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I. Introduction

Earthquakes and other calamities often generate substantial government-sponsored relief, but because disasters are not always followed by significant taxpayer-financed assistance there is the obvious question of when to expect post-disaster relief. In turn, some understanding of the availability of public subsidies has implications for the structuring of relief efforts. Inasmuch as these efforts sometimes take the form of pre-disaster subsidies, this Article aims to illuminate the choice between pre- and post-disaster relief.

The positive question of when relief is likely to be government subsidized refers implicitly to the American experience in which earthquakes, floods, and severe droughts trigger sympathy and government-funded relief more often than do crime waves, inner city decay, rural deterioration, and some diseases. It should be apparent that this comparison is difficult to prove because so much depends on the definitions and measures of relief that are used. For example, if all farm programs are seen as addressing the phenomenon of rural depopulation, all expenditures on urban-based crime, drug prevention, and education are linked to concerns about inner cities, and all funding of scientific research is interpreted as aimed at improving mortality statistics, then the amount spent on relief following droughts and earthquakes will seem trivial. Even so, the question of why relief follows some natural disasters rather than others remains, but the larger question of political priorities can be substantially avoided. In this Article, I will assume that expenditures relating to crops, crimes, and science can be taken to reflect narrower interests than those noted

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above and that, in any event, there is something interesting about the fact that public expenditures are part of the reaction to some discrete losses but not others. It is surely the case that large, direct expenditures by the federal government are more likely following an earthquake than after an urban crime wave.[1]

Section II explores the characteristics of disasters that beget relief. Among other things, I suggest ways in which the prospect of disaster relief might generate desirable incentives for investments aimed at minimizing disaster-related losses in the first place. Section III turns to the conventional wisdom that people might decline to take preventive steps, including the purchase of insurance, because they expect relief in the event of disaster. I suggest that all parties might be better off if the government could credibly promise that in the event of relief insured losses would be compensated along with uninsured ones. Section IV considers the choice between post-disaster relief and pre-disaster subsidized insurance. I argue that there may be a kind of intransitivity among various policy options but that pre-disaster relief may be the alternative most likely to emerge. I conclude with an illustration involving health care politics and financing, for a move in the direction of national health insurance can be understood in terms of the choice among the options of no relief, post-disaster assistance, and pre-disaster subsidies. Among other things, the discussion

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1. It is arguable, however, that federal relief simply follows property damage rather than death or injury, although this distinction might itself have an obvious interest group explanation. The Los Angeles Rodney King Riots, for example, generated much less relief than the Northridge Earthquake soon thereafter, but the latter did twenty times more in the way of property damage. See Shante Morgan, *Two Years Later, L.A. Riot Scars Run Deep*, San Diego Union-Trib A3 (Apr 29, 1994) (victims of riots causing thousands of injuries, 55 deaths, and $1 billion in damage to buildings feel "ignored" in comparison to earthquake victims, although at least $0.6 billion in aid followed the riots). The Northridge earthquake caused between $20 and $30 billion of damage and was followed by more than $7 billion in relief. Michael Miller, *Fire, Quake, Mud, Floods, Riots Dim California Dream*, Reuters (Feb 9, 1994), available in LEXIS, News Library, Reuna File ($20 billion estimate); Emergency Supplemental Appropriations Act of 1994, Debate on HR 3759 on the House Floor, 103d Cong, 2d Sess, 140 Cong Rec H211-04 (1994) (statement of Rep. Lucille Roybal-Allard) (range of damage estimates); Emergency Supplemental Appropriations Act of 1994, Pub L No 103-211, 108 Stat 3-14 (1994) (general allocation of $4.7 billion along with allocations to Small Business Administration ("SBA"), Departments of Education, Transportation, and Housing and Urban Development, the Veterans Health Administration, and President's Discretionary Fund (to be divided between earthquake and Midwest flood relief) totalling about $7.2 billion).

Any comparison between the gradual losses from problems such as urban decay with those from unique events such as earthquakes or riots leads to the familiar point that discrete events focus attention. A child in need of a liver transplant may attract more attention and monetary contributions than a nation of children in need of funding for prenatal care or kidney dialysis. See Guido Calabresi and Philip Bobbitt, *Tragic Choices: The Conflicts Society Confronts in the Allocation of Tragically Scarce Resources* 134-37 (Norton, 1978). More generally, my focus in this paper is on discrete losses that the state has not precommitted to compensate.

suggests that pre-disaster subsidies (such as subsidized flood insurance) may be more beneficial than generally recognized and that it might be sensible to provide federal relief only where there are matching state-provided funds.

II. Explaining Post-Disaster Relief

A. The Positive Political Theory of Disaster Relief

An obvious but important explanation of the incidence[2] of post-disaster relief is that discrete natural disasters tend to affect limited geographic areas and often, therefore, relatively well organized interest groups. An earthquake in Los Angeles affects people who are already well organized by virtue of the structure of our political system.[3] If earthquake victims gain more federal aid in absolute or relative terms than do a similar number of citizens suffering from a given disease, then we might attribute that difference to the geographic concentration of earthquake victims who, through their representatives or electoral votes, can gain a greater share of the national pie. We expect such interest groups to be excellent at avoiding burdens and to be fairly successful at obtaining benefits.[4] This is especially true when the interest group is concentrated in several congres-

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2. By incidence I refer not to the identity of the ultimate beneficiaries of relief, but rather to the occasions on which substantial relief is forthcoming.

3. It would be interesting to compare this to relief patterns in parliamentary systems with only at-large representation. I am unable to offer reliable, comparative data in part because most democracies have at least some geographic representation. But it is interesting that after the recent floods in Western European countries, with parliamentary democracies and strong political parties, there was no disaster relief for farmers and other (geographically concentrated) interests. In contrast, in Japan, where geographical representation is thought to be important, the government gave $25,000 to every family that lost its home and $50,000 to each family that lost its head of household in an earthquake and tidal wave that caused massive destruction on the island of Okushiri. *World News Tonight with Peter Jennings*, ABC News (July 15, 1993) available in LEXIS, News Library, Script File. It is noteworthy that there are countries with geographic representation, such as New Zealand and Britain, that have experimented with universal earthquake insurance and with war damage insurance. See G. Granville Slack, *The War Damage Acts and the War Risks Insurance Act, 1939, Part II (Commodity Insurance Scheme)* 11 (Butterworth, 2d ed 1944) (The British Act provided compensation for war-damaged property with 50% of the funds coming from a new tax on land owners and the other 50% coming out of general funds.). Note, however, that the United States had a similar act during World War II. Mark S. Rhodes, *Couch on Insurance 2d* § 42:474 at 562 (Law Co-op, 2d ed 1982).

4. See Saul Levmore, *The Case for Retroactive Taxation*, 22 J Legal Stud 265, 279 n 27, 285 (1993) (a kind of endowment effect may make organized interests especially determined to protect what they already enjoy). Success may also be tied to the chance that the jurisdiction affected by the disaster is considered pivotal in an upcoming political election. See, for example, Melissa Healy, *Cheney Defends Plan to Rebuild Base Hit By Storm; Recovery: Defense Secretary Admits Proposal is Based on More than Military Needs. But He Rails Against Charges That Move is Motivated by Politics*, LA Times A15 (Sept 3, 1992) (linking decision by President George Bush to rebuild Homestead Air Force Base after Hurricane Andrew to forthcoming presidential election).

sional districts or states, or is essentially coterminous with one state, because there is already in place a means of overcoming collective action problems and gaining political advantage over dispersed and disorganized fellow citizens. In contrast, those who suffer from a disease (or those who hope for government funds to support research about a disease) need to overcome collective action problems in organizing their claims.[5] Falling in between these extremes are disasters that strike a group that is previously organized but not geographically—and therefore politically—advantaged. For example, Black Lung Disease was largely coincidental with membership in a single union (and also with residence in a small number of states), and Agent Orange posed a political task for previously organized veterans. We might surmise that previously organized victims are, at the very least, poised to act when disaster strikes and, in most cases, able to generate relief for the very reasons that they were able to organize in the first place.[6] Recurring disasters, such as crop failures or floods, might motivate groups to organize in preparation for future calamities.

On the other hand, nonrepetition can be an advantage in securing relief because unique disasters are less threatening to taxpayers. Compare, for example, the victims of a mad gunslinger who opens fire in a restaurant with those who suffer at the hands of an invading army which does damage before being subdued. These groups are similar in terms of geographic representation, likely exposure to media coverage, ongoing organization, and moral hazard concerns (none), and we might imagine them to be of identical size. And in neither case is there likely to be a failure of the capital markets such that victims would have difficulty borrowing funds in order to rebuild profitable businesses.[7] But I think

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5. A major problem is the ability to suppress free riding in order to extract "taxes" or other seed capital from potential beneficiaries. Rent seeking by an interest group may be profitable but "investors" need a means of pooling their investments.

6. It is tempting to suggest that modest success will also come to interest groups organized around issues of great absolute value to individual members. Thus, an increase in social security benefits may affect a group that is just as numerous as a group that would benefit from a plan to compensate victims of crime, but added social security benefits seem more likely to emerge from the political process than does compensation to crime victims. The latter group may be perfectly identifiable (as it will be, for example, if the proposal is to compensate victims of crimes committed in the past year) but most of its members will have relatively little to gain.

But one problem with this comparison, or suggestion, is that there are striking examples of nonrecurring interests with a great deal to gain but with little history of success. Consider, for example, the relatively low benefits paid to families of members of the military killed in active service. These extremely sympathetic victims are not associated with a moral hazard problem, suffer losses that are not easily insurable through private channels, and might work for fairly large ex post relief packages—but they are geographically dispersed and otherwise unmotivated to organize.

There are, of course, examples of relief even where the victims are dispersed or appear unsympathetic. For example, governments may pay for emergency room care even when victims are at fault and (ostensibly) politically powerless. The discussion in the text claims only that among the factors explaining the incidence of relief, geographical and other organizational advantages are noteworthy.

7. However, at least with respect to local capital markets, one way of rationalizing

it fair to say that relief is most unlikely in the gunslinger situation and yet possible in the "invasion" setting.[8] While the gunslinger's victims could have purchased private insurance more easily than the invasion's victims, I suspect that the important difference between the two settings is that relief seems more likely for unique disasters. In other words, it is difficult to rationalize compensation for the victims of one murderer because we are unlikely to offer relief to all victims of murderers. Hence, even though victims of an invasion are hardly well organized, the uniqueness of the event makes relief plausible. However, we should recognize that "uniqueness" may simply camouflage the importance of insurability. It may be that victims of murder fail to gain relief because they could have insured, and that the invasion victims might get relief not because their problem is unique but rather because acts of war are generally excluded from insurance coverages.[9] If pieces of a meteor landed and did similar damage, my intuition is that there would be no relief unless the losses fell deeply and widely on a well organized interest group. If so, insurability and organization do all the predictive work, and uniqueness is superfluous.[10]

If, in order to create or excite a formidable interest group, it is "advantageous" for a victim to be one of many ravaged by a given disaster, it is nevertheless likely that the group of losers can grow too large. For example, victims of crime may in reality simply be too numerous to subsidize. If the cost of relief is very great, even the most dispersed and passive majority will notice the grave threat to tax rates or other government programs; and if the cost is constrained by limiting each victim's relief, then the net potential recovery per victim may be sufficiently small that victims will not find it worthwhile to organize at all.

