



# 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?

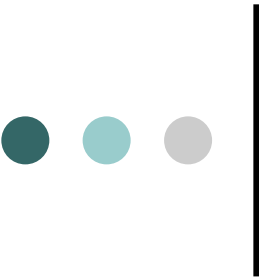
- **Because there is limited agenda space for getting attention**
- **Because more attention usually yields more negative attention**
- **Because the act of getting an issue on the agenda can influence the choice of policies that are ultimately adopted.**



# 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

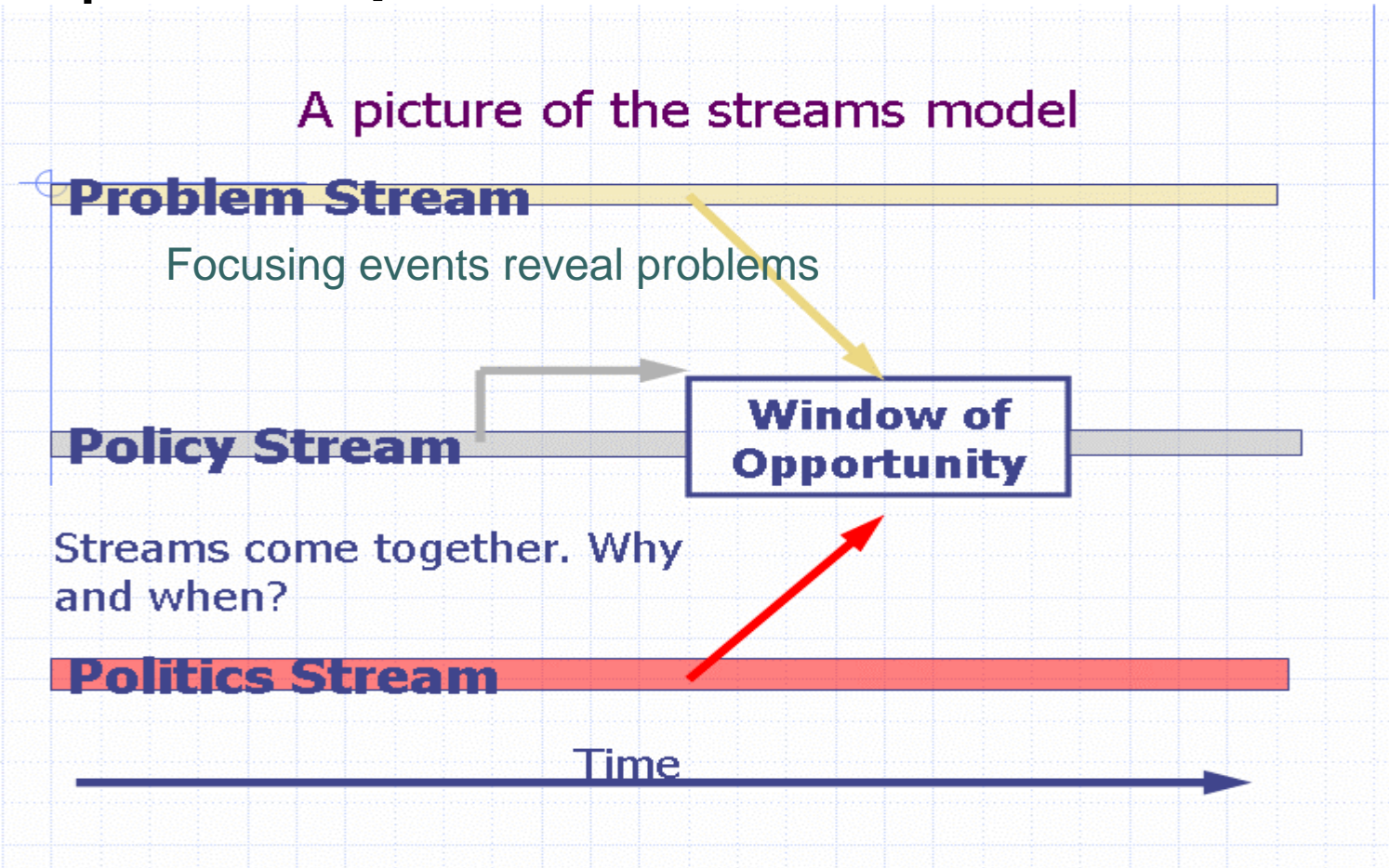
**Policy Stream**

**Window of Opportunity**

Streams come together. Why and when?

