The Politics of Natural and Unnatural Hazards

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Some basic concepts

- Politics
- Public Policy
- The Policy Process
Elements of the Policy Process

- Problem definition
- Agenda setting
- Policy development
- Alternative selection
- Implementation
- Evaluation
- Feedback
The Problems with the Stages Model

- Not every step always happens
- Not every step always happens in order
- The model doesn’t always run to “completion”
- There is very little theory here
- Recent better theories have enhanced our knowledge of agenda setting
Agenda Setting in the Policy Process

- What is an agenda?
- What are the levels of the agenda
  - The agenda universe
  - Systemic agenda
  - Institutional Agenda
  - Decision Agenda
What are actors’ goals in agenda setting?

- To put things on the agenda
- To take things off the agenda
- This is an important element of power
Why is the agenda so important?

- Because there is limited agenda space for getting attention
- Because more attention usually yields more negative attention
- Because the act of getting an issue on the agenda can influence the choice of policies that are ultimately adopted.
How do issues reach the agenda?

- Changes in indicators of a problem
- Focusing events
  - An event that is or is potentially harmful, affects a particular community of interest, and that is known by mass and elite actors almost simultaneously.
Improved Models of the Policy Process Help Us Understand Focusing Events

- Kingdon’s “streams” metaphor
- Baumgartner and Jones’s “punctuated equilibrium” in the policy process
- Sabatier’s “Advocacy Coalition Framework”
Kingdon’s Streams Metaphor

A picture of the streams model

**Problem Stream**
Focusing events reveal problems

**Policy Stream**
Streams come together. Why and when?

**Politics Stream**

Window of Opportunity

Time
Why is there long periods of stasis in policy followed by sudden periods of change?

- Greater attention to an issue → greater negative attention → changes in the “policy image”

- What triggers attention? Sometimes, a focusing event
Sabatier’s Advocacy Coalition Framework

- There are often many groups in a policy domain....
- ...but they coalesce into two to four advocacy coalitions
- Policy disputes are mediated by “policy brokers”
- The policy domain is the site for learning among participants in the advocacy coalitions
Enough background! What does this mean for disasters?
1925 Santa Barbara Earthquake

The First Methodist Episcopal Church, picture from http://americahurrah.com/SantaBarbara/Cover.htm
1933 Long Beach Earthquake

Collapse of John Muir School on Pacific Avenue from the 1933 Long Beach earthquake. Photo Credit: W.L. Huber from http://www.ngdc.noaa.gov/seg/hazard/slideset/5/5_slides.shtml
1964 Alaska Earthquake

From: http://science.howstuffworks.com/earthquake7.htm
1971 Sylmar Earthquake

Olive View Community Hospital, Sylmar, California

Image from http://www.data.scec.org/chrono_index/sanfer.html
1989 Loma Prieta Earthquake

http://science.howstuffworks.com/earthquake7.htm
1994 Northridge Earthquake

Aerial view of the collapsed freeway interchange between I-5 and the Antelope Valley Freeway (State 14).

photo: Kerry Sieh  Source: www.data.scce.org
What do all these have in common?

- Policy change was triggered by each of these events
- Why didn’t I show hurricanes?
- Because as far as I can tell, there is only one hurricane that had as much influence on state-level policy change
Hurricane Andrew

After Disaster

- The Goal: What makes some disasters more focal than others?
- The “political model”: greater attention to disasters (agenda change) is a function of
  - Media coverage
  - Impact (damage and deaths)
  - The scope of the disaster
  - The mobilization of voices to discuss the issue
  - Attitudes toward policy (tone)
"The Political Model"

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Congressional Agenda Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Earthquakes</td>
</tr>
<tr>
<td>News Change</td>
<td>0.451***</td>
</tr>
<tr>
<td>News Density</td>
<td>0.372***</td>
</tr>
<tr>
<td>Mobilization</td>
<td>0.307*</td>
</tr>
<tr>
<td>Scope</td>
<td>0.028</td>
</tr>
<tr>
<td>Tone</td>
<td>-0.380***</td>
</tr>
<tr>
<td>N</td>
<td>38</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.633</td>
</tr>
<tr>
<td>F</td>
<td>13.746</td>
</tr>
<tr>
<td>p</td>
<td>0.000</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01"
What the model means

- Ideas matter more in the earthquake domain than in the hurricane domain (the tone variable)
- The model is a better fit for earthquakes than hurricanes. Why? Because there’s more “politics” in earthquakes than hurricanes.
More Evidence: What Do Congressional Witnesses Talk About?