There are, of course, counterexamples where very large—but not well organized—subsets of the population extract reimbursement for discrete losses. Supplemental unemployment benefits may be one such example.[11] But relief for

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post-disaster relief is with the idea that these markets may be too inflexible to finance a rapid recovery.

8. There is, of course, no recent experience with post-invasion relief claims. While the bombing of Pearl Harbor did produce some civilian casualties and business losses, virtually all those losses were traced to anti-aircraft activity, rather than direct enemy strikes. Walter Lord, *Day of Infamy* 158, 220 (Holt, 1957). It is unclear whether this fact makes relief more or less likely. In any event, inasmuch as post-disaster relief blossomed only in the last 25 years, see note 13, the Pearl Harbor experience is probably uninformative.

9. See Rhodes, *Couch on Insurance 2d* § 1:61 at 159-60 (cited in note 3) (containing a standard form homeowners policy that excludes war damage from coverage). At least in the case of life insurance, however, insurance companies only use the exclusion in times of war or impending war, and then only for particular high-risk insureds (such as males of draft age). Janice E. Greider, et al, *Law and the Life Insurance Contract* 227 (Irwin, 5th ed 1984); Kenneth Black, Jr. and Harold D. Skipper, Jr., *Life Insurance* 138 (Prentice-Hall, 11th ed 1987).

10. There is also a connection between repetition and moral hazard and between repetition and the ability of citizens to expect that relief will be forthcoming. These matters are explored below.

11. These benefits are occasionally added to "expected" benefits in the midst of an

discrete losses suffered by a large unorganized subset of the population generally comes not in the form of taxpayer-sponsored relief, but instead in the form of (apparent) burden-shifting to another disfavored or unorganized group. Rules barring foreclosures and requirements that workplaces or buildings accommodate disabled persons illustrate this idea.

A related phenomenon concerns the structure of relief. When an interest group is successful in obtaining post-disaster relief, it is most unlikely to reimburse the fisc in a future time period. Thus, if farmers in the Mississippi Valley gain aid after serious flooding, we do not expect that region to be required to pay higher taxes than the rest of the country in a year in which weather conditions and harvests are especially favorable. The very characteristics of interest group politics that are associated with the existence of post-disaster relief also support the interest group's ability to ward off special assessments or other "extra" burdens. There are important historical exceptions to this observation, including a windfall profits tax on domestically produced oil and higher taxes on businesses enjoying supernormal profits during war, but these are relatively unusual political developments and are facilitated by the presence of wars, embargoes, and other salient events that focus political attention on large numbers of voters rather than on organized interests.[12]

Although geographic concentration seems to spawn relief, other variables must also play a role. West Virginia and California, for example, have suffered disasters that are fairly state-specific, but they are not equally successful in extracting federal funds. It may be useful to learn about the political experience and connections of those who represent these interests, but it is likely that there are other factors that explain the relative successes of various disaster victims. I turn first to considerations that do not have much to do with positive political theory and then in Section II-C to the possibility that the expectation of relief payments stimulates prudent disaster-mitigating investments earlier in time.

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economic downturn (or election season). Note that previously promised unemployment benefits contain an element of pre-disaster relief because there are obvious cross-subsidies among insured workers.

12. The bailout of Chrysler is a particularly interesting exception because the government received stock options which later proved quite profitable. Warren Brown, *Chrysler's Driving Wheel Bids Farewell; Iacocca's and Automaker's Resurgence Were Intertwined*, Wash Post H1 (Dec 27, 1992) (government earned $350 million from warrants and stock options issued in exchange for $1.2 billion in loan guarantees). In contrast, businesses in Los Angeles that received post-earthquake relief were not asked to promise to make payments in the event that they thrived after rebuilding. Of course, to the extent that even the most powerful interest groups must join coalitions and therefore must face constraints, it is difficult to predict when interest groups will do better holding out for larger "subsidies" rather than benefits that are offset by extractions in the event of success. Universities might choose to lobby for scholarships rather than subsidized loan programs of somewhat smaller net benefit, but when we see loans (or Chrysler stock options) it is not always the case that the interest group has proved to be weaker than others.

B. OTHER CONSIDERATIONS

1. Identification.

It is easy to imagine that voters are more likely to come to the assistance of fellow citizens when they can identify with these beneficiaries. A related possibility is that relief may be conceived of as part of a mutual insurance arrangement. For instance, farmers in South Dakota may be among the first to favor relief for drought-stricken farmers elsewhere—both because they identify with those in need and because they hope that other voters will follow the precedent of relief when a drought hits South Dakota.[13] However, this is not an especially useful explanation for post-earthquake relief because voters know that earthquakes are far more likely in some locations than in others. Yet it is also possible that relief follows empathy which, in turn, may be linked to personal familiarity. Influential citizens or politicians (and their aides) may identify more with (or simply know many more of) the residents of Southern California than those of West Virginia.

2. Moral hazard.

The prospect of public assistance generally raises the fear of moral hazard. The most familiar example is that flood relief or subsidized flood insurance may encourage inefficient building on flood plains. It is difficult to assess the relative magnitudes of moral hazards, but it seems plausible that the moral hazard accompanying drought relief is less serious than that associated with such familiar relief as unemployment benefits. It is even more difficult to evaluate the moral hazard problem associated with earthquake relief—both because subsidies can be made to be conditional on disaster-mitigating steps[14] and because there

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13. More generally, relief may beget relief in the sense that expectations about relief have something to do with past experience. The Alaska earthquake of 1964 is often given as the watershed event, after which major disasters often generated government-sponsored relief. Douglas C. Dacy and Howard Kunreuther, *The Economics of Natural Disasters: Implications for Federal Policy* 53-54 (Free Press, 1969) (The Alaska earthquake of 1964 produced the first U.S. legislation specifically aimed at a single disaster, despite the fact that Alaska's property damage was only average when compared to prior disasters.). See also Howard Kunreuther, *Recovery from Natural Disasters: Insurance or Federal Aid?* 9 (Am Enterprise Inst, 1973).

On the other hand, most examples of identification could also be explained on geographic grounds. For instance, South Dakota may benefit from drought relief because enough citizens from other states fear droughts themselves, but it is also possible that South Dakota—with its disproportionate power in the Senate—is simply good at getting relief. Political power may explain the fact that even small problems can receive attention and relief from federal agencies. See, for example, *South Dakota Landslide Victims Need Assistance Now*, 104 Cong Rec S9113-01 (July 15, 1994) (statement of Senator Larry Pressler urging relief in addition to the SBA loans already approved for home and business owners in the small town of Lead, South Dakota, where a slow-moving landslide caused damage).

14. To the extent that these rules are state-initiated there is the puzzle as to why relief comes from the federal government. In the case of floodplains, it seems sensible that

is not much post-earthquake individual behavior at stake (although the prospect of relief may well lead to greater development in areas with substantial earthquake risk). In the case of flood insurance, subsidies are often contingent on a community or an individual insured adopting steps likely to mitigate damage, so that there may actually be less loss than there would have been in the absence of the insurance program in the first place.[15] Moreover, post-disaster relief may reduce losses if relief funds can only be used to redevelop in accordance with disaster-mitigating regulations. Conditional relief can, at least in theory, reverse the obvious moral hazard accompanying the prospect of subsidizing victims. In any event, as a positive matter the moral hazard problem does not seem well correlated with the absence of disaster relief. Losses from war and unpreventable diseases do not, for example, normally trigger relief efforts, while post-flood relief, which is fairly common, may create a serious moral hazard problem.

3. Government as partner.

It may be tempting to think of some post-disaster relief as reflecting an implicit private-public partnership. We tax Californians when they prosper and therefore, the argument proceeds, we ought to subsidize them when they suffer from an earthquake. There is a ring of fairness to this explanation, but also a fairly intuitive efficiency claim about the neutral treatment of risky investments.[16] The suggestion is that the correct amount of investment and risk-taking will be encouraged in a system where the government, if it shares in gains, also shares in losses. In the case of post-disaster relief it is even possible, as a positive matter, to point optimistically to the nature and magnitude of relief. The relief following recent California earthquakes, for example, could be described as mirroring the tax rates imposed (in the absence of disaster) by the federal government on profitable enterprises or perhaps on appreciated residences.[17]

But this optimistic, partnership-like view of relief is probably misguided. If

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control and prevention are somewhat in the hands of the United States Army Corps of Engineers because relief is expected from the federal fisc. Oliver A. Houck, *Rising Water: The National Flood Insurance Program and Louisiana*, 60 Tulane L Rev 61, 66-71 (1985).

15. Id at 71.

16. The argument is a familiar one in the debate over the proper treatment of losses in an income tax system. See Mark Campisano and Roberta Romano, *Recouping Losses: The Case for Full Loss Offsets*, 76 Nw U L Rev 709 (1981) (arguing for symmetrical treatment of losses and profits in order to encourage efficient, if risky, investments). The problem is complicated by the fact that it is difficult to keep an even playing field among start-up companies, enterprises with past losses, and conglomerated firms.

Note also that the casualty loss deduction in 26 USC §165(c)(3) (1988) of the tax code gives relief even for personal assets lost in a disaster. Louis Kaplow, *The Income Tax as Insurance: The Casualty Loss and Medical Expense Deductions and the Exclusion of Medical Insurance Premiums*, 79 Cal L Rev 1485, 1489-93 (1991) (casualty loss deduction covers assets used for the owner's consumption, such as a yacht destroyed by a storm).

17. This is because the percentage of property losses covered by federal aid was in the range of the marginal tax rates on ordinary income and capital gains.

the economic activity found in Southern California were instead in another location, far from a fault line, the federal government would still tax away a large share of the profit earned in these activities and would then not need to pay for disaster-related losses. The analysis is thus closely related to the moral hazard discussion in the preceding section because relief expenditures might be seen as efficient and fair only when the profits themselves (taxed away in good times) were somehow linked to the risk of earthquake or drought or other relief-prone disaster. Put differently, most of the activity that takes place in Southern California and that is taxed by the federal government could also occur (and be taxed) in other locations, so that post-earthquake relief is not necessary to encourage the activity. And as a matter of fairness alone it is difficult to see why taxpayers should pay Californians for the losses that they suffer when, or to the extent that, these activities take place in California because people enjoy living there rather than somewhere else. On the other hand, to the extent that more profitable farmland is likely to be in flood-prone areas, the partnership view is positively and normatively attractive with regard to flood relief, as well as many other kinds of disaster relief.