**Politics Stream**

Time





# Baumgartner and Jones Punctuated Equilibrium

- 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](http://www.ngdc.noaa.gov/seg/hazard/slideset/5/5_slides.shtml)



# 1964 Alaska Earthquake

**From:** <http://science.howstuffworks.com/earthquake7.htm>

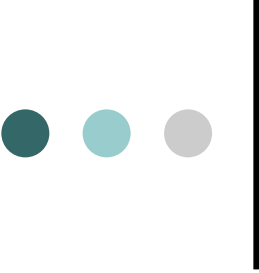




# 1971 Sylmar Earthquake

Olive View Community Hospital, Sylmar, California

Image from [http://www.data.scec.org/chrono\\_index/sanfer.html](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.scec.org](http://www.data.scec.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

Near Homestead, Florida, 1992. Source:  
<http://www.photolib.noaa.gov/historic/nws/wea00550.htm>



# *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 3-2: Political Model of the Congressional Agenda**

Standardized Regression Coefficients		
Dependent variable:	Congressional Agenda Activity	
	Earthquakes	Hurricanes
News Change	0.451***	-0.032
News Density	0.372***	0.696***
Mobilization	0.307***	0.357*
Scope	0.028	-0.091
Tone	-0.380***	0.109
N	38	25
Adjusted R <sup>2</sup>	0.633	0.371
F	13.746	3.836
p	0.000	0.014

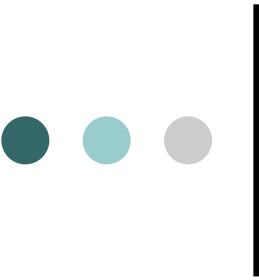
\* $p < .05$ ; \*\* $p < .01$



# 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?

	Specific Events	No Specific Event	All Testimony
EQ	Disaster Relief	NEHRP	Disaster Relief
HURR	Disaster Relief	Disaster Relief	Disaster Relief



# 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



# A brief history of 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

Year	Law	Event
1933	Field Act	1933 Long Beach
	Riley Act	1933 Long Beach
1964-70	<i>National Academy Studies of the Alaska Earthquake</i>	1964 Alaska
1973	Hospital Safety Act	1971 San Fernando
	Strong Motion Instrumentation Act	1971 San Fernando
1972	Alquist-Priolo Earthquake Fault Zoning Act	1971 San Fernando
1975	Seismic Safety Commission Act	1971 San Fernando



# Policy Changes Relating to Earthquakes

Year	Law	Event
1977	<i>National Earthquake Hazards Reduction Act</i>	<i>Various, including 1964 Alaska, 1975 China</i>
1986	California Earthquake Hazards Reduction Act	1985 Mexico City
1986	Un-reinforced Masonry Building Law	1983 Coalinga
1986	Essential Services Building Seismic Safety Act	1985 Mexico City
	Bridge Seismic Retrofit Program	1971 San Fernando
1990	Earthquake Safety and Public Buildings Rehabilitation Bond Act of 1990 (Prop 122)	1989 Loma Prieta



# Policy Changes Relating to Earthquakes

Year	Law	Event
1990	Seismic Hazards Mapping Act	[1989 Loma Prieta]
1994	Hospital Seismic Retrofit and Replacement Program	1994 Northridge
1994	Marine Oil Terminal Program	1994 Northridge



# 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

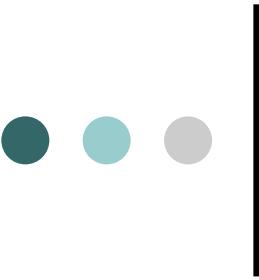
- FEMA was more professionalized (but is this a long-run change?)
- Mitigation became much more important in all hazards, and esp. in hurricanes
- Florida passed legislation to mitigate hurricanes
- Ultimately, the Wind Hazard Reduction Program was created, modeled on the NEHRP.



# 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?



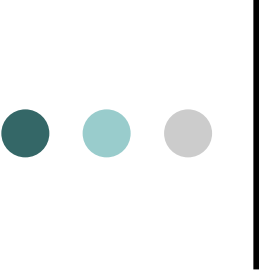
# Reasons for Policy Change After Earthquakes, and for stasis after hurricanes

Earthquakes	Hurricanes
A large professional community that pressed for a national program	A small professional community that has achieved a small program; before 2004, low presence
Mitigation relies on engineering and technology	Mitigation relies on generally unpopular land use restrictions
No ability to predict or warn = higher dread, more motivation to mitigate	Warning allows for preparedness, evacuation, development of a hurricane culture
A number of large events focused in one place	Relatively few events; their effects are scattered
High capacity for putting lessons into practice	Lower capacity for applying lessons



# 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