<table>
<thead>
<tr>
<th></th>
<th>Specific Events</th>
<th>No Specific Event</th>
<th>All Testimony</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQ</td>
<td>Disaster Relief</td>
<td>NEHRP Disaster</td>
<td>Disaster Relief</td>
</tr>
<tr>
<td>HURR</td>
<td>Disaster Relief</td>
<td>Disaster Relief</td>
<td>Disaster Relief</td>
</tr>
</tbody>
</table>
What does this all mean?

- All natural disaster policy is a “policy without publics”
- Policies without publics rely on technical expertise to advance beneficial policy
- This expertise has long existed in California for the earthquake hazard, and has been influential in policy making
- Such expertise may exist in hurricanes, but it really doesn’t, and it hasn’t had much influence on policy.
The Big Difference: The National Earthquake Hazard Reduction Act

- Why has there been an NEHRA since 1977, but a wind hazard program only since 2004?
- Why has California “learned” from so many events to change policy?
- Why has there been limited learning in hurricanes?
A brief history of Earthquake Policy

- 1906 Earthquake – Lots of denial among boosters, but also founding of the Seismological Society of America in 1906.
- 1925 Santa Barbara – More denial by boosters, but local recognition that building codes needed seismic elements.
- 1933 Long Beach – Some denial, but hard to accomplish with damage right in L.A. Led to the Field Act which required improved school buildings. Some communities pass URM ordinances.
A brief history of Earthquake Policy

- 1933-1960s: Structural engineering comes into its own as a discipline; EERI founded; research on N-bomb blast effects transfers to building practices
- 1964 Alaska earthquake leads to (1) first ideas for a national earthquake policy and (2) huge NAS study of all aspects of this earthquake
A brief history of Earthquake Policy

- 1971 San Fernando earthquake leads to Alquist-Priolo act on hazard mapping, disclosures; California laws on protecting hospitals; improved standards for highway structures; more pressure for national earthquake policy
Mid 1970s: Huge earthquake in China kills over 800k people; some belief that earthquake prediction was beginning to bear fruit, but more resources needed to achieve this; Frank Press, Carter’s science advisor, very influential advocate for earthquake science
A brief history of Earthquake Policy

- All these groups—scientists (SSA, EERI, etc) and policy entrepreneurs (Press, Sen. Cranston, etc.) were able to keep earthquakes on the agenda.
- The result: their “own” program, the NEHRA and the NEHRP.
- NEHRP has been influential in all hazards, not just earthquakes.
A brief history of Earthquake Policy

- 1989 and 1994 Loma Prieta and Northridge Earthquakes led to more learning opportunities
## Policy Changes Relating to Earthquakes