C. DEMOCRACY AND DISASTER

1. Internalization.

The most optimistic explanation for post-disaster relief is that governments agree to provide relief when, or even because, the prospect of such future expenditures creates desirable incentives for preventive measures. If taxpayers and their representatives know that they will pay for a substantial fraction of losses caused by floods, then there is an incentive to invest in such things as levees and floodplain management in order to economize on disaster relief. But, if the government paid the entire cost of relief and rehabilitation, there might be too substantial a moral hazard problem. A government that was forced to share in relief, however, might leave potential victims with suitable incentives even while encouraging itself to take the most efficient preventive measures.[18]

There are some enticing examples of this internalization idea. The rising popularity of national health insurance can, for example, be described as sensible because the government funds, and therefore controls, the direction of medical research and disease prevention efforts. This theory suggests, perhaps correctly, that relief would be provided in the event of a military invasion. It fails, however, to predict the (rather universal) low level of relief for those who perish in the service of their country.[19]

18. In referring to "full internalization" below, I will assume that the government will actually pay only a fraction of losses in order to control moral hazards. In contrast, partial internalization will refer to the idea that the government pays still less, or gives relief less often, if only because there is insufficient sympathy or political support for "full" relief.

19. An optimistic theorist might insist that war casualties are sufficiently in the public

But this straightforward internalization suggestion is far too optimistic. There is, first, a missing link in the argument. If the government is motivated by either public opinion or other means always to provide disaster relief, then why is it not simply and more directly motivated by the same forces to invest regularly in efficient mitigation?[20] Moreover, there does not appear to be much of a connection between disasters that beget relief and disasters that could be efficiently minimized by the government. Post-disaster relief appears to be more likely following earthquakes and hurricanes than in the aftermath of major fires, but government-initiated prevention would seem to be at least as effective for fires. Similarly, there is rarely post-disaster relief for crime victims, although a government that compensated all victims of crime or, perhaps to avoid moral hazard problems, all victims of serious violent crime, would surely take the cost of crime much more seriously. Finally, the optimistic internalization argument, or the little that is left of it, is weakened by the fact that when the federal government provides relief, it is often the state and local governments that are better situated to effect preventive measures.[21]

In short, if the internalization argument suggested here were completely

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eye as to obviate the need for further political internalization. This is related to the well known claim that democracies do not engage in warfare with other democracies. Of course, this optimistic view suggests that there would not be relief in the event that a hostile military force inflicted losses, because such an event would be very much in the public eye.

Put differently, it is possible to categorize potential losses, or "disasters," as of the kind that the state can be expected to prevent in an efficient manner or of the kind regarding which the state could use some budgetary encouragement to prevent efficiently. The state might be expected to plan efficiently for the national defense, so that little would be gained by having it compensate those citizens who suffer losses from warfare—poorly or well conducted.

20. The argument can not be that relief is always provided in order to encourage efficient prevention, because it is obvious that some crimes, fires, storms, and other "disasters" do not generate government-sponsored relief. If, instead, the idea is that benevolence (or political forces) encourages relief whenever it is plausible that government-sponsored mitigation steps would have efficiently minimized or prevented the disaster at issue, then the question is why these same forces do not simply encourage efficient preventive steps, without the intermediation of relief. Where private parties are concerned, it is easy to see both why the threat of damages might encourage efficient precaution-taking and why it might be easier to use losses as the triggering device instead of suits for unreasonable risk creation. But where public servants are concerned, the threat of payments for (disaster-related) losses will not necessarily encourage precautions because the losses are not paid by these agents themselves. At the very least, we will need a complicated theory to explain how disaster relief might best encourage efficient precautions.

21. One possibility is that the federal government seeks credit for relief. Another is that it wishes to regulate, perhaps in order to attract rent seeking behavior, and plans to justify regulation as a means of lowering the costs of relief. An interesting possibility is that the federal government will or should condition relief on the provision of matching funds from state governments. This state-provided post-disaster relief must be drawn from a broad tax base or an affected group will simply agree to pay the state in order to receive federal funds.

successful there would be no puzzle as to when government-sponsored relief was forthcoming because the claim would be that we would find relief whenever efficient mitigation was in the same government's hands. Citizens would always demand relief as a precommitment to efficient precautions. In reality, however, relief is much more occasional. Moreover, the internalization idea lacks connective fiber between payments and prevention. The prospect of paying losses in tort or contract may well motivate private parties to take efficient precautions, but it is hard to see how the prospect of disaster relief encourages legislators or bureaucrats to invest in precautions. If legislators or other government officials are simply inclined to do that which is socially desirable, disaster relief is a superfluous intermediating incentive. And if instead these agents need encouragement, it is hard to see how the prospect of disaster relief forces their hands with respect to pre-disaster precaution-taking.

2. Partial internalization.

I have imagined a (counterfactual) world in which disaster relief is promised in order to encourage the promisor or its agents to make efficient investments in disaster-mitigation, and I have suggested that ours is not such a world, if only because disaster relief is in fact not always forthcoming. It is possible, however, that some subset of efficient precautions is encouraged by the promise or history of disaster relief. In particular, if disaster relief follows public "sympathy" or interest group pressure of some kind, or even if relief is largely unpredictable, the government might wisely take cost effective precautions to reduce the subsequent costs of relief. The unpredictable quality of this impetus for relief might well generate too few precautions, but at least the precautions that are taken will be efficient. My suggestion is that whatever the explanation of the availability of disaster relief, the prospect of such relief will generate some efficient government-sponsored precautions.

If, for example, the government knew that it would be forced to compensate all losses from all hurricanes, then it might invest in every efficient precaution in order to reduce these expenditures. I have, of course, not yet specified the mechanism that would encourage such efficient investments—and indeed I have expressed some skepticism regarding the likelihood that "the government" has any incentive at all to do the sensible thing. But in order to consider the problem one layer at a time, assume for the present that the government is perfectly responsive to financial incentives, so that the prospect of spending now in order to save later is attractive. Under such an assumption it is again obvious that full internalization—reduced only to control moral hazard problems—will lead to efficient precaution-taking.

Now what if there is "partial internalization," so that the government is expected not to compensate a large fraction of all hurricane-related losses, for instance, but rather half (or some other fraction) of all losses caused by one out of two hurricanes? The government might perceive that political coalitions and media coverage are such that relief will not always be required, but it will know that there is some positive probability that it will be forced to provide post-disaster relief. This expectation should encourage the government to take some steps to reduce losses. If, for example, a better bridge can be constructed at a cost of one hundred million dollars, and this hurricane-resistant bridge provides an expected benefit in present value terms of five hundred million dollars, then the government is encouraged to invest in this precaution because it expects to pay about one-quarter of all hurricane-related losses, and the return to this investment is more than four hundred percent. In contrast, we might wish the government to build a given storm sewer system or stockpile relief supplies at a cost of $0.9 billion with an expected social benefit in present value terms of $1 billion, but a government that was perfectly responsive to financial incentives, that expected to pay only a fraction (such as 25 percent, or anything less than 90 percent) of losses, and that was otherwise unresponsive to voters and social costs would not invest in these precautions. The point is that partial internalization might lead to some efficient precautions, even if it is unlikely to encourage investment in all efficient, available precautionary projects. With this point in mind we can turn to the causal connection between expected relief expenditures and the incentive to invest in pre-disaster precautions.

3. Feedback loops.

a) Taking "sympathy" as given. It is possible that elected leaders or other public servants act in the best interests of their constituents and seek out efficient, disaster-mitigating steps suitable for government intervention. This optimistic view of disaster mitigation has very little to say about disaster relief. There is no social benefit from full or partial internalization, for the government is by hypothesis already eager to undertake efficient precautions. The occasional availability of post-disaster relief might simply be explained with a combination of most of the variables discussed in Sections II-A and B—but with no role for internalization.

I prefer to make something of the connection between post-disaster relief and a variety of pre-disaster programs. For example, there is little doubt that experience with flood relief has generated both subsidized flood insurance programs and attempts to regulate the quantity and quality of development on flood plains.[22] It seems likely that other pre-disaster programs have arisen not (or not only) out of direct attempts by the government to solve collective action problems or to provide public goods in an efficient manner, but rather as a reaction to, and in anticipation of, expected post-disaster relief costs.

One simple suggestion is that the political disposition toward occasional post-disaster relief (based on geography, "sympathy," and so forth) causes a variety of interest groups to respond with pre-disaster programs.[23] Some of these pre-disaster steps will be efficient precautionary investments and others

22. See generally Houck, 60 Tulane L Rev 61 (cited in note 14).

23. On the possible collective action problem among these interests, see note 30 and accompanying text.

may simply be redistributive or simply inefficient schemes designed to benefit some groups while attracting support (or minimizing strong opposition) because of their ability to reduce the likelihood, and therefore the expense, of post-disaster relief. Put differently, even if we are unable to develop a perfect positive theory of when to expect post-disaster relief, the prospect of some positive probability of paying out such relief generates pre-disaster effects. We might imagine that citizens or their public-regarding agents will take these pre-disaster steps if they anticipate paying out more post-disaster relief to their fellow citizens. Alternatively, and perhaps more strangely, we might imagine various selfish interest groups as supporting—or at least as not opposing—pre-disaster investments or regulations simply to avoid post-disaster relief efforts that will draw on the fisc and reduce the chance that programs favored by these interest groups can be funded. The most likely story is that important players in the political process oppose (even many of the most efficient) pre-disaster precautions when the likelihood of post-disaster relief is low, but favor (and certainly do not block) exceptionally efficient precautions when the probability of more expensive post-disaster relief is high.

I do not mean to ignore either the collective action problem that might exist among interest groups or the possibility that self-serving interest groups will propose inefficient spending programs in the name of disaster mitigation. Turning first to the problem of self-serving interest groups, it is noteworthy that a purely public-regarding citizen, politician, or group could encourage many efficient precautions not with pre-disaster subsidies—which are normally the easiest means of enriching the very interest groups that might lead the charge for such pre-disaster "mitigation"—but rather with unfunded mandates. The federal government could require private insurance, local building codes, zoning strategies, and other steps that might efficiently reduce the need for post-disaster relief at no obvious expense to the federal fisc. One problem with this strategy (on the part of concerned interest groups) is that it is difficult to displace the expectation of post-disaster sympathy. An unsubtle government will simply require these precautions or will announce that future relief is conditional on these pre-disaster precautions. Yet when disaster strikes, the political propulsion toward relief may not be inhibited by the fact that many victims did not abide by earlier warnings.[24]

b) Famines and feedback mechanisms. Famines present a useful illustration of the feedback loop between post-disaster relief and pre-disaster precautions. Famines also present a striking example of the mechanism I have in mind because we tend to think of famines as completely avoidable, although in some sense starvation and malnutrition can be avoided at a cost in much the way all

24. See, for example, notes 47 and 58 which discuss the inability of the government to follow through on its earlier threats that relief would be denied to those who did not participate in crop insurance or flood insurance programs.

hurricane and crime losses might be prevented at a cost. Finally, famines offer an opportunity to think about the collective action problem among interest groups because some methods of relief or prevention generate obvious benefits to discrete groups.

