TABLE 7.12

Regressions of Contact Measures on Selected Community and Personal Characteristics (N = 1725)

Independent Variables	Dependent Variables Are Contact Measures[a]						
	General Contact	Business	Emergency Services	Public Officials	Popular Interest Groups	Political Leaders	Mass Media
Population (1970)	-.01 (.56)	-.03 (1.12)	-.03 (1.32)	-.03 (1.35)	.02 (.80)	.04 (1.79)	-.01 (.41)
Median Household Income (1970)	.06* (2.52)	.03 (1.19)	.02 (.77)	.16*** (6.79)	.00 (.12)	-.01 (.50)	.03 (1.17)
Disaster Experience[b] (1960-1970)	.05* (1.96)	.03 (1.40)	.00 (.05)	.11*** (4.92)	.01 (.36)	-.06* (2.36)	.09*** (3.56)
Community Disaster Salience[c]	-.10* (2.28)	.01 (.25)	-.08 (1.87)	-.12*** (3.19)	-.09* (2.06)	-.06 (1.31)	-.13** (3.13)
Community Favorability[d]	.14*** (5.82)	.07** (2.99)	.10*** (4.24)	.13*** (5.73)	.08*** (3.33)	.14*** (5.42)	.12*** (4.71)
Executives[e]	.15*** (6.16)	.08*** (3.52)	.17*** (7.26)	.20*** (8.62)	.04 (1.58)	.03 (1.21)	.08*** (3.34)
Legislators	.08*** (2.90)	.02 (.64)	.05 (1.89)	.26*** (10.16)	-.00 (.17)	.01 (.35)	-.04 (1.34)
Appointed Officials[e]	.06* (2.10)	-.04 (1.31)	.19*** (6.99)	.28*** (10.56)	-.10*** (3.46)	-.13*** (4.39)	.02 (.69)
Private Sector[e]	.08** (2.69)	.31*** (11.36)	-.17*** (6.31)	.05* (2.08)	-.13*** (4.61)	.04 (1.48)	.00 (.08)
Recalled Disaster Experience[f]	.04 (1.08)	-.01 (.31)	.04 (1.24)	.06 (1.70)	.06 (1.48)	-.00 (.03)	.03 (.85)
Perceived Disaster Salience[g]	.04 (1.47)	-.02 (.87)	.05 (1.71)	.06* (2.06)	.04 (1.52)	.04 (1.55)	.06* (2.07)
Age	-.06* (2.32)	-.09*** (3.81)	.06* (2.46)	-.05* (1.96)	-.07** (2.63)	-.06* (2.11)	-.05* (1.99)
Education	.08** (3.01)	.08** (3.10)	-.02 (.84)	.12*** (5.02)	.05 (1.86)	-.00 (.13)	.06* (2.42)
In Current Position Over 5 Years	.08** (3.18)	.10*** (4.17)	.03 (1.34)	.06** (2.81)	.07** (2.82)	-.01 (.56)	.01 (.42)
Holds Another Government Job	.09*** (3.94)	.04 (1.72)	.07*** (3.30)	.10*** (4.60)	.06* (2.36)	.05* (2.10)	.08*** (3.30)
Ever Officer of Business or Professional Assoc.	.08** (3.14)	.08*** (3.26)	.04 (1.58)	.09*** (4.04)	.02 (.72)	-.00 (.06)	.05 (1.94)
Ever Officer of Civic Association	.11*** (4.40)	.06* (2.42)	.11*** (4.50)	.06* (2.49)	.06* (2.50)	.10*** (3.91)	.10*** (4.06)
R^2 =	.117***	.161***	.159***	.233***	.060***	.062***	.081***

[a] Table entries are standardized regression coefficients with t-statistics in parentheses.

[b] Total number of hurricanes, floods, tornadoes and earthquakes experienced by a community in the period 1960 to 1970 as reported in Red Cross chapter reports.

[c] Average salience ratings given to disasters computed over respondents in each community.

[d] A community measure expressing the extent to which active and important groups in community are favorable to disaster mitigating legislation. (See Table 7-15 for a more complete explanation of how this measure was computed.)

[e] Dummy variables reflecting position held by respondent. Omitted category includes all other positions not explicitly included in the dummy variables. (See Table 7-6 for enumeration.)

[f] Average number of disasters recalled by respondents from each community for the period 1967-1977.

[g] Sum of salience ratings of disaster issues given by respondent in item 1 of the questionnaire.

The last four variables in Table 7.12 are dummy variables indicating whether or not respondents have held their current position for more than 5 years, whether or not they hold another government job, and whether they have ever been elected officer of a business or professional association or of a civic association. All these factors imply the potential for greater contact with groups and positions. The results show a consistent and positive effect on contact for each of those variables. The two remaining individual characteristics—hazard seriousness and community disaster experience—produce virtually no impact on the level of contact with any of the clusters.

The more favorable to nonstructural hazard-mitigation measures the local elites are perceived to be (see p. 213), the more likely they are to have high general contact and to be in contact with each of the clusters. All the coefficients for this variable are positive and statistically significant. The variable attempts to capture the extent to which the climate of opinion in the local community among active and powerful groups favors land-use controls. The results suggest that the more the powerful and influential elites agree on a particular issue (in this case, the desirability of nonstructural hazard-mitigation measures), the more likely they are to be in close contact with each other. Unanimity and concentrations of importance are a large component of this measure, and hence may express the extent to which the community's elite is cohesive and unified.

Disaster experience also tends to explain a high degree of contact. The greater the number of natural disasters experienced in 1960-1970, the more likely elites are to have high general contact and contact with the public official and mass media clusters. However, they are less likely to be in contact with the political leaders cluster.