<table>
<thead>
<tr>
<th>Year</th>
<th>Law</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1933</td>
<td>Field Act</td>
<td>1933 Long Beach</td>
</tr>
<tr>
<td></td>
<td>Riley Act</td>
<td>1933 Long Beach</td>
</tr>
<tr>
<td>1964-70</td>
<td><em>National Academy Studies of the Alaska Earthquake</em></td>
<td>1964 Alaska</td>
</tr>
<tr>
<td>1973</td>
<td>Hospital Safety Act</td>
<td>1971 San Fernando</td>
</tr>
<tr>
<td></td>
<td>Strong Motion Instrumentation Act</td>
<td>1971 San Fernando</td>
</tr>
<tr>
<td>1972</td>
<td>Alquist-Priolo Earthquake Fault Zoning Act</td>
<td>1971 San Fernando</td>
</tr>
<tr>
<td>1975</td>
<td>Seismic Safety Commission Act</td>
<td>1971 San Fernando</td>
</tr>
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</table>
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<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td><em>National Earthquake Hazards Reduction Act</em></td>
<td>Various, including 1964 Alaska, 1975 China</td>
</tr>
<tr>
<td>1986</td>
<td>California Earthquake Hazards Reduction Act</td>
<td>1985 Mexico City</td>
</tr>
<tr>
<td>1986</td>
<td>Un-reinforced Masonry Building Law</td>
<td>1983 Coalinga</td>
</tr>
<tr>
<td>1986</td>
<td><em>Essential Services Building Seismic Safety Act</em></td>
<td>1985 Mexico City</td>
</tr>
<tr>
<td></td>
<td>Bridge Seismic Retrofit Program</td>
<td>1971 San Fernando</td>
</tr>
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<thead>
<tr>
<th>Year</th>
<th>Law</th>
<th>Event</th>
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<tbody>
<tr>
<td>1990</td>
<td>Seismic Hazards Mapping Act</td>
<td>[1989 Loma Prieta]</td>
</tr>
<tr>
<td>1994</td>
<td>Hospital Seismic Retrofit and Replacement Program</td>
<td>1994 Northridge</td>
</tr>
<tr>
<td>1994</td>
<td>Marine Oil Terminal Program</td>
<td>1994 Northridge</td>
</tr>
</tbody>
</table>
The big learning opportunity in Hurricanes: Andrew 1992

- Why was Andrew a learning opportunity?
  - Relatively few very large hurricanes compared with earthquakes
  - Relatively few storms had struck Florida
  - The impact of Andrew was huge, particularly in southern Dade County
  - The event, like focusing events do, revealed major problems in hurricane policy nationally and in Florida
Problems revealed by Andrew

- Poor building code enforcement
- Shoddy construction
- Exposure of insurance industry to catastrophic losses
- Differences in impact between wealthy and poor
What policy changes resulted from Hurricane Andrew

- FEMA was more professionalized (but is this a long-run change?)
- Mitigation became much more important in all hazards, and esp. in hurricanes
- Florida passed legislation to mitigate hurricanes
- Ultimately, the Wind Hazard Reduction Program was created, modeled on the NEHRP.
Changes to Florida Law After Hurricane Andrew

- Changes to the South Florida Building Code
  - Provisions
  - Enforcement
- Hurricane Catastrophe Fund
- Florida Hurricane Loss Mitigation Program
  - Created in 1999
  - $10 million a year, (40% to mitigate losses to mobile homes, 10% to the FIU Hurricane Center, 50% for other mitigation in the Department of Community Affairs)
Is Florida now a leader in hurricanes the way California is in earthquakes?
# Reasons for Policy Change

## After Earthquakes, and for Stasis after Hurricanes

<table>
<thead>
<tr>
<th>Earthquakes</th>
<th>Hurricanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A large professional community that pressed for a national program</td>
<td>A small professional community that has achieved a small program; before 2004, low presence</td>
</tr>
<tr>
<td>Mitigation relies on engineering and technology</td>
<td>Mitigation relies on generally unpopular land use restrictions</td>
</tr>
<tr>
<td>No ability to predict or warn = higher dread, more motivation to mitigate</td>
<td>Warning allows for preparedness, evacuation, development of a hurricane culture</td>
</tr>
<tr>
<td>A number of large events focused in one place</td>
<td>Relatively few events; their effects are scattered</td>
</tr>
<tr>
<td>High capacity for putting lessons into practice</td>
<td>Lower capacity for applying lessons</td>
</tr>
</tbody>
</table>
A Few Words on the Politics of Crisis Management (Birkland and Nath)

- Most crisis management literature is prescriptive (aimed at middle managers)
- Most of this literature is wrong about the policy process and interest groups in the process.
Key features of crisis management (and of disaster policy)

- Blame fixing and the telling of causal stories
  - Exxon Valdez: Act of God, Drunk Captain, Government Interference
  - Jack in the Box: Our Suppliers
  - ValuJet: Our Contractor

- Mobilization
  - Exxon Valdez: A lot
  - Jack in the Box: Some
  - ValuJet: Not much (the firm had few friends)
The manageability of events

- See the article, Table 2, pp 296-297.
Future research

…is about whether and to what extent disasters and focusing events trigger learning and improved policy.