Amartya Sen has explored the remarkable ability of democracies—or more precisely, nations with elected leaders and free presses—to avoid major famines.[25] We might simply assume that this remarkable connection is robust; even poor democracies stave off famines while more affluent countries, that have neither a lively press to report on problems and incompetence, nor rulers who suffer in the event of disaster, endure famines. But what is the mechanism that averts this particular disaster? Sen implies that because elected leaders know that they will not survive an avoidable famine of great magnitude, they support investments in networks of roads, public employment programs, or other disaster-mitigating steps in order to prevent famines in the first place.[26] Put more cynically, elected leaders appear to survive easily in the face of some malnutrition and disease, but if these problems grow to some level of salience, then the media attention that follows makes it impossible for these leaders to survive in office.

There is room to quibble with this straightforward feedback mechanism because elected leaders might be able to blame those who preceded them by one or two terms for the failure to invest in infrastructure and the like. Indeed, Sen may really mean that once a famine strikes, a politically responsible government will be forced to take steps to avert a catastrophic event. If food shortages appear, a responsible government might be forced to redistribute wealth, release reserve stocks, engage in public works programs to redistribute wealth, and take other steps that lead the press and the electorate to marvel at their leaders in crisis rather than depose them at the next election. Sen's evidence may be consistent with this depiction of crisis and elected leadership because it suggests a connection between democracy and the absence of *major* famines. A cynic might even say that in democracies there will be more frequent crises because constituent groups perceive that the prospect of a major disaster will arouse the attention of otherwise unresponsive governments. In any event, the critical suggestion is that crises stimulate effective responses. Bits of Sen's work can be understood as favoring this alternative account of democracy and disaster,[27] but

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25. Amartya Sen, *The Economics of Life and Death*, Sci Am 40 (May 1993); and Amartya Sen, *Freedom and Needs*, New Republic 31 (Jan 10 & 17, 1994).

26. Sen, Sci Am at 43 (cited in note 25) ("If leaders must seek reelection and the press is free to report starvation and to criticize policies, then the rulers have an incentive to take preemptive action."); see also Sen, New Republic at 33-34 (cited in note 25).

27. See Sen, Sci Am at 43-44 (cited in note 25) (noting that China continued the questionable agricultural policies of the "Great Leap Forward" despite the onset of a three-year famine that killed between 23 and 30 million people). See also Amartya Sen, *Inequality Reexamined* 77-78 (Harvard, 1992) (noting Emperor Haile Selassie's refusal to undertake famine relief measures in Ethiopia in 1973 because "wealth has to be gained through hard work" and because "those who don't work starve"). The implicit argument

to a degree it is an unflattering picture (even) of democracy, for it suggests that democratic governments may preside over numerous small-scale tragedies that are in the aggregate no less horrible than the occasional large-scale disasters they avoid.

An ancillary view of the democracy-famine connection returns us to the internalization theme. While electoral feedback forces relief in the event of a famine,[28] it is the prospect of such costly relief that causes politicians to make more efficient pre-disaster investments in order to prevent famine in the first place. And if politicians are not inclined to make these investments because, as suggested earlier, current investments may only affect the likelihood of disaster long after they need to run for reelection, a variety of interest groups may nevertheless push politicians to make these investments because the potential economic burden of famine relief threatens competing programs that these other groups desire.[29] Perhaps the most likely story is that some citizens and politicians will propose sensible precautions and organized groups will not oppose these plans because the long-term investments are solid even from the perspective of the interest groups that do not immediately gain from precautionary steps. When post-disaster relief is not expected, interest groups will oppose even efficient precautions because the costs associated with these precautions are borne by taxpayers (including the members of these potent interest groups) although most of the benefits accrue to disaster victims. In contrast, when post-disaster relief is expected (because of sympathy and interest group pressures), "unrelated" interest groups will not oppose dramatically efficient precautions because of the expected savings in post-disaster relief.

Moreover, any collective action problem among citizens and these unrelated interest groups might be overcome by the work of "related" interest groups, such as those interested in road building or grain storage contracts, that stand to gain directly from famine avoidance investments.[30] Indeed, the dynamics among

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is that only a ruler who is not democratically accountable could survive while abiding by such a principle.

28. One version of the argument is that citizens will respond to large-scale suffering of fellow citizens. Another version, which helps limit the argument to famines and to a small number of other disasters, is that such sympathy arises primarily where the disaster is perceived as having been avoidable by sensible government projects.

29. Note that I do not argue that potential victims force the government to prevent famine. There are simply too many examples of repeat losers (even in democracies) to believe that otherwise disadvantaged regions or ethnic groups suddenly develop political power when famine is concerned. I therefore prefer the more indirect mechanism described in the text; powerful interest groups recognize that a major disaster will elicit sympathy and expenditures in favor of the disadvantaged.

30. The collective action problem among interest groups may seem like an analytically serious problem of the theory suggested in the text. But we are generally ignorant of why and when collective action problems are overcome. Thus, when a tax measure includes generous depreciation deductions we are inclined to point to "business interests," even though these interests include a wide variety of trade associations and other entities which might suffer from their own collective action problems.

interest groups might explain the precise means by which democracies avoid serious famines; cash grants may lose out to roadbuilding, stockpiling, and in-kind distributions because the latter methods may more powerfully motivate interest groups to form coalitions with other groups which seek only to encourage efficient investments that will create a bigger pie later on.

This internalization argument implicates democracy to the extent that informed voters will want their leaders to ease the suffering of fellow citizens—and that occasions will arise on which these voters will be painfully informed.[31] A democratic government can therefore be expected both to respond to and to mitigate such a disaster. In turn, some citizens or their agents or their selfish interest groups might wish for their government to invest in advance in order to avert famines if only because prevention is cheaper than the cure. Plainly, this indirect feedback story assumes that it is in fact generally less expensive to avoid famines in the first place than to provide aid once they occur.

In the case of famine, it is noteworthy that the prospect of relief probably creates little moral hazard because even if individuals knew that famine relief would be forthcoming, they would still hardly want to be among those who suffer before their fellow citizens apply sympathetic pressure or before their leaders step in to avert a major famine. One may quarrel with the proper method of intervention,[32] but it is difficult to be opposed to all disaster relief in the case of a large-scale famine.

c) Democracy and disaster mitigation. I am not suggesting that all disasters ought to generate relief. There are, for example, more serious moral hazard problems associated with relief following floods, hurricanes, and earthquakes. In advanced economies, most potential victims will be at little risk of serious personal injury where these natural disasters are concerned, and the prospect of relief for property losses may lead to greater losses than would be borne in the

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One partial solution to the collective action problem would involve some linkage. Mayors of large cities might be more inclined to support flood management programs if any surplus in the flood insurance program was promised to urban programs. But the question of linkage and direct competition among interest groups is beyond the scope of this Article.

There is also a related question of why charitable organizations succeed in organizing around certain causes. There is both a collective action mystery and a disaster-related puzzle. Charities operate along with governments in some areas (for example, blood donations and museums) but not others (for example, crime control). I leave these questions for another effort.

31. It is also possible that different interest groups will form or gain power in democracies and non-democracies.

32. Sen favors not food distribution but rather wealth redistribution or employment programs which provide victims with purchasing power. Sen, Sci Am at 43 (cited in note 25). I have already noted that some (perhaps second-best) methods of avoiding serious famines may be relatively attractive to interest groups that can resolve any collective action problem among interest groups and concerned citizens. See note 30 and accompanying text.

absence of expected relief. My point instead is that in all these cases relief may be "forced" on the government by a sympathetic citizenry, and the prospect of these relief expenses may stimulate disaster-mitigating steps—with no serious opposition because of the efficiency of these steps. In short, prevention may be undertaken if it is cheaper than a cure and, at least in theory, those who favor pre-disaster precautions will take the moral hazard problem into account when comparing the cost of prevention and cure. If the prospect of relief generates losses, interest groups may either favor disaster-mitigating investments that combat the moral hazard, perhaps by conditioning investments on certain behavior, or they will simply oppose the investments, knowing that they will do more harm than good.[33] Again, the critical triggering device (and one that separates responsive from nonresponsive governments) is that it is understood that in the event of a major disaster there is a positive chance that the government will be forced to provide relief. We might understand the correlation between democracy and the absence of famine as following from the notion that since a serious famine is expected to lead to relief with a probability of one, democracies always invest in preventing such famines because the prevention, or at least intervention once a famine begins and before it becomes severe, is much cheaper than the cure. In the case of other disasters, including less serious famines, relief is less certain, perhaps because much depends on where the disaster strikes or how media coverage proceeds, so prevention is found less worthwhile.

More generally, once we recognize the implications of Sen's categorization of "serious famines,"[34] the basic connection between democracy and disaster-avoidance can probably be made for most disasters. Much as democracies do experience some starvation and malnutrition, but not famines that claim the lives of twenty million citizens, so too democracies experience hurricanes—but not hurricanes that leave millions without shelter for more than a month. Much as democracies avoid major famines, it should also be the case that floods and earthquakes of comparable magnitude do far more damage in nondemocratic environments. Again, the mechanism that makes this plausible is that where responsive governments are concerned there will often be relief in the event of a major disaster and, in turn, the prospect of this relief sets in motion interests that favor disaster-mitigating investments. There is also the less interesting notion that democratic governments simply intercede more readily once a major disaster is underway.

The picture thus far is one of partial internalization. Some combination of public and interest-group pressure can be counted on to force *occasional* post-disaster relief. In the case of certain enormous disasters this relief can be counted on, but in other cases it is expected with some probability between zero and one. And even if these predictions are imperfect, and the source or nature of the public pressure not perfectly specified or well understood, the chance of relief

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33. Although the collective action problem among interest groups is now more serious.
34. Sen, Sci Am at 41-43 (cited in note 25).

makes at least some pre-disaster investments worthwhile. Citizens or politicians or even selfish interest groups are not so hobbled by collective action problems that they would miss the opportunity to make some of these efficient, pre-disaster investments, but it is unlikely that all desirable precautions are undertaken. This is especially the case because some disasters rarely rise to the level required for "forced" relief arising out of media coverage, sympathy, and the like. Thus, few fires or crimes rise to the level necessary to extract a decent chance of relief even though the government is very much in control of most of the relevant prevention efforts.