Oddly, the more seriousness elites attribute to natural hazards, the less likely they are to be in contact with other groups. Since we have held other community characteristics constant, especially favorability toward nonstructural hazard-mitigation measures, the communities with persistent hazards problems are those whose elites are divided on such issues. Such divisions could account for the lower level of contact among groups in these communities.

As a group, community-level variables also affect levels of regular contact. This finding indicates that communities vary in the extent to which local elites are in contact with the group clusters.

Community population size and prosperity, defined as average household income in 1970, do not appear to affect contact (all other factors have been held constant). The only exception is the rather high coefficient for contact with the public officials cluster, which indicates that, in prosperous communities, elites tend to have more contact with public officials and with all groups in general.

All told, the patterns displayed in Table 7.12 seem to indicate that levels of contact in general and with clusters of groups appear to depend on position and community. Positions that necessitate dealing with particular clusters have high levels of regular contact. Communities that are favorable toward nonstructural hazard-mitigation measures and have had disaster experience, are also communities that appear to be more united on this issue—at least on the elite level—and hence foster contact with all of the group clusters.

ELITE FAVORABILITY TOWARD NONSTRUCTURAL HAZARD-MITIGATION MEASURES

How receptive are elite groups to land-use management and strict building codes as hazard-mitigation measures? Power and influence can be exerted either for or against such measures, so we must consider the content and direction of the elite activities.

We presented each elite with the list of 24 groups and asked which of them were "generally favoring" land-use management and stricter building codes. The results, presented in Table 7.13, indicate that there is no groundswell of support for such measures. Although 54% say the city planning department favors such measures, this is the only group that achieves a majority. Indeed, only six of the groups received a response greater than 33%. If we take 33% as a cut-off point indicating some degree of support, then we see that five of the six favorable groups are public officials and local government departments—City Councils, mayors, city planning and Public Works departments. Only one nongovernment group (conservation groups) and the Civil Defense director are considered favorable to nonstructural hazard-mitigation measures.

However, our question leads to some degree of ambiguity in interpreting the meaning of nonfavorability. Although respondents indicated which of the groups they thought were generally favorable, neglecting to designate a group as favorable does not necessarily mean that it is *unfavorable*. Such groups might be viewed as neutral or, in some cases, as divided in the views expressed by members. Whereas Table 7.13 does not indicate widespread support for nonstructural hazard-mitigation, it does not indicate widespread opposition either.

Table 7.14 shows a set of clusters that differ somewhat from those shown in earlier analyses. Some of the more striking differences are as follows: First, *business* cluster contains not only industries and merchants, but also land-developers, farmers, the Real Estate Board, and banks. In some of the previous factor analyses, a distinct *real estate cluster had appeared: here, it*

TABLE 7.13

Proportions Perceived as "Generally Favoring"[a] Land Use or Building Codes Changes Lowering Disaster Risks (N = 1831)

Position/Group	Percent Perceived As: Favoring	Not Favoring	Don't Know	Not Applicable
City Planning Department	54	41	2	3
City Council	47	50	2	1
Mayor (Chief Executive)	42	56	2	1
Civil Defense Director	39	57	2	2
Conservation Groups	39	58	2	1
Public Works Department	33	62	2	3
Newspapers	27	71	2	0
Fire Department	26	72	2	0
People Living in High Risk Areas	23	74	2	1
Chamber of Commerce	21	76	2	1
Red Cross Chapter	21	76	2	2
TV and Radio Stations	21	75	2	2
Homeowners' Associations	20	74	2	4
Banks and Savings Associations	18	79	2	0
Police Department	18	79	2	0
Democratic Leaders	12	85	2	0
Republican Leaders	11	86	2	1
Leading Industries	10	87	2	2
Construction Firms	9	87	2	1
Leading Merchants	9	89	2	0
Construction Unions	8	85	2	5
Farmers	6	87	2	4
Respondent	25	73	2	0
Respondent's Agency (firm, position)	27	70	2	0

[a]Responses to "Which of these ... do you see as generally favoring legislation regulating land use or tightening up building codes to lower risks ...?"

appears that the business sector of the community is more unified. Second, political party leaders and the mass media are seen to belong to the same cluster (labeled *media and political leaders*), a combination that is somewhat baffling. Third, there is no emergency services cluster: The police and fire departments are clustered with other city departments (labeled *Public officials*) Fourth, a *disaster agencies* cluster, composed of the Red Cross chapter, the Civil Defense director, and (weakly) the Chamber of Commerce, is introduced. Fifth, there is a *grass roots* cluster composed of

TABLE 7.14

Factors and Factor Loading for Levels of Perceived Group Favorability to Disaster Mitigation Measures (N = 100)

