent) did say they were more nervous in tall buildings a year later, but the meaning of this is not clear since we have no data on how much our respondents actually went into high rise buildings before and/or after the earthquake. Actually, one study which estimated that 70,000 structures had been damaged said that only 1,400 of them were over four stories. In general, the psychological concerns expressed seemed to be somewhat less than others found up to five weeks after the earthquake (e.g., Dufka, 1988).

Among our survey respondents, about a quarter (26.3 percent) said the thought of moving out of the city had occurred to them,

although there is very little indication that such a move was taken as a serious possibility. In fact, when asked why they had not moved, they gave such reasons as having to work in the metropolitan area. Only 1.1 percent of those who even said they considered moving, ever did move elsewhere. These figures are somewhat consistent with what other postdisaster surveys have obtained with reference to moving from a location after a disaster. About 5.1 percent of our survey respondents had moved within the area during the year, but that is probably within the normal range of moving in the community.

b. Knowledge of governmental disaster planning.

Little seems to have been learned by our respondents about organizational preparations for disasters. As indicated earlier the Mexican government had in the year following the earthquake set up a new federal level disaster agency--a national system or agency for civil protection. However, only 7.2 percent of our survey respondents even claimed that they knew of the federal organization. But this is probably on the high side, for when probed about their knowledge of the system, very few persons could give any details. In fact, 40.8 percent of those who said they had heard of the civil protection system admitted they knew nothing about it. Almost everyone else who volunteered some details were incorrect in their statements.

Actually it is fairly clear that even among the relatively few (14.1 percent) who claimed some knowledge of formal disaster planning--apart from knowing of the civil protection agency or system--knew very little. Thus, there was a tendency to equate awareness of school drills, the military plan, and a variety of other particular agencies (e.g., the police) and/or programs (e.g., reconstruction costs), with knowledge of disaster preparedness planning. Men who claimed to be twice as aware as women, did not exhibit any better comprehension of details.

Interestingly, only about two thirds--66.1 percent--thought the government should have the responsibility for disaster planning and rehearsals. Overall, there was a great willingness to participate in evacuation drills with 90.6 percent saying they would take part. Those who either sheltered or took shelter with others after the earthquake were slightly more inclined to do so.

c. Individual involvement in planning for future disasters.

In terms of self knowledge and actions, the overall picture is less clear and in some respects puzzling. When respondents were asked very specific questions about their own earthquake preparedness planning, a surprising number of persons said they had taken relevant actions or were specifically prepared. On the other hand, when respondents had to volunteer what they had done along these lines, claims for having done something dropped substantially.

For example, when asked directly, a majority reported they had undertaken some particular emergency-related actions or were specifically prepared in some way. Thus, more than three fifths (63.3 percent) said their families had agreed upon a safe place within their home. Over half (52.5 percent) indicated they knew emergency numbers to call if needed, although it can be assumed that some persons would know them independent of any disaster situation. Nearly half (48.7 percent) stated that they had a first aid kit in their homes--although the survey question did not specify whether or not the kits had been obtained during the previous year and/or as a result of the earthquake. Nearly half of our respondents also said they had developed (when applicable) disaster planning for children and/or elderly in their own households. About a third (36.1 percent) indicated they knew the safest way to leave their house in case of an earthquake. A little more than one of every four (26.1 percent) said that household members had agreed upon a place to meet after a disaster in which members were not at home and physically separate from one another. These kinds of figures are considerably higher than what others have reported about learning from the experience of a disaster (Drabek, 1986: 323-327).

On this matter also there were some consistent social class differences in the claims advanced of having prepared for future earthquakes. As also has been reported elsewhere (Drabek, 1986: 24) there was a direct relationship between higher socioeconomic status and assertions of having undertaken disaster planning. For example, 53.6 percent of UC respondents compared to 35.4 percent of MC and 27 percent of LC persons--among those who said they had done anything--had planned for a future earthquake. The respective figures for having a first aid kit were 70.9 percent UC, 51.7 percent MC, and 42.1 percent LC, and for knowing emergency numbers, 61.5 percent for UC, 57.1 percent for MC and 47.1 percent for LC respondents. Not surprisingly too, on most matters the married claimed they had undertaken more preparations (38 percent to 29.8 percent).

In contrast, answers to open ended questions suggest specific learning may have been substantially less than the figures above might indicate. Only about a third of our respondents (33 percent) said they had given some thought or had done some planning in the event of a future earthquake. But among those (n=247) who made such a claim, the specifics were usually very vague. For example, under planning, respondents mentioned such actions as attempting to remain calm, leaving the house, looking for a safe place inside one's residence, helping others, leaving quickly, and similar kinds of activities. Very few mentioned the specific actions discussed above, such as an agreement on the safest place in the house, special attention for dealing with children and/or elderly, or an understanding where family members might meet after a disaster. In fact, 34.4 percent admitted that they just as soon preferred



not to make any planning, another 12.8 percent noted that planning had not crossed their mind, and another 7.2 percent said preparations were pointless. There is little evidence in these data to suggest that many households had given much concentrated attention or had specifically discussed how family members should act in the case of another earthquake.

With this we conclude the data presentation. We now turn to our more general analyses and presentation of some implications of what was found at both the organizational and individual levels.