To the extent that there is this connection between expected relief payments (arising out of some unspecified mix of sympathy, political coalitions, and the like) and efficient, pre-disaster precautions, the process described here can also provide the underpinning for a normative theory of disaster relief. The implication is that one might favor relief—with some allowances made for moral hazard problems—in order to bring about efficient disaster-mitigating investments. For example, if taxpayer-financed relief appeared inevitable after many violent crimes we might imagine a very different set of interests in favor of gun control, drug decriminalization, prison construction, and school funding.[35] But in the absence of post-disaster relief, we should not expect otherwise unconcerned interest groups to support efficient, pre-disaster precautions.

III. Insurance and relief

A. Insurance and the Likelihood of Relief

If a citizen can be sure of obtaining relief in the event of a given kind of disaster, and if this relief is at the expense of other taxpayers, then quite plainly there will be no need to purchase insurance to cover the potential loss. If, as is almost always the case, relief is less than certain and less than fully compensatory, then the citizen faces something of a tradeoff. It is quite likely that the presence of insurance will reduce the likelihood or level of relief, if only because there will be less sympathy from other voters. It is also likely that relief will be available only for uninsured losses.[36] If relief is indeed a function of interest

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35. I do not mean to take a position on the optimal size of these programs, but there is surely something to be said from the perspective of positive political theory for internalizing a larger fraction of the real social costs of crime and other problems. The (positive and normative) case for compensating crime victims is sufficiently intricate as to require separate development.

For the present, it should be sufficient to note that even if the moral hazard problems associated with such a relief effort could be overcome, victims of crime would still be difficult to organize into an effective coalition because actual victims face serious collective action problems of their own, and potential victims are both unidentifiable and dispersed. Moreover, serious political opposition would be likely.

36. Under the Federal Emergency Management Act ("FEMA"), all recipients must repay any government assistance that is duplicated by insurance proceeds. 44 CFR § 205.39 (f)(2) (1994). Similarly, the SBA will not provide relief for losses that are covered by

group power and general sympathy, then there may be optimal levels of insurance and interest group politics to purchase[37] so that after a disaster there will be some certain amount of insurance coverage and then some probability of relief to cover uninsured losses. But the point here is that there is at least some tradeoff between insurance and "free" relief. In a manner of shorthand, we can imagine situations (or ranges) where individuals will prefer the (increased) potential for post-disaster relief over the purchase of insurance in advance of any disaster.[38] This is hardly a novel suggestion.

The strategic problem implicit in the tradeoff just described is complicated by the fact that insurance will generally cover both individual and widespread losses, while government-sponsored relief will virtually never be available for disasters striking just one, or even several individuals.[39] Conceptually, one might purchase insurance that provided coverage only in the event that the disaster that caused the insured's loss did not do widespread damage, but, practically speaking, the existence of such an insurance policy would destroy political sympathy for the victim.

I am suggesting, then, that since relief is more likely where there is no insurance, and because relief is uncertain in general and unlikely for disasters

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insurance. 13 CFR § 123.3 (b)(3) (1995). In addition, victims are not eligible for relief when they "assumed the risk," which includes situations where insurance was initially purchased but not maintained. 13 CFR § 123.3 (b)(4) (1995).

37. The implication is that there is often a need to spend in order to gain interest group power.

38. Kunreuther, *Recovery From Natural Disasters* at 30-32 (cited in note 13), illustrates how an individual may be better off declining to purchase insurance, taking out a large mortgage (because later relief may be tied to outstanding loans), and later enjoying an SBA loan and forgiveness grant along with a casualty loss tax deduction. Unfortunately, Kunreuther does not make the individual's ex ante estimate of the likelihood of relief in the event of a disaster explicit. Similarly, Kunreuther notes that SBA loans may make small losers whole, whereas flood insurance would have come with a deductible, but again there is no discount taken for the fact that, in the event of flooding, insurance payments are virtually certain while disaster relief is not. The implicit claim is that since many individuals do not purchase flood insurance even when the government subsidizes 90% of its cost, individuals must regard the disaster relief as quite likely. Id at 23.

39. This suggests an interesting analogy, or contrast, between takings law and disaster relief. Insurance aside, one who suffers alone from a natural disaster is unlucky (because there is no prospect of relief if lightning hits one or two properties) while one who suffers alone as the result of a government program may be able to obtain just compensation as a result of having been "singled out." See Saul Levmore, *Takings, Torts, and Special Interests*, 77 Va L Rev 1333 (1991). Insurance complicates this comparison. Relief is less likely to be forthcoming for insured losses, but insurance may often be unavailable for losses threatened by government actions. Indeed, takings law has been described as a substitute for (unavailable and difficult to provide) private insurance. Lawrence Blume and Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 Cal L Rev 569, 571 (1984). Risk averse individuals or property owners can buy insurance to cover most disasters, and can expect relief because of takings law in the event of individualized losses from government actions, but must hope to be on the winning side of interest group battles when it comes to losses suffered by many citizens because of government actions.

that strike narrowly, individuals face a difficult problem when they decide how much insurance to buy and how much to invest in interest group formation. There is obviously a technical solution to this wealth maximization problem, although it will differ across individuals according to their perceptions of collective action problems and their attitudes toward risk. Moreover, the "solution" that will occur to individuals seems unfortunate. As already suggested, individuals might purchase less insurance the more they expect widespread losses and then relief. No special moral hazard or other social inefficiency is generated by the purchase of additional insurance for individualized losses alone, but the reality is that the very sale of such policies will reduce the likelihood of relief. I have been unable to find an insurance policy that provides for coverage in the event of flood, fire, or earthquake damage, but then, for example, only half as much coverage in the event that the locality is identified as a recipient of federal disaster relief or in the event that more than one thousand properties are damaged. If coverage cannot be bifurcated in this manner (between widespread and narrow disasters), individuals will buy less insurance the more they expect losses to be relieved. This reduction seems inefficient.

From the perspective of taxpayers at large this tendency seems especially unfortunate (but not particularly inefficient) because the less insurance purchased, the more likely the groundswell of sympathy for the victims of disasters. This claim may be most persuasive when put in unscientific terms: television broadcasts of uninsured property owners pointing to their horrible losses will most likely move public opinion in favor of government-financed (as well as private-charitable) relief. A related point is that audiences and voters project from their own circumstances. Most citizens do not have earthquake insurance but do have fire insurance and can therefore more readily favor relief after earthquakes than after fires.[40] In any event, for the present it is sufficient to see that individuals will underinsure because of the potential for relief of uninsured losses.

One obvious solution to this problem is to attempt to develop an expectation that relief will never be available for insurable risks. If individuals do not expect relief for uninsured losses because these losses could have been insured, then there will be no inclination to underinsure in the expectation of relief. Coalitions may or may not succeed in gaining relief after disasters caused by terrorism or war, for example, but inasmuch as insurance is not generally available for losses arising out of these events[41] there is no problem of encouraging "underinsur-

40. This intuition is difficult to prove to the skeptical. We do not have the luxury of a controlled experiment in which a serious hurricane or earthquake strikes a region with a great deal of private insurance and then strikes another with little insurance. On the other hand, the fact that we do not experience post-disaster relief after airplane and railroad crashes (even where there is no tort recovery) and after fires suggests that relief may be associated with uninsured victims. The contrary impression would be that even where most victims are insured, the media can always stimulate sympathy and relief by locating and broadcasting information about uninsured victims.

41. Regarding the war exclusion, see text accompanying note 9. The inclusion of ter-

ance." Private relief, normally funneled through charitable organizations, might be available for insurable but uninsured losses (and it would be difficult to ban such relief) but direct, publicly-funded relief might be reserved for uninsurable losses. The problem with this "solution" is that it is almost surely politically unacceptable or unworkable. There is no enforceable means of precommitment, no apparent inclination to limit relief to uninsurable losses, and many situations in which some victims of a disaster will be of sufficiently modest means that the decision to do without insurance will seem understandable rather than excessively risky or socially exploitative. A more normative project might make the argument that relief ought to be denied where losses would have been insurable, but I take the apparent social taste for relief efforts as given. My positive aim in this Section has been to explain when we might expect post-disaster relief; my normative aim is limited to suggestions that are within the realm of the politically acceptable. There is an argument to be made against (and in favor of) virtually all relief, for example, but that is simply not the point of the present project.

B. Promising Relief for Insured Losses

A more modest resolution to the problem caused by the tradeoff between insurance and relief is for the government to attempt to promise, if only through precedent, that when relief is provided it will cover losses whether or not they are insured, even if some insured victims gain recovery exceeding their losses. One reason for this promise is to encourage potential victims to buy the amount of insurance they want without any perceived need to decrease their coverage because of the probability of relief. If a business or residential property owner knows that relief, should it be forthcoming, will be for fifty percent or some other fraction of losses—be they insured or uninsured—then that potential victim will purchase an amount of coverage that comes close to what he or she would purchase in a world in which there were no chance of relief. It is likely that the insured will purchase slightly less insurance in a world where relief is possible, if only because the prospect of relief removes some risk of loss. But if relief is given only for uninsured losses, then it must surely be the case that the prospect of relief will cause substantially less insurance to be purchased.[42] In short, one rea-

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rorism in a special federal program designed to encourage insurers to undertake normally uninsurable risks indicates that the private insurance market has not generally provided "terrorism insurance." Rhodes, *Couch on Insurance 2d* § 80:4 at 626 (cited in note 3); *Providence Washington Ins. Co. v Lynn*, 492 F2d 979, 984 n 3 (1st Cir 1974) (noting that the federal reinsurance program designed to provide coverage for "riot and civil disorder" also covers terrorism).

The usual noninsurability of war (and terrorism) losses is itself interesting. The obvious explanation is that insurers fear that with such coverage the solvency of the insurance system might be in question. I do not find this explanation compelling if only because insurance could be written with some aggregate loss ceiling. Put differently, insurers could respond to the correlation among insureds' losses by reinsuring in the international market or offering only partial coverage.

42. We might imagine a regime in which relief is promised only to those who have

son to promise relief (even) for insured losses is to lessen the bias toward underinsurance that is introduced by prospective post-disaster relief.

The prospect of relief in addition to insurance does raise some moral hazard problems. If insurance added to relief holds out the prospect of recoveries exceeding the value (or even the replacement value) of what has been lost, insureds might do such things as bringing their valuables to flood and fire rather than taking them away to higher or safer ground. But because relief is never certain (and insurance comes with deductibles)[43] it is unlikely that insureds will behave in this manner. And as a cautionary measure it is also possible to legislate penalties for such fraudulent behavior. Finally, relief might be limited to cover losses to real property and crops, for example, in order to limit the opportunity for socially destructive but privately profitable behavior, which seems like more of a threat where personal property is concerned.