Position/Group	FACTOR AND FACTOR LOADINGS: Business	Public Officials	Media & Political Leaders	Disaster Agencies	Grass Roots	Conservation Groups
Leading Industries	.79	.28	.08	.05	.06	-.05
Leading Merchants	.78	.24	.08	.00	.09	-.07
Farmers	.76	.00	-.01	.07	.15	.34
Land Developers	.75	.04	.13	.01	.18	.05
Real Estate Board	.70	.04	.17	.15	.28	.06
Banks	.62	-.06	-.01	.37	- 03	-.10
Fire Department	.10	.83	.04	.16	.03	.20
Public Works Dept.	.15	.84	.13	.14	.13	.06
Police Department	.09	.81	-.01	23	11	.15
City Planning Dept.	.08	.73	.20	.19	.28	.13
Mayor	.21	.69	.35	.09	.13	-.25
City Council	.14	.65	.40	.09	.18	-.30
Rep. Party Leaders	(51)	.02	.74	-.05	.16	.10
Dem. Party Leaders	(52)	.03	.71	-.11	.19	10
Newspapers	- 03	.41	.71	.20	.24	-.03
TV & Radio	.01	.38	.69	.30	.04	.14
Red Cross	.10	.26	.05	.82	.10	.05
Civil Defense Director	.10	.28	.07	.74	.05	-.02
Chamber of Commerce	.31	.20	.34	.51	.26	-.31
Homeowners' Assoc.	.24	.19	.24	.13	.77	.02
High Risk Areas	.20	.39	.15	.04	.76	-.03
Construction Unions	.37	.25	.20	-.11	-.00	.68
Conservation Groups	.04	.11	.07	(46)	(51)	.52

[a]Factors and factor loadings computed by the principal component method and rotated using the varimax criterion.

homeowners' associations and inhabitants of high-risk areas. Finally, a last cluster contains construction unions and (weakly) conservation groups, another baffling combination.

It should be emphasized that the clusters are not strongly defined. The circled factor loadings in Table 7.14 delineate groups that participate in more than one factor. Thus, political party leaders define their own cluster, along with the mass media, but they also have high loadings in the business sector Similarly, conservation groups have their highest loading in the clus-

ter with construction unions but also participate in the conservation groups and grass roots clusters almost as strongly.

The favorability ratings in Table 7.13 let us examine the community circumstances affecting of overall elite favorability to nonstructural hazard-mitigation measures. In the world of local community politics (as in politics in general), the principle of one person, one vote applies only to popular elections. Groups, as well as persons, have unequal impact. Some groups are more important because they are able to sway the views of others. Others, perhaps with less influence, make their mark on policy by more effectively wielding whatever power they possess.

These considerations suggest that the favorability measures should be weighted by the importance of the groups and by their activity levels. A weighted favorability score was computed for each of the groups by taking the product of the groups' scores for favorability, importance, and activity. Table 7.15 shows the mean, standard deviation, and range for the weighted favorability scores of the groups or positions. It is not surprising to find that the City Council and the mayor or chief executive are at the top of the list, with the city planning department and Civil Defense director following. On the other hand, we see in addition to farmers, that the least favorable groups are construction firms, construction unions, real estate boards, major land developers, major merchants, and major industries. An overall weighted community favorability measure was also computed, and is shown at the bottom of Table 7.15.

The group scores on weighted favorability were summed for each community, thus providing a measure of the extent to which the balance of power in a community favored nonstructural hazards-mitigation legislation. The overall community weighted favorability score was then regressed on a number of community characteristics, as shown in Table 7.16. The findings are quite striking. First, 35% of the variation in favorability from community to community is accounted for. The strongest predictor of favorability is community experience with natural disasters. Using data from Red Cross chapter reports, we computed the number of disaster experiences suffered by each of the 100 local communities in 1960-1970. The greater the number of such experiences, the more favorable elites are to nonstructural hazard-mitigation measures. Elites in communities where there is support for the general principle of land-use management and little opposition to the NFIP are also more favorable to nonstructural measures.[12] Finally, the more prosperous the community (as defined by median household income in 1970), the more favorable the elites are to nonstructural measures.

[12]In a sense this finding tends to be somewhat tautological, as the absence of opposition to flood insurance and the absence of controversy over that issue may be seen as another way of stating that the community is favorable to disaster-mitigating legislation. However, it should be borne in mind that the flood insurance controversy is defined as reports from elites about controversy in general in the community and not from elites necessarily. Similarly, support for federal land-use controls is defined over the elites interviewed and not whether the groups in question support the philosophy. Of course, to the extent that members of such groups are also respondents in the elites' survey, we are dealing with the same persons. Yet there is some independence between the measures. In any event, removing the two items from the regression in Table 7.15 lowers the amount of variance explained (to .24) but still retains the importance of disaster experiences and community property.

TABLE 7.15

Mean, Standard Deviation, and Range of Weighted Favorability[a] to Disaster Mitigation Measures, by Group of Position and Overall Community Favorability (N = 100)

Group/Position	Mean	Standard Deviation	Range
City Council	41.0	17.1	0-78.6
Mayor (Chief Executive)	37.3	17.7	0-75.0
City Planning Department	31.1	18.8	0-68.8
Civil Defense Director	29.6	17.3	0-84.6
Newspapers	22.0	13.6	0-55.0
Conservation Groups	20.2	12.5	0-60.0
Public Works Department	19.3	13.7	0-50.0
TV and Radio Stations	16.4	11.8	0-50.0
Fire Department	16.0	11.1	0-50.0
Chamber of Commerce	14.9	10.8	0-38.9
Red Cross Chapter	12.2	10.1	0-46.2
Police Department	11.6	9.6	0-40.0
People Living in High Risk Areas	10.2	9.5	0-40.0
Democratic Leaders	9.4	8.9	0-40.0
Republican Leaders	8.1	8.5	0-40.0
Banks and Savings Associations	7.4	7.9	0-33.3
Homeowners' Associations	7.0	9.5	0-50.0
Major Industries	5.6	6.3	0-25.0
Major Merchants	4.4	5.4	0-23.1
Major Land Developers	4.1	4.7	0-15.4
Real Estate Board	3.6	4.8	0-19.0
Construction Unions	3.4	5.3	0-25.0
Construction Firms	3.1	4.3	0-15.8
Farmers	2.4	5.5	0-25.0
Community Level Weighted Favorability	34.0	13.9	1.82-62.67

[a]For each group/position favorability (see Table 7-13) is weighted by importance of group/position (see Table 7-7) and by levels of activity (see Table 7-1). Scores are expressed as products of the three proportions (multiplied by 100), and averaged for each community. The community level measure represents the overall weighted favorability for all the groups.

TABLE 7.16

Community Level Favorability[a] to Land Use Management and Building Codes, Weighted by Group Activity and Importance, Regressed on Selected Community Characteristics (N = 93)

	Dependent Variable is Weighted Community Favorability[a]	
Independent Variables	Standardized Regression Coefficient	t-Value
Disaster Experience 1960-1970	.29**	3.04
Opposition to Federal Flood Insurance Program[b]	-.27**	2.54
Opposition to Land Use Controls[c]	-.19*	2.02
Median Household Income 1970	.20*	1.93
Population 1970	-.05	.61
Community Salience of Disaster Issues[d]	.16	1.03
Recalled Disaster Experience 1967-1977[e]	-.03	.20
R^2 =	.346***	

[a]Dependent variable consists of community scores in which group levels of favorability (see Table 7-13) are weighted by group levels of importance (see Table 7-7) and by group levels of activity (see Table 7-1). Scores are products of the three levels.

[b]Community levels of key persons' perceived amount of opposition to the Federal Flood Insurance Program in the community in question.

[c]Computed from Item V-48, asking about key persons' opinions of stricter land use controls and building standards by the Federal Government, representing the aggregated climate of opinion.

[d]Average salience ratings given to community problems presented by floods, hurricanes, tornadoes, and earthquakes.

[e]Community level aggregated responses to questions asking whether community had experienced floods, hurricanes, or tornadoes in the period 1967-1977.

Several factors were shown to be irrelevant to favorability: community population size, the salience of community natural disaster problems, and elites' recollections of disasters in the last 10 years

The general pattern that emerges is one in which communities that have had experiences with disaster in the past, and whose elites are not opposed to federal intervention, are more in favor of local legislation that involves land-use management and stricter building codes.

WHO INFLUENCES THE ELITES?

Up to this point, our respondents have been reporting on the importance of the groups or positions in a general way. Which of them influence our

elites' opinions concerning natural hazards issues? This is a matter of concern because our elites are associated with the organizations and agencies that play important roles in decisions involving natural-hazard mitigation.

Table 7.17 shows that our elites feel they are influenced most by the City Council (44%), newspapers (42%), the city planning department (42%), the mayor (39%), conservation groups (39%), the Civil Defense director (37%), and television and radio (36%). Of the seven most influential groups, four are local government positions or agencies. The mass media also appear to be influential. Surprisingly, conservation groups finally get some attention, after playing quite a minor role in most of the analyses presented so far in

TABLE 7.17

Proportions Claiming Group/Position is Influential[a] For Respondent (N = 1831)

	Percent Claiming			
Group/Position	Influential	Not Influential	Don't Know	Not Applicable
City Council	44	55	1	0
Newspapers	42	57	1	0
City Planning Department	42	55	1	3
Mayor (Chief Executive)	39	59	1	1
Conservation Groups	39	59	1	1
Civil Defense Director	37	60	1	2
TV and Radio Stations	36	61	1	2
Chamber of Commerce	32	67	1	1
Public Works Department	31	65	1	3
Fire Department	27	72	1	0
Police Department	23	76	1	0
Major Industries	23	75	1	1
People Living in High Risk Areas	23	76	1	1
Major Land Developers	21	76	1	2
Homeowners' Association	18	78	1	4
Major Merchants	18	82	1	0
Red Cross Chapter	17	80	1	2
Democratic Leaders	17	82	1	0
Real Estate Board	16	81	1	2
Construction Firms	16	83	1	1
Banks and Savings Associations	15	84	1	0
Republican Leaders	14	84	1	1
Farmers	14	82	1	4
Construction Unions	9	85	1	5

[a]Responses to "... which of these groups would you say are influential - positively or negatively - in shaping your own views on issues that involve natural hazards?"

this chapter.[13] Businesses, industry, the Red Cross, and Democratic and Republican party leaders are regarded as influential by a minority the elites surveyed.

The clustering of influential groups shown in Table 7.18 does not yield a clear structure. This factor analysis is computed on the basis of individual responses, and hence reflects the clusters of groups that are influential for our respondents. Three of the groups do not clearly fit into any of the six clusters found (farmers, Chamber of Commerce, and the Public Works department).

The six clusters are somewhat similar in composition to others shown earlier in this chapter. A *business cluster,* perhaps the clearest, contains most private businesses and the construction unions. *Emergency services* contains the police and fire departments, the Red Cross, and the Civil Defense director. *Elected officials* is a small cluster containing only the mayor and the city council *Popular interest groups* contains homeowners' associations, conservation groups, inhabitants of high-risk areas, and oddly enough, the city planning department. The remaining clusters, *political party leaders* and *mass media,* each contain the obvious candidates for those clusters. Since the issue of whom a respondent claims to be influenced by, positively or negatively, is essentially an individual issue, we have computed a set of individual level regressions. Thus, in Table 7.19, we examine the characteristics of individuals who are influenced by each of the clusters and the kinds of communities in which such individuals live.

The analyses shown in Table 7.19 do not explain much of the variations among elites in their willingness to be influenced by any of the clusters. Indeed, only for *popular interests groups* (6%) and *business* (8%) are we able to explain more than 5% of the variance; the remainder of the cluster analyses explain 3-5% These low levels mean, of course, that there are some perhaps quite powerful variables that do account for variations in influence proneness but for which we have no measures.