The most interesting effect of this promise, that if relief is forthcoming it will go to insured and uninsured losses alike, is that as more insurance is purchased, relief itself becomes less likely.[44] As discussed earlier, relief is more likely where there are sympathetic victims and political clout, and the first of these conditions is weakened when there are fewer victims who can claim to have been devastated by the disaster in question. Thus, an airplane crash never seems to elicit relief for the families of those who perish. The suggestion is that an important obstacle to relief is the fact that many of those who die will have substantial life insurance and, in any event, tort recoveries are likely. If television crews had trouble finding flood and earthquake victims who have lost virtually all their worldly goods, or did not find such victims representative, then relief would be much less likely after these disasters as well. Again, even if a potential victim were aware

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insurance, but this sort of regime is likely to cause the purchase of too much insurance. Moreover, for reasons mentioned earlier, it would be politically unacceptable to keep this promise.

43. A 10% deductible is common with respect to earthquake insurance. Earthquakes and Earthquake Insurance, Hearing Before the Subcommittee on Policy Research and Insurance of the House Committee on Banking, Finance and Urban Affairs, 101st Cong, 2d Sess 54 (1990) (statement of John Drennan, Allstate Insurance Co.).

The details of these policies provide that losses are covered only if they exceed 10% of the property's insured value and that only 90% of losses above that ceiling are reimbursed. These "copayments" can be understood as a mechanism for avoiding claims for cracks and other damage that may not have been caused by the earthquake. In the case of flood insurance, the moral hazard problem is more obvious.

44. It is, of course, possible either that the existence of pre-disaster insurance does not affect the likelihood of post-disaster relief or that a pre-disaster program signals the government's involvement in a problem and actually increases the likelihood of post-disaster relief. The (opposite) intuition, as reflected in the text, is shared by Professors Macey and Miller who, in the context of bank failures, suggest that deposit insurance might be understood as signalling to bank regulators that the insurance amount reflects the limit of the government's exposure in the event of failure. Jonathan R. Macey and Geoffrey P. Miller, *Deposit Insurance, the Implicit Regulatory Contract, and the Mismatch in the Term Structure of Banks' Assets and Liabilities*, 12 Yale J Reg 1, 23-24 (1995).

of this connection between insurance and relief, he or she would also realize that the *individual* decision to purchase insurance has virtually no effect on the probability of relief. However, when many individuals purchase insurance because of the promise that relief will not be limited to uninsured losses, it is almost inevitable that less relief will in fact be forthcoming. Although I emphasize the positive effect on the amount of insurance that will be purchased, a reasonable normative conclusion is that since much relief is administratively costly and regressive in distributional terms, the likely decrease in relief is probably a good thing in and of itself.

This relationship between insurance and relief may also form part of the explanation for the lack of generous relief following the deaths of members of the armed forces on active duty. When armed forces are involved in a conflict and suffer casualties, there is normally no special post-disaster relief, even though many families lose important sources of support. One obvious explanation goes to the coalition part of the theory; the victims are not from a convenient geographical area and do not have an easy means of organization. Moreover, veterans groups might be expected to focus more on relief for survivors with disabilities or even on education benefits. In short, the families of those who die in the service of their country are in a sense one degree more removed from political organization than surviving veterans, and this difference may explain the absence of special relief. A second explanation suggests that the absence of this form of post-disaster relief stems from the existence of a death benefit that is specified in advance. There would surely be more public sympathy for surviving families if there were no provision of a death benefit. This is especially so because individual combatants and their families are unlikely to be able to insure against the relevant losses because life insurance policies generally exclude losses from actual or imminent wars.[45] Yet the advance specification of a death benefit is a contributing but not sufficient explanation on its own because organized veterans groups often succeed in gaining post-war increases in various benefits even though lesser benefits were specified in advance.[46]

In any event, although I am suggesting that a kind of collateral source rule for relief might be a good thing, I have not suggested a means for making credible the promise of such a rule. But I suspect that if politicians simply announced that relief would not be denied for insured losses, and then followed through on the first occasion when relief was otherwise legislated, a precedent would be set that would itself be politically difficult to break.

45. Greider, et al, *Law and the Life Insurance Contract* at 227 (cited in note 9); Black and Skipper, *Life Insurance* at 138 (cited in note 9).

46. Note also that the advance specification factor is a familiar one. An employer, such as a private school or charity, will sometimes raise funds in order to present a retiring or disabled employee with a substantial gift. But such gifts are much less likely in the presence of employer-supported retirement programs or disability insurance.

C. Uninsured Losses and Implicit Collusion

A logical implication of the argument about encouraging expectations regarding collateral benefits is that, as a budgetary matter, it may even be worthwhile for the government to subsidize the purchase of certain kinds of insurance in order to reduce the pressure for post-disaster relief.[47] In turn, representatives of citizens who expect relief in the future might sensibly oppose the promise of relief even for insured losses. After all, if this promise is likely to induce the purchase of insurance, and, the more insurance purchased, the less likely post-disaster relief, then it will be in the interests of a group of potential victims to discourage its members from purchasing insurance. In other words, it may not be rational for any given individual to vary the amount of insurance purchased because of the effect on the likelihood of relief,[48] but it will be sensible for representatives of these individuals to encourage underinsurance in order to increase the amount of post-disaster relief. An interest group could do this either by helping to develop the precedent that relief is available only for uninsured losses or by discouraging attempts to legislate mandatory insurance. Potential victims may well prefer government-subsidized insurance (which can be worth more than the increased likelihood of relief), a topic to which I turn to shortly, but my point here is simply that unsubsidized insurance may be something that these interest groups (or their agents) would wisely discourage.

Of course, it is unlikely that we will find much evidence of potential relief recipients or their representatives[49] behaving in the manner just described. Explicit expressions of interest in less relief (or promise of relief) rather than more would be sufficiently striking as to draw attention to the strategic behavior that underlies it. And, in turn, evidence of conscious manipulation of public sympathy would reduce the likelihood of relief. But there may be more subtle

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47. The Federal Crop Insurance Program subsidizes direct crop insurance for farmers by paying 30% of each producer's premiums up to a maximum 65% of each producer's adjusted yield. Matthew Bender, *Agricultural Law* § 120.A02, reprinted in Commission for the Improvement of the Federal Crop Insurance Program, *Recommendations and Findings to Improve the Federal Crop Insurance Program* 159-60 (GPO, 1989). Although the goal of the program was to replace disaster relief, the relatively low participation rate (approximately 25%) has resulted in continued ex post relief. *Federal Crop Insurance Commission Act of 1988*, 134 Cong Rec H8228, H8230 (Sept 26, 1988) (statement of Rep. Ed Jones) ("producer participation in the program [has not been] sufficient to forestall the political pressures that always come to bear when natural disasters strike a wide path, especially in an election year.").

48. Individuals may rationally underinsure because they know that there is a chance of relief for uninsured losses. But we should not expect individuals to further underinsure in order to increase the chance of relief, because any one person will have an insignificant effect on the overall amount of uninsured losses or on the probability that public sympathy will develop for devastated individuals.

49. I ignore the possibility that their representatives might selfishly wish to maximize relief efforts in order to get credit for the program.

ways of maximizing relief in the manner suggested. Consider, for example, the fact that mortgagees in Southern California normally require borrowers to carry fire and other insurance on homes and other properties, but they apparently do not require earthquake insurance.[50] It is possible that these creditors recognize that if there is any substantial earthquake damage, then there will be fairly widespread damage and that relief will be forthcoming. This signal from lenders may itself be sufficient to encourage individuals to buy less earthquake insurance (and in the aggregate to make relief more likely), so that lenders may serve as subtle intermediaries.

It may also be no coincidence that California has historically been a state where it is difficult or expensive for lenders to enjoy deficiency judgments against defaulting mortgagors;[51] property owners are in fact "insured" in the sense that devastating earthquakes will either stimulate relief efforts or will be borne largely by lenders. In a regime where lenders do not look beyond the security offered by the property for the satisfaction of their loans, the insurance that is required by lenders is likely to be the only insurance that homeowners will find worthwhile to purchase.[52] In any event, it is not impossible that sophisticated lenders understand that to require earthquake insurance would be to reduce the likelihood of relief. And inasmuch as this relief is likely to generate economic activity it may even be in the lenders' narrow interest to prefer relief over insurance.[53] Alterna-

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50. Based on 1990 Congressional testimony, State Farm records indicated that only 28% of Californians with homeowners insurance also had earthquake insurance. *Earthquakes and Earthquake Insurance*, 101st Cong 2d Sess at 60 (cited in note 43) (statement of Frank Nutter, The Earthquake Project, Alliance of American Insurers). On a more limited scale, an insurance company with 37,000 homeowner's policies in the Bay Area estimated that only 30% of its policyholders had earthquake insurance. Id at 52 (statement of Peter Lefkin, Fireman's Fund Insurance Co.).

The Flood Disaster Protection Act of 1973, Pub L No 90-448, 82 Stat 476 (1973), codified as amended at 42 USCA §§ 4001 et seq (1994), makes flood insurance a requirement on new mortgages for property in identified flood areas. A similar requirement has been recommended for earthquakes. See Howard Kunreuther, et al, *Disaster Insurance Protection: Public Policy Lessons* 253 (Wiley & Sons, 1978).

51. John Mixon and Ira B. Shepard, *Antideficiency Relief for Foreclosed Homeowners: ULSIA Section 511(b)*, 27 Wake Forest L Rev 455, 476 (1992) (noting that California homeowners are protected from deficiency judgments more than homeowners who lived in the oil-states were during the 1980's recession). California's anti-deficiency statutes, which were enacted in the 1930's, limit the mortgagee's right to seek a deficiency judgment and even eliminate that right in certain circumstances, such as a mortgage that is foreclosed through a private sale. David A. Leipziger, *Deficiency Judgments in California: The Supreme Court Tries Again*, 22 UCLA L Rev 753, 753 n 1 (1975); see generally the "anti-deficiency statutes" contained in the Cal Civ Proc Code §§ 580a, 580b, 580d, 726 (West 1993).

52. They may also insure home contents, but again there is quite a moral hazard associated with relief for such personal property. A less likely, but provocative, example of this implicit collusion may be the exclusion in most insurance policies for losses resulting from acts of war. The expectation may be that insurance will reduce the likelihood of charitable or governmental relief.

53. There will also be fewer borrowers if insurance is required because insurance raises

tively, a competitive equilibrium among banks may be sustained where earthquake insurance is not required (and there is some substantial probability of relief).[54]

A less subtle example of implicit collusion against insurance in order to maximize expected relief is offered by the experience following the National Flood Insurance Act of 1968.[55] Under the Act, the federal government subsidizes flood insurance (marketed by private firms) but only for properties located in a community that has qualified by enacting land-use and control measures aimed at reducing the flood hazard related to new construction.[56] But because only one-third of flood-prone communities had joined the program by 1973, there is reason to think that communities declined to enter the program because they feared that there would be less disaster relief in the event of flooding.[57] Although the Act sought to increase the purchase of insurance by promising that post-disaster relief would be unavailable to residents of qualified communities who failed to acquire flood insurance, it has been difficult to make this promise entirely credible.[58]

Finally, there is the possibility of a more extreme solution, if it can be called that, to the problem of strategic underinsurance: insurance could be mandated. All property owners, or all owners in specified regions, might be required to carry a given level of earthquake or flood or other insurance.[59] One problem with this approach is that many property owners sincerely prefer not to pay for this insurance. And the political problem is now familiar; mandatory insurance

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the cost of homebuying and so forth.