Several important general findings appear. For every groups, the more seriousness an elite attributes to natural hazards, the more likely some group or groups in each of the clusters will be cited as influential. This tendency is independent of the level of salience of natural hazards. Thus, those elite respondents who worry more than others in the community about the problems caused by natural disasters, are more likely to be influenced (in either

[13]In effect, the respondents appear to be saying that conservation groups are important for them but not for others This may mean that conservation groups have not managed to capitalize on their potential influence on community elites. Of course, since groups can be regarded as influential both positively and negatively, this does not mean that the same persons who are influenced in one way by the mass media, for example, are also influenced in the same way by the conservation groups.

TABLE 7.18

Factors and Factor Loadings for Groups Influential With Respondent Views (N = 1831)

Group/Position	Business	Emergency Services	Elected Officials	Popular Groups	Political Leaders	Mass Media
Construction Firms	.74	.14	.04	.13	.11	.11
Leading Merchants	.74	.21	.19	.05	.12	.10
Leading Industries	.73	.12	.17	.11	.03	.14
Developers	.65	.02	.09	.37	.00	.12
Real Estate Board	.64	.03	.14	.28	.10	.09
Banks	.63	.12	.16	.07	.21	.08
Construction Unions	.61	.24	.05	.09	.29	.05
Farmers	.46	.16	-.13	.22	.30	-.00
Chamber of Commerce	.40	.08	.35	.24	.10	.34
Fire Department	.20	.82	.14	.08	-.00	.09
Police Department	.24	.79	.17	.05	.01	.10
Civil Defense Dir.	.01	.64	.12	.18	.14	.03
Red Cross	.20	.59	-.07	.17	.24	.22
City Council	.18	.21	.79	.03	.13	.12
Mayor	.18	.21	.79	.03	.13	.12
Conservation Groups	.15	.03	-.01	.73	.19	.16
City Planning Dept.	.14	.22	.37	.63	-.05	.06
Homeowners' Assoc.	.42	.15	.06	.53	11	.06
People in Risk Areas	.30	.21	.00	.55	.17	.10
Public Works Dept.	.16	.44	.35	.49	-.05	-.03
Dem. Party Leaders	.27	.10	.15	.13	.86	.15
Rep. Party Leaders	.28	.13	.13	.13	.85	.13
Newspapers	.17	.10	.14	.13	.10	.88
TV & Radio	.17	.18	.11	.11	.13	.86

[a]Computed from individual responses on which groups are influential in formation of opinion on natural disaster issues. Principal component with varimax rotation was factor method used.

direction) by what members of all the groups say or do on this issue. This is undoubtedly the mark of a partisan who is sensitive to the play of support and opposition among significant groups in the community. This finding obtains even though the *less* salient problems of natural disasters are for elites, the more likely they are to claim that they are influenced by emergency services groups, business groups, popular interest groups, and the mass media. In short, conditions of general indifference appear to foster general receptivity to being influenced (pro or con) by many groups. Persons who are concerned more than the average are also alert to what groups and

TABLE 7.19

Regression of Influence Measures on Selected Individual and Community Characteristics (N = 1736)

Independent Variables[a]	Dependent Variables = Index of Group Cluster Influence on Respondent: Emergency Services	Business	Elected Officials	Popular Interests	Party Political Leaders	Mass Media
Local Executive	.02 (.675)	.04 (1.56)	.06* (2.18)	.05* (1.98)	.01 (.369)	-.02 (.641)
Population	.01 (.353)	.01 (.323)	.01 (.422)	-.00 (.098)	.02 (.633)	.01 (.522)
Recalled Experience (1967-1977)	.05 (1.20)	.05 (1.20)	-.01 (.284)	.10** (2.50)	-.04 (.922)	.07 (1.89)
Age	-.02 (.873)	-.04 (1.74)	-.01 (.560)	-.00 (.013)	.03 (.519)	-.04 (1.60)
Perceived Salience	.14*** (5.71)	.14*** (6.04)	.19*** (8.08)	.127*** (5.40)	.16*** (6.60)	.13*** (5.40)
Private Sector	-.06* (2.04)	.02 (.589)	.01 (.277)	-.03 (1.11)	-.02 (.669)	-.01 (.253)
Community Favorability (weighted)	.02 (.928)	-.03 (1.23)	.04 (1.41)	-.01 (.369)	.04 (1.39)	.03 (1.35)
Median Household Income (1970)	-.13*** (5.19)	-.20*** (7.72)	-.00 (.190)	-.15*** (5.77)	-.04 (1.57)	-.10*** (3.95)
Local Legislators	-.02 (.651)	-.00 (.111)	.01 (.293)	.05 (1.78)	-.01 (.339)	-.02 (.658)
Disaster Experience (1960-1970)	-.05 (1.92)	-.06* (2.24)	-.01 (.568)	-.05* (1.95)	-.01 (.561)	-.03 (1.23)
Education	-.04 (1.70)	-.04 (1.66)	-.03 (.884)	-.02 (1.04)	-.04 (1.42)	-.00 (.173)
Appointed Officials	-.02 (.839)	-.03 (1.16)	.04 (1.42)	-.01 (.293)	-.03 (1.05)	-.04 (1.43)
Community Salience	-.14*** (3.59)	-.14** (3.47)	.00 (.069)	-.17*** (4.35)	.01 (.337)	-.16*** (3.98)
R^2	.048***	.077***	.043***	.057***	.030***	.034***

[a]See Table 7-1? for definition of variables used.

positions are saying, but perhaps this is necessary for a partisan to function effectively. Of course, this is a largely speculative interpretation, since we cannot be sure that the process operates precisely as we surmise.