54. Note that an insurance policy that covered earthquake-related losses in the event that fewer than 500 houses were damaged (or less subtly, in the event that no government-sponsored relief arrived) would dramatically reduce the likelihood of sympathy and relief.

55. Pub L No 90-448, 82 Stat 476 (1968), codified as amended at 42 USCA §§ 4001 et seq (1994).

56. Id at § 4011(b) (flood insurance program should encourage participation by private insurers); id at § 4022 (no new flood insurance provided unless adequate land use and control measures are adopted).

57. Kunreuther, *Recovery from Natural Disasters* at 25 (cited in note 13).

There is also evidence that even when communities qualified, most residents did not purchase flood insurance. Kunreuther, *Disaster Insurance Protection* at 6 (cited in note 50). In 1973, Congress attempted to overcome this problem by denying federal financial assistance for the construction or acquisition of buildings to communities and individuals that did not join the National Flood Insurance Program or purchase flood insurance after enrollment in the program. Id at 6-7.

58. See for example, Kunreuther, *Recovery from Natural Disasters* at 24-25 (cited in note 13) (disaster aid provided after Tropical Storm Doria flooded homes of New Jersey residents who were eligible for flood insurance, even though the 1968 Act provided that such individuals were ineligible).

59. If there is a competitive market in the provision of the insurance, price controls are unnecessary. In the case of health insurance, proposals for mandates are usually accompanied by regulation or price control plans because such competition is not universally expected.

will be opposed if only because it makes disaster relief less likely. Moreover, it may be difficult to follow through and to deny relief to those who did not abide by the earlier mandates. Nevertheless, the evolution toward mandatory insurance for automobile owners[60] and in the area of health care suggests that this option should not be ignored. My intuition is that the first step toward such change should be a federal commitment to consider (but not to guarantee) relief only where a state government asks the federal government to match funds that the state has already agreed to provide. A state-federal partnership in post-disaster relief would serve to encourage efficient pre-disaster precautions (because the states would now internalize projected losses to a degree) and pre-disaster mandates.[61]

IV. Pre-Disaster Relief

A. Insurance and Relief Revisited

I have suggested that if individuals expected relief efforts (in the event that they are forthcoming) to cover insured as well as uninsured losses, then more insurance would be purchased and, in turn, less relief would materialize. Relief requires some combination of public sympathy and political power (with little of the latter needed where, for example, in the case of serious starvation the disaster is truly devastating), and the former is less likely the more insurance coverage there is in place. The same sort of thinking would appear to provide an easy answer to the question of why interest groups do not regularly obtain subsidized pre-disaster insurance rather than post-disaster relief. Yet in terms of positive political theory alone, pre-disaster relief, in the form of subsidized insurance, would seem more likely than an equivalent amount (in expected value terms) of post-disaster relief, if only because virtually all members of the interest group would benefit from and, therefore, support the pre-disaster alternative.[62] A United States Senator from California would probably do well to secure post-earthquake relief for the thousands of Californians who suffered earthquake-related losses, but there is some chance that other in-state interests will be indifferent to such relief. In contrast, it is almost impossible to imagine a world in which the Senator would not be encouraged to gain pre-earthquake insurance subsidies directly benefitting hundreds of thousands of constituents. The problem

60. The automobile insurance example reflects an implication of the present Article, that victims who are unlikely to attract sympathy and post-disaster relief might choose pre-disaster precautions.

61. See text accompanying note 21.

62. In cases where pre-disaster subsidies exceed the expected value of the post-disaster relief that would have been available in the absence of a pre-disaster program, it is no mystery why interest groups might prefer pre- rather than post-disaster programs. But it does not appear to be the case that pre-disaster programs are more generous than their post-disaster "substitutes." The move to pre-disaster relief is thus not simply one of "entitlement creep."

with this preference, of course, is that there will not be much public sympathy before an earthquake strikes. Californians may prefer pre-disaster to post-disaster relief, and their political agents may be inclined to work harder in order to get credit for such programs, but it seems likely that something more is needed in order to overcome the general pre-disaster reaction that this is but another interest group seeking a piece of the pie.

On the other hand, if it is true that taxpayers in general might be better off *not* limiting post-disaster relief to uninsured losses, then it may also be the case that taxpayers are better off providing pre-disaster relief. Even if we hold the level of expected expenditure constant, it is possible that subsidizing insurance creates less of a distortion than the potential for relief of uninsured losses alone. The possibility of gaining relief for uninsured losses can be expected to discourage the purchase of insurance, while a subsidy for insurance will presumably encourage the purchase of insurance. It is possible, or even likely, that the first distortion is greater than the latter. It is even possible that the two offset one another. The subsidy encourages insurance, but potential victims may (correctly) still expect some relief even though there was a pre-disaster subsidy for insurance and, therefore, may decrease their insurance purchases to the extent that they expect more relief for uninsured losses.

A second reason for preferring to give pre-disaster insurance subsidies rather than occasional post-disaster relief relaxes the assumption that the cost of the two programs will be the same. Taxpayers or their representatives may perceive both that sympathy for victims is great once a disaster occurs and that there is less sympathy if pre-disaster insurance had been available at a subsidized level but had not been purchased. In short, it may be economical to give in advance. Moreover, for reasons discussed earlier, recipients and their representatives may prefer less aid to more because the subsidy is directed to more recipients. Those who would have purchased insurance even if unsubsidized will almost surely prefer the subsidy; and even a majority of those who would not have purchased insurance may prefer a certain subsidy (should they choose to take it) over an uncertain payout, even if the latter has a somewhat higher expected value.

There is a kind of voting paradox in this preceding argument, and I am suggesting that this kind of intransitivity may explain a good deal of the legislation we find. Given the "requirements" of sympathy and political influence, we often expect post-disaster relief and not pre-disaster subsidies because sympathy is absent before disaster strikes. But once we can expect some post-disaster relief, both potential victims and other taxpayers may prefer some package of pre-disaster subsidies over post-disaster relief even though a proposal for a pre-disaster subsidy would have lost to the possibility that nothing at all be done.

There is a third, related, and very practical reason to think that pre-disaster relief will sometimes prevail. It combines the redistributional characteristics of the preceding argument (regarding the preference, however intransitive, for insurance subsidy over post-disaster relief) with a return to the question of disaster mitigation and the encouragement of the optimal amount of insurance. When relief takes the form of subsidies for insurance it is fairly simple to reduce the overall loss from future disasters by conditioning relief on preventive steps. Thus, the subsidized insurance may be conditioned on certain building requirements or flood-control plans and so forth. Again, it is useful to see that potential victims may join other taxpayers in preferring this approach over post-disaster relief. Some recipients will be planning to take these preventive steps in any event, and others will simply prefer the subsidy-in-hand (however conditioned) over the greater prospect of uncertain disaster relief. In any event, it is more difficult to condition post-disaster relief on preventive steps. As discussed previously, a promise that relief, if given at all, will only be given to those who had met certain building requirements or other disaster-mitigating conditions may not be credible. And the payment of relief only for reconstruction that meets certain requirements will normally affect only a small number of property owners likely to be affected by the next disaster. To be sure, the government could simply legislate, or virtually force the state government to enact and enforce, the behavior in question. But in practice this will be difficult to do unless attached to a carrot.

In short, I am suggesting that on both efficiency and public choice grounds the emergence of pre-disaster subsidies is not surprising. At the same time, I am not quite claiming that this form of relief dominates other outcomes. There is the potential for a kind of intransitivity, with pre-disaster relief appearing superior to post-disaster relief which seems preferable (occasionally) to no relief which, in turn, seems to defeat pre-disaster relief.[63] One possibility is that we should expect instability as a kind of constant dissatisfaction with the status quo that generates change.[64] Alternatively, for reasons discussed presently, it is possible that the pre-disaster subsidy outcome is most likely to emerge as the stable equilibrium.[65] The case for instability is in part based on the fact that relief is difficult to predict because sympathy depends on media coverage and because political influence requires an interest group to form a successful coalition. But part of the case for instability also rests on the intransitivity sketched above; there may be constant movement from no relief to occasional (and increasing) post-disaster assistance, to pre-disaster insurance subsidies, and then, because of the absence of relief in the pre-disaster period, to no relief again.

The alternative argument, that the pre-disaster subsidy regime will prevail, is essentially one of endowment effects. When no relief scheme is in place, every

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63. By "defeat" I mean prevails over in the political process.

64. For a similar kind of cycling, see Saul Levmore, *Parliamentary Law, Majority Decisionmaking, and the Voting Paradox*, 75 Va L Rev 971 (1989).

65. The cycling need not be the same for every disaster and relief program. But in the case of earthquakes and floods, for instance, it is easy to imagine that post-disaster relief defeats no relief (when sizable losses generate sympathy), that pre-disaster subsidized insurance defeats post-disaster relief, and then that no relief defeats pre-disaster subsidies. It is also possible that a proposal for pre-disaster unsubsidized mandates defeats pre-disaster subsidies—but that these are sometimes hard to live up to so that post-disaster relief again defeats no relief.

disaster affords an opportunity for an interest group to take advantage of acute sympathy for victims in order to obtain post-disaster relief. The "no relief norm" in this way will constantly be challenged by occasions for relief. Somewhat similarly, post-disaster relief will always raise fears of moral hazard and of future relief expectations such that the presence of post-disaster relief may generate the movement to pre-disaster subsidies for many of the reasons discussed earlier. But it may be more difficult to move away from pre-disaster relief (to no relief) because the benefits of this change would be spread widely and thinly, while the costs will be concentrated in one narrower interest group. It is perhaps conventional wisdom to think that it is difficult to remove a program that benefits a well organized group, but this wisdom often seems correct.

Finally, pre-disaster subsidized insurance may reduce the chance of post-disaster relief, but it surely does not eliminate that possibility. Predicting the durability of a pre-disaster relief scheme is thus especially difficult because potential disaster victims and other taxpayers may not share expectations as to the likelihood of post-disaster relief in a regime with pre-disaster subsidies. I am satisfied to leave open the question of whether and when to expect not cycling but stability in the form of pre-disaster relief.

B. National Health Insurance

The contemporary debate about national health insurance has some relation to the political and economic phenomena discussed thus far. The prospect of an insurance scheme causes various interest groups to scramble into coalitions because most schemes necessarily involve some cross-subsidies and, therefore, some winners and losers. If universal coverage is to emerge, then the political game is all the more intense because an implicit or explicit tax is necessary in order to finance health care for those who have not purchased it in the past and are unable to afford it (or corresponding taxes) in the future.