Another general finding that holds for four of the six clusters is that elites living in more prosperous communities are less likely to be influenced by groups in any cluster. It is difficult to imagine what process connects community prosperity with patterns of influence. The remaining patterns are apparently specific to each of the clusters and do not easily generalize. Indeed, the lack of differentiation among the six regressions is another expression of the lack of structure in the clusters discerned in the factor analysis shown in Table 7.18. The sensitivity of elites to the views expressed by others appears to be a rather general process dominated largely by the salience of disaster problems to the local community and to individual key elites.

WHO INFLUENCES CITY HALL?

The role of local elected officials appears to be critical in the process of disaster-mitigation legislation. Local elected officials are responsible for enacting relevant local legislation, of course, but their influence on hazard-risk-management policies seems to cut much more deeply. Throughout all sectors of the local community elite, the consensus is that local elected officials are the key people in hazard-risk management: They are seen by all elites as the most active sector, the most influential sector, the sector most important to have on one's side. Furthermore, they have the most sustained contacts with all other elements in the local power structure, and their views on the issues are reported to be the most influential in forming the views of others. Finally, they are perceived by other elites as tending to favor nonstructural risk-management concepts. Given these findings, an obvious and important question must be raised, namely, what determines the outlooks of local elected officials on matters related to environmental-risk management?

All told, there are 383 local elected officials—mayors or other elected chief executives and elected local legislators—among the respondents. What factors influence the outlooks of these 383 on nonstructural hazard-mitigation approaches to environmental-risk management? The dependent variable for the analysis is the *nonstructural mitigation* item from the disaster policy sequence (see Chapter 4). Among the 383 elected officials in the analysis, 18% agreed strongly with the nonstructural mitigation approach and 31% agreed somewhat, for 49% agreement with nonstructural approaches overall. The remaining 51% thus disagreed at some level with

these approaches. Local elected officials therefore prove to be somewhat *more* attracted to nonstructural approaches than the rest of the local community elite, but there is by no means a consensus among these officials that such approaches are the obvious policies of choice. On the contrary, with elected officials, we get as close to maximum *dissensus* on the topic as possible.

Of course, elected officials are not independent of their communities. In a very direct sense, they are dependent on votes, and hence on prevailing political climates. They may be even more sensitive to the climates of opinions that impinge on them in their day-to-day contacts, ordinarily with other members of the community elite. We should thus be able to show that there is some degree of sensitivity of elected officials to the predominant tone of local elite opinion, as they perceive it.

To capture this perceived elite-opinion climate in a measure, we used many of the variables discussed earlier to assess each respondent's perception of the local power balance on nonstructural hazard-mitigation policies. This is a standardized composite measure, ranging from −1 to +1 and reflecting each elected official's assessment of the activity, importance, influentiality, extent of contacts, and stand on the issue for the 24 local positional elites included in the question sequence. Each respondent was asked to rate whether or not each group was.

1. Active or not active in local natural-disaster legislation or regulation in the local community (*Active* = 1, *Not active* = 0).
2. If the group or person was important to have on your side if you wanted to get something enacted in this community on some issue concerning natural disasters (*Important* = 1, *Not important* = 0).
3. If the group or person was influential in shaping the respondent's view on issues involving natural hazards (*Influential* = 1, *Not influential* = 0).
4. If the respondent had contact on a regular basis with the group or person (*Contact on regular basis* = 1, *Not on regular basis* = 0).

The scores from these four items were summed if the respondent perceived the group or person as generally favoring nonstructural hazard-mitigation approaches. If the respondent perceived the group or person as being opposed to such legislation, the sum of the scores was multiplied by −1. Hence, each group could receive a score ranging from −4 (indicating the group was not only *against* such legislation, but was also active on these issues, generally important on these issues within the community, influential in the respondent's views, and in contact with the respondent on a regular basis) to +4 (indicating the group was in regular contact with the respondent and had expressed active, important, and influential *support* for such legislation). The scores for each of the 24 groups were then summed to provide a measure reflecting the respondent's perception of the balance of local power on the issue. However, since many localities contained less than the 24 positional elites, it was necessary to normalize the measure for each respondent. This was done by dividing the total perceived power balance score by four times the number of groups mentioned. Thus, the perceived power balance measure varies from −1 (power balance strongly against the regulations) to 0 (power balance neutral on the regulations) to +1 (power balance strongly in favor of regulations).

Of course, one must also take into account individual characteristics of the elected officials that might also influence their position on disaster policy issues. All together, four additional sets of variables were used. First, to control for the objective need for such regulations, we include the perceived return probabilities for serious hurricanes, floods, and earthquakes. Tornadoes were omitted from this analysis since only building code regulations can mitigate their damage. The measure employed was constructed by giving a score of 1 to respondents who perceived a higher probability of disaster than the median in the survey and a 0 to all others. These values were then summed across the three disaster types.

Second, a dummy variable salience measure was constructed to measure the seriousness of natural hazard damage relative to other problems facing the community. Respondents were scored 1 on the measure if they rated any of the three disaster types as 7 or above on the 10-point scale and zero otherwise.

Third, biographical variables assumed to be important were included. Among these are age, race, sex, education, general political ideology, political party, and experience with and losses from floods.

Last, to assess the effect of region, dummy variables were created for the Northeast, South, Midwest, and West.[14] The first three regions were entered into the equations.