There are, of course, obvious differences between this interest group struggle and that associated with earthquakes, floods, and other discrete disasters. Even though discrete disasters generate victims who are plainly identifiable and easily organized (because of their geographic proximity), the pre-disaster high risk group is also identifiable and may be even easier to organize. As such, the major evolutionary advantage of post-disaster relief, it will be recalled, is not organizational ability but rather the likelihood of sympathy from other taxpayers. In contrast, the subset of citizens in need of extensive health care is more difficult to organize. Some of these subsets may be especially successful in attracting charitable support, and a few may even be able to overcome problems of political organization, but by and large post-disaster relief is unlikely.[66] In the case of a particular disease, for example, afflicted citizens are usually dispersed

66. To the extent that post-disaster relief is likely, there may be groups that would prefer for national health insurance proposals to fail. Insurance will extract premiums from these high risk groups while post-disaster relief would have provided relief at lower cost.

and unlikely to be well-organized. And in the pre-disaster phase, the subset of citizens at high risk for the given disease is not nearly as identifiable as that for earthquakes and similar natural disasters.

This difference in dispersion and identifiability means that post-disaster relief for particular health problems is often unlikely, but it does not say much about the likelihood of any pre-disaster program. I use the term program rather than relief because a national health insurance scheme that covers treatment for an illness need not subsidize one group at the expense of another in ex ante terms. The move toward government-sponsored, rather than private, insurance may be fueled by problems of mobility rather than affordability.[67]

The comparison is more interesting when we force the affordability issue by thinking of the problem of uninsured patients who cannot afford critical care. One way to think about the apparent move toward national health insurance is to see that we have a post-disaster relief scheme currently in effect in the form of public and private subsidies to maintain emergency rooms and other hospital facilities used rather intensively by uninsured patients.[68] This form of disaster relief seems akin to what we would expect in the event of famine; it is difficult to imagine an affluent democracy (or perhaps any society) denying emergency medical care,[69] so that public sympathy generates relief even for a group with little political power. Given the reality of this post-disaster relief scheme,[70] taxpayers may sensibly prefer pre-disaster relief in the form of subsidized insurance over the post-disaster relief currently taking place in emergency rooms. The analogy is to the disaster mitigation features of subsidized flood (and perhaps earthquake) insurance. Just as taxpayers and potential victims may both benefit by a move from post-disaster to pre-disaster relief when the latter is in the form of subsidized insurance contingent on disaster-mitigating steps (such as flood planning and conformity to building codes), so too everyone may benefit if subsidized heath insurance leads to preventive rather than emergency care. The move can be beneficial in both financial and mortality terms. Put somewhat differently, there is also the possibility of evolution toward catastrophic health

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67. The mobility problem is that workers who develop health problems will be unwanted in new insurance pools. The most obvious solution to this problem is to break the link between the workplace and the insurance pool, but the evolution of tax laws and insurance schemes makes this difficult to do without a move toward a national or regional health system.

68. It has been estimated that the total annual cost of health care provided to uninsured Americans is $9.7 billion. Note, *Eliminating Patient Dumping: A Proposal for Model Legislation*, 28 Valp U L Rev 291, 292 (1993). As anecdotal evidence, it is often stated that much of this cost can be attributed to the failure of uninsured persons to seek medical care until they are in need of emergency care. *Health Care Reform: Pizza Hut, McDonald's, and the Fast-Food Industry*, 140 Cong Rec H6333-02, H6335 (July 27, 1994) (statement by Rep. Rosa Delauro).

69. More accurately, voters will care for those with whom they empathize.

70. I include the moral, political, and practical impossibility of moving to a no-relief scheme.

insurance (or health care), but the expenditures necessary to support more routine (but emergency room) care bring about the possibility of pre-"disaster" relief for all health problems. But either kind of national health insurance (universal or catastrophic) is an example of pre-disaster relief succeeding post-disaster relief so long as substantial redistribution is involved.

I do not think a strongly normative position on this matter is warranted. It is remotely possible, for example, that subsidized health insurance will have a significant impact on work effort; better health care, like better food and lodging, is, after all, one of the things many citizens work hard to enjoy. In this, as in many other questions of public versus private provision, experimentation or experience may be necessary in order to understand better the interaction between economies of scale, incentives to work, moral hazards, well functioning markets, and other concerns. My point is simply that once we recognize the substantial post-disaster relief schemes that have arisen as part of the present system, it is no surprise to see a movement toward the alternative of pre-disaster relief. Once again, even if a majority of taxpayers, their representatives, or policy experts prefer no relief, or at least less relief, over pre-disaster relief (and that is not likely to be the case in health care), there is likely to be evolution from post-disaster to pre-disaster relief.

V. Conclusion

All disasters are not alike, and a theory of disaster relief must suffer immediately from the problem of defining disaster. But I have tried to paint over such problems with a broad brush in order to make some progress on the question of when to expect relief and in order to generalize about alternatives to post-disaster relief. As it turns out, it is difficult to predict the scope of post-disaster relief because so much depends on the level of what I have called "sympathy" for victims. We can predict that relief is more likely after an earthquake than after a crime wave, but I do not claim to be able to predict which earthquakes (or hurricanes or explosions, for that matter) will generate the greatest relief efforts. To take but one problematic variable, if one disaster strikes soon after another it is possible that taxpayers will tire of financing relief efforts, but it is also possible that victims of the second disaster will benefit from the precedent regarding relief created in the aftermath of the first.[71]

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71. When the Pacific Northwest floods of 1964 struck just eight months after the Alaska earthquake of 1964, a congressman from the Pacific Northwest cited the Alaska relief as precedent. Dacy and Kunreuther, *The Economics of Natural Disasters* at 54-55 (cited in note 13). Oregon Congressman Al Ullman stated that "[w]e seek no preferential treatment, only assistance parallel to . . . the Alaska earthquake." Id at 54-55. The Pacific Northwest Disaster Relief Act of 1965, Pub L No 89-41, 79 Stat 131 (1965), provided Alaska with 30-year loans and $70 million for highway reconstruction. Dacy and Kunreuther, *The Economics of Natural Disasters* at 55 (cited in note 13). By contrast, neither the subsequent Upper Mississippi floods nor the extraordinarily destructive tornados that hit the Midwest on Palm Sunday, 1965 produced special legislation. Id.

I have suggested that there is often a kind of intransitivity among the (rough) policy options of post-disaster relief, no relief, and pre-disaster relief. I have also argued that in some situations cycling may not occur, because the order of consideration, as it were, can be expected over time to favor the pre-disaster relief outcome.[72] It is also possible that this dynamic operates outside of the context involving government-sponsored relief. Thus, one plausible description of the history of retirement plans is that in the beginning employers paid their workers in cash, with no fringe benefits, because employees could then make suitable individual savings (and other allocational) decisions. Over time there were retirements or deaths or disabilities that evoked sufficient sympathy as to cause employers or fellow workers to raise funds for the departing worker or for that worker's stricken family. The regime was then one of "no relief" with occasional "post-disaster relief." It is also easy to see how precedents might have been created so that the number of sympathy cases grew. In turn, these cases might have generated moral hazard fears, although they are not quite that, about the propensity to save and, more generally, pressure on the one side to make relief more certain and on the other side to defuse the case for relief by encouraging pre-disaster planning. Retirement and other insurance plans may in this way have emerged through employer-organized "subsidies," or forced savings programs in place of wages. These programs seem like natural developments; post-disaster relief leads to pre-disaster plans. Moreover, the pre-disaster programs need to be subsidized, mandated, or somehow encouraged (compared to private savings and consumption) or too many employees will allow disaster to strike if only to elicit post-disaster relief. To be sure, the tax system has come to play a role in this scheme, but tax laws might just as well have encouraged private savings through direct incentives. In any event, tax law may be the cart rather than the horse in this story.

In the case of this particular example, if we were to start all over again, a substantial case might be made against employer-organized retirement systems on grounds of free choice (and utility), mobility, and horizontal equity. With perfect foresight about the development of employer-sponsored plans, a substantial number of those who favored "no relief" might have preferred a different kind of pre-disaster planning or might have worked harder to forestall tax and other preferences for relief of any kind in order to encourage private ordering. But in the real workplace, the movement from no relief to post-disaster relief and then to pre-disaster relief seems almost inevitable. In turn, the expense of pre-disaster programs has encouraged the growth of part-time employment, not to mention contractions and self-employment, such that a subset of the work-force has been relegated to no relief. The kind of intransitivity explored in this Article is thus not limited to public programs.

72. By order of consideration I refer to the familiar idea that where there is cycling and a voting paradox, the order of consideration will determine the outcome that is approved by majority (or other) vote. The same may be true here if voters are disinclined to return to a scheme that was once found deficient.

Returning to the emergence of pre-disaster subsidies more generally, it is, of course, possible that I have overstated the positive case for pre-disaster programs. The future may bring about the gradual reduction and even withdrawal of flood insurance, subsidized health insurance, and even retirement plans. I have followed conventional wisdom in assuming that interest groups (and employees with endowment effects) will be good at protecting benefits they enjoy,[73] but in reality even the most cherished entitlements can disappear. Budget crises may cause gradual reductions in the level of the subsidy for flood insurance, for example, while the continued presence of a flood insurance program may suppress sympathy for post-disaster relief. More interesting, the threat of many uninsured victims (asking for post-disaster relief the next time around) and the problem of adverse selection may encourage not only the reduction of subsidies, but also the passage of accompanying legislation mandating the purchase of private insurance or requiring disaster-mitigating expenses. Similarly, the federal government could, if it wished, find a political and legal means of requiring property owners (in specified regions) to carry earthquake insurance even without the provision of federally-sponsored pre-disaster or post-disaster relief. More generally, there may be evolution toward insurance but not necessarily toward subsidized insurance.[74] The government could also find ways to require various disaster-mitigating expenditures with sticks rather than carrots. I suspect that these developments will be more likely if state-sponsored relief is a precondition for federally-sponsored relief.[75]

Unsubsidized, mandated health insurance is perhaps the best current example of such a possibility. The potential for such unfunded mandates or regulations aimed at disaster mitigation makes plain both the deep and complicated involvement of government in private lives and the difficulty of attaching ideological labels to many policy proposals. If post-disaster relief is often a precursor to pre-disaster relief, and sometimes even a precursor to subsequent unfunded mandates, then citizens and their representatives can be forgiven if they have mixed feelings about proposals for relief or for disaster-mitigation programs in the first place.

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73. See text accompanying note 4.

74. Thus, there may be evolutionary advantages to workers' compensation systems and other no-fault systems over more ex post tort law even when such insurance schemes do not incorporate substantial redistributive components. But inasmuch as my sense is that most pre-disaster schemes do involve subsidies or other means of redistribution, I emphasize the option of pre-disaster relief and simply leave open the possibility of subsequent movement toward unsubsidized mandates.

75. See text accompanying notes 21 and 61.