Table 7.20 presents the results of a multiple regression equation predicting nonstructural hazard-mitigation policy stands for all local elected officials in the sample. Few of the variables are significant, even at the .10 level. Neither perceived risk to the community nor the respondent's experiences with and losses from floods have a significant effect on respondents' attitudes. Thus, the two factors that would seem to be directly relevant turn out to be of little consequence. The salience of the disaster problem also has a nonsignificant but negative coefficient. Age, race, education, and sex of the respondent

[14] *Northeast* = Connecticut, Delaware, Massachusetts, New Hampshire, New Jersey, New York, and Pennsylvania; *South* = Alabama, Florida, Louisiana, North Carolina, South Carolina, and Virginia; *Midwest* = Illinois and Missouri, *West* = California, Colorado, Oklahoma, Texas, and Utah

TABLE 7.20

Regression of Nonstructural Mitigation Policy Approval on Power Balance and Selected Individual Characteristics: All Elected Officials

	Independent Variables	(Dependent Variable is Approval of Non-Structural Disaster Mitigation Federal Policy (see Chapter 4) b	SE
1.	Perceived Community Power Balance Measure	.571***	.164
2.	Political Beliefs Measures		
	Government Regulation Favorability	.156*	.086
	Economic Conservatism/Liberalism	-.083	.092
	Social Conservatism/Liberalism	.069	.077
	Democrat	.228*	.127
3.	Disaster Experience Measures		
	Flood Experience	.035	.038
	Perceived Risk	-.049	.064
	Salience	-.072	.124
	Northeast	.383***	.149
	South	.093	.138
	Midwest	.407**	.191
	West	--	--
4.	Personal Characteristics		
	Male	.135	.206
	White	-.121	.195
	Age	.007	.005
	Education	-.167	.118
Constant		1.552**	.493
		R^2 = .11***	
		N = (383)	

* Significant at .10 level
** Significant at .05 level
*** Significant at .01 level

have nonsignificant effects. Of the background variables, then, only region seems of much importance: the coefficients for the Northeast and the Midwest are significant and positive. Thus, there is a greater willingness in these two regions, as opposed to the South and West, to accept nonstructural hazard-mitigation policies.

The political characteristics of officials have some effects on their willingness to accept this policy. First, the dummy variable for Democrats has a significant, positive coefficient Not surprisingly, the governmental regulation variable also has a significant, positive coefficient, so that the more

liberal local elected officials are toward governmental regulation and planning in general, the more they tend to approve of land use and building code regulations for disaster mitigation. (The variables measuring economic and social liberalism, however, are not significant.) To a certain extent, then, it seems that these officials tend to be guided by party affiliation and by their own political philosophies.

Even with other variables controlled, the local elected officials' perceptions of the balance of power within the community toward the issue have strong significant, positive effects on their own attitudes. When officials perceive the local power balance to be in favor of these regulations, they also tend to favor them; when the balance of power is seen to be negative, elected officials are also negative. The hazard management views of elected officials tend to reflect their sense of prevailing community elite opinion This pattern holds regardless of personal political ideologies, experiences, or characteristics.

The coefficient of determination for this equation is small (R^2 = .11), however, most of the variance in outlooks is random with respect to the variables in the model. Since, natural-hazards issues are not especially salient items on the political agendas of most localities (see Chapter 3), the low R^2 may only mean that elected officials have more latitude on this issue than on issues of higher salience. One implication of this speculation is that elected officials will have much less latitude in communities where disaster problems are of greater concern.

Accordingly, we divide the sample of officials into "low" and "high" disaster salience groups. The high-salience group consists of officials rating either floods, earthquakes, or hurricanes as 7 or higher on the 10-point seriousness scale; the low-salience group consists of all other officials. Table 7.21 shows regression equations estimated separately for each of these salience categories. The equations are identical to that in Table 7.20, except that salience is not included, since the officials in each category are eq on the dummy variable for salience.

For low-salience officials, the regression coefficients show slight, but interesting, differences from the initial results. First, the significant effect previously shown for conservatism-liberalism on the issue of governmental regulation has now dropped out. Education is now significant and has a *negative* effect on agreement with the policy. The coefficients for Democratic party affiliation and the regional effects for the Northeast and Midwest remain significant and increase in magnitude. However, as predicted, the effect of the perceived power balance declines over the first equation, although it remains significant. Hence, in communities where disaster issues are of relatively minor concern, elected officials have more freedom of action.

The regression equation for the high-salience officials shows an even

TABLE 7.21

Regression of Nonstructural Mitigation Policy Approval on Power Balance and Selected Individual Characteristics: Low Salience and High Salience Officials Separately

		(Dependent Variable is Approval of Non-Structural Disaster Mitigation Federal Policy (see Chapter 4))			
		LOW SALIENCE OFFICIALS		HIGH SALIENCE OFFICIALS	
	Independent Variables	b	SE	b	SE
1	Perceived Community Power Balance Measure	.424**	.179	1.295**	.429
2.	Political Beliefs Measures				
	Government Regulation Favorability	.135	.100	.320*	.166
	Economic Conservatism/ Liberalism	-.108	.104	-.100	.192
	Social Conservatism/ Liberalism	.136	.087	-.170	.153
	Democrat	.352**	.147	-.083	.265
3.	Disaster Re-experience Measures				
	Flood Experience	-.006	.045	.132**	.067
	Perceived Risk	-.039	.076	-.056	.125
	Northeast	.490**	.172	.091	.307
	South	.157	.161	-.006	.276
	Midwest	.616**	.216	.040	.401
	West	--	--	--	--
4.	Personal Characteristics				
	Male	.195	.233	.561	.441
	White	-.182	.237	.081	.346
	Age	.002	.006	.018*	.009
	Education	-.340**	.136	.438**	.242
	CONSTANT	1.669**	.562	.791	.992
		R^2 = .15 N = (289)		R^2 = .26 N = (94)	

* Significant at .10 level
** Significant at .05 level

greater number of changes from the initial results. As predicted, the variance explained in the independent variable is increased to 26% from 11% in the total sample. Thus, the model is most efficient among officials who place disasters high on the community's political agenda.

The regression coefficients in the high-salience equation reveal several interesting patterns. First, the regional effects disappear entirely. The coefficient for Democrats is reversed in sign and is now negative and insignificant. Age, education, and flood experience now show positive and significant effects whereas all were insignificant and two negative for low-salience officials. Thus, among elected officials for whom disasters are salient community problems, the older one is, the more educated one is, and the more floods one has experienced, the most likely one is to see the need for mandatory planning measures to reduce hazard risk in the community. Also, the coefficient for attitude toward governmental regulation returns to significance and increases in magnitude.

Once again, the perceived power balance on local hazard-management issues has large, independent effects on officials' agreement with the policy. The magnitude of the regression coefficient, now 1 29, is more than double that of the original regression, and triple that of the low-salience model. Therefore, in communities where disasters are a particularly serious problem, elected officials are even more attuned to the political realities presented by the views of the local power structures.

The implications of these results seem quite straightforward On hazard-management issues in local communities, elected decision makers react first and foremost to the political factors extant in their community, and generally not to what they perceive to be the policy needs of the community If this were *not* the case, the perceived hazard risk to the community would affect their attitudes; it does not. Instead, the variable measuring their perceptions of the local balance of power on the issue has the most consistent effects.

These findings modify somewhat the importance our earlier results seemed to give local elected officials. Certainly, elected officials are looked to by community elites as important and influential actors on issues of this sort. However, these data support a characterization of the political process as interactive, with elected officials partially reflecting their constituencies (or the more articulate segments of it) and partially influencing them.

SUMMARY AND CONCLUSIONS

In this chapter, we have examined the patterns of activity, influence, and power among key positions and groups in local communities with respect to issues involving disasters In general, natural hazards are not salient issues on local agendas. Thus, the patterns that have emerged from our analyses reflect perceptions of how disaster issues would be dealt with or how they had been dealt with in the past. Our findings represent normal low level decision-making expections in local communities.

The positions and groups who are perceived as most active on issues involving local natural disaster legislation or regulation are the elected officials and the public agencies concerned with the community infrastructure, such as the planning and public works departments—in short, those whose position requires them to pay attention to local legislation on such issues. Patterns of activity were identified for six combinations of groups in communities: businesses, real estate interests, public officials, local political party leaders, emergency services agencies, and community services organizations. Parallel analyses of perceived activity levels for environmental issues and the clustering of those interests show that the activity patterns that arise around hazard-mitigation legislation appear to be unique to that issue. Activity levels in disaster issues for the various clusters of groups appear to be sensitive to the salience of disaster problems in communities. There is also some tendency for groups to be less active when the community is more prosperous.

In addition to activity levels, a second important dimension of community decision-making patterns is the perceived influence of persons or groups. When asked who would be important to have on their side in trying to get something enacted concerning natural disasters, over one-half our respondents designated the City Council, the mayor, the media, the Civil Defense director, and the Chamber of Commerce. The ways in which these groups cluster are comparable to the clusters found for activity level, although separate dimensions are clearly being tapped. The influence of groups involved with natural hazards appears to be greater when a community has had experience with natural disasters and when community leaders approve of the NFIP. Public officials are also regarded as more influential in communities in which average household income is above the national median.

Next, we examined the patterns of regular contact among community elites. Our respondents indicated greater levels of contact "on a more or less regular basis" with the elected officials, the mass media, the planning department, and the Chamber of Commerce. The clustering of regular contact also is consistent with the clustering of activity and influence. Contact appears to be position- and community-dependent for all groups. Communities that are favorable toward nonstructural hazard-mitigation policies and that have had experience with disasters have more regular contact among groups.

Our data show no widespread support for nonstructural hazard-mitigation measures. When we asked elite respondents to indicate who among the list of positions and groups they perceived as favoring such measures, only the city planning department was mentioned by a majority the respondents. In fact, only 6 of the 24 groups were cited as generally favoring such measures by more than one-third of the respondents. However, although there is no

groundswell of support for such measures, there does not appear to be any widespread opposition either.

To better incorporate the various dimensions of community activity and power, a weighted favorability score was computed for each position or group. It expressed average favorability weighted by the activity and influence levels of that position or group. The strongest predictor of weighted favorability is community experience with natural disasters. In communities where the general principle of land-use management is supported and where there is little opposition to the NFIP, elites are more favorable to nonstructural hazard-mitigation measures. Furthermore, the more prosperous the community, the more favorable the elites are toward such measures.

Our data show that elites perceive the various groups in a community to influence their own views on natural hazards issues. Clusters of influence are evident, and the more salient our respondents perceive the problems of natural disasters to be to their community, the greater the influence others wield. This effect holds despite the tendency for elites to be influenced less by the various groups when the community elite in the aggregate perceives disaster salience to be high. Finally, persons living in more prosperous communities are less likely to be influenced by groups of elites.

In summary, the sensitivity of elites to the views expressed by others seems to be a function of the importance given to disaster problems by themselves and by local community leaders. This holds true for elected officials—mayors and city councilmen—whose perceptions of the balance of power affected their levels of approval for federal nonstructural hazard-mitigation policies.