Idea Emergence Agenda Change, and Learning

Thomas A. Birkland
Susan Camilleri
Megan K. Warnement
North Carolina State University

The extent to which policy makers learn from policy failure has been of considerable interest to social scientists for years. Natural disasters and technological disasters, in particular, are normatively assumed to provide opportunities to "learn the lessons" of the event, so that the bad things don't happen again. But research suggests that learning from experience is not common in many policy domains that deal with hazards. But the failure to learn may be due less to an unwillingness to learn, and more due to a paucity of policy ideas on which policy makers can draw. Such ideas can come from experts, interest groups, other policy domains, and the general public. In this paper, we describe a project in which we track ideas about the causes and potential solutions to hurricane and earthquake damage using a data set of news media coverage, academic literature, and Congressional materials from the last thirty years. We hypothesize that, when the news media, academics, and policy makers discuss a set of policy ideas at about the same time, the policy "soup," as Kingdon called it, becomes richer with ideas, which, in turn, leads to a greater likelihood of innovation. We also hypothesize that this effect does not occur around every event, but that experience accumulates until an event becomes so compelling that the search for solutions is more energetic than usual, and the opportunity for policy change is more pronounced than after less consequential events. This project is the beginning of a multi-year project that seeks to connect theories of agenda change, policy change, and learning to provide for better models of event-driven policy change. This project also directly relates to the 2014 WPSA conference theme, "The Power of Information," because our research shows how events generate a great deal of information that must be processed by policy makers who seek to join together problems and solutions in the form of compelling policy ideas.

Sudden crises or disasters, such as earthquakes and hurricanes, provide an opportunity for agenda and policy change within the policy process. These events are known as "focusing events" because they highlight existing policy failures, thus providing an opportunity for policy change and learning. Following events, many new ideas emerge regarding problems and solutions, leading to fierce competition among policy entrepreneurs concerning how to frame these problems. Consideration of the nature of ideas surrounding the disaster is the primary focus of our broader project.

Mehta (2011) identifies three different kinds of "ideas": policy solutions, problem definitions and public philosophies or zeitgeist (27). In our long-term project, we plan to focus on problem definitions and solutions, since these two aspects of policy discourse are deeply intertwined. Problem definitions correspond on the same analytical level as Hall's (1993) "policy paradigms" since they describe "not only the goals of policy...but also the very nature of the problems they are meant to be addressing" (279). There are multiple ways to frame a problem, however, the concept of *framing* is different from problem definitions in terms of how it has been used in the literature. Framing has been used to describe the process of packaging one's set of ideas in order to sway others to one's position. This is often understood as a competitive process among policy entrepreneurs (Béland 2005; Stone 2002; Campbell 1998). Therefore, both idea emergence and framing of ideas will be considered and connected to hurricane and earthquake focusing events.

This research is interested in how ideas emerge and problems are framed following different types of focusing events. This paper presents a proof of concept, which will be part of a larger study. This paper will focus solely on earthquakes and the role of idea emergence by the media. After testing this concept, our goal is to expand the scope of this study to include hurricanes as a comparison group, along with adding testimony by Congress and experts. The larger project will be primarily interested in how the ideas and frames generated post event differ among the arenas of media, Congress and experts.

The literature suggests that frames may differ depending on the institutional arena in which the event is discussed. We theorize that the institutional characteristics of the arena influence the frames each choose to promote (Hilgartner and Bosk 1988). Furthermore, a difference may also exist in the framing of hurricanes and earthquakes because hurricanes tend to be more salient to the public due to the fact the issues surrounding hurricanes are not just of a technical nature. Earthquakes, however, tend to be very technical in nature which restricts the accessibility to the public. This suggests that "technocrats" (Heclo 1988) serve the role as experts and are more apt to frame the problem. Furthermore, certain types of technical policies are usually restricted to specific scientific communities, thus inhibiting group mobilization and interest group involvement. Peter May (1991) classifies this as "policies without publics" (190).

Therefore, the purpose of this research is to study which ideas emerge among different arenas (media, Congress, experts) and how these different arenas define the problem and engage in the framing process. We are interested in where these arenas overlap and diverge in their framing. Most importantly, we are interested in comparing how ideas and frames are discussed among different hazards, specifically earthquakes and hurricanes. As previously stated, this paper will serve as a proof of concept in testing the feasibility of our research study. Therefore, only idea emergence by the media following earthquakes is considered. Because of the exploratory nature of this research, we do not pose specific research questions and hypotheses.

Focusing Events and the Agenda Setting Process

Focusing events serve a major role within the agenda setting process. Given that individuals and groups have limited information processing capabilities, no single system can pay attention to all issues and ideas that are prevalent in society (Baumgartner & Jones 1993; Cobb & Elder 1983; Walker 1977). As a result, the agenda setting process involves the identification of the most prevalent problems and the selection of appropriate solutions (Birkland & Lawrence 2009; Hilgartner & Bosk 1988; Lawrence & Birkland 2004). It is essentially a triage process.

Therefore, when a focusing event occurs, it has a "bowling over" effect on the agenda setting process. Kingdon (2003) states these events "simply bowl over everything standing in the way of prominence on the agenda" (96). Also, the focusing event highlights a policy failure and presents an opportunity for policy change to correct this failure.

Kingdon adopts a very broad definition of focusing events. His definition is used within his multiple "streams metaphor." For Kingdon, there are three conceptual streams in the policy process: the "problem" stream, which contains ideas about various problems; the "politics" stream, which contains the electoral process and public opinion; and the "policy" stream, which contains all the ideas and solutions to possible problems and how they can be addressed (Kingdon 2003). Furthermore, Kingdon states a "window of opportunity" opens in order for an issue to reach the policy agenda. For the window to open, two or more of these streams must come together at the same time. Thus, problems are matched with solutions and politics align to promote this occurrence. A focusing event can help open this window since they highlight the policy failure with their "bowling over" effect (Kingdon 2003).

Kingdon uses a very broad conceptualization of focusing events, which include events, crises and symbols. He states that a focusing event is a "little push...like a crisis or disaster that comes along to call attention to the problem, a powerful symbol that catches on, or the personal experience of a policy maker" (Kingdon 2003, 94–95). Kingdon highlights that the power behind focusing events lies in the aggregation of their harms. Therefore, a plane crash that kills 200 people will get more attention than 200 automobile accidents. This once again refers to the "bowling over effect."

Birkland applied this "bowling over" effect when he narrowed the definition of focusing events in order to empirically test Kingdon's work. Kingdon's definition as it stands alone is insufficient to develop a testable model. Therefore, Birkland (1997) defines a *potential focusing event* as an event that is:

> Sudden, relatively rare, can be reasonably defined as harmful or revealing the possibility of potentially greater future harms, inflicts harms or suggests potential harms that are or could be concentrated on a definable geographical area or community of interest, and that is known to policy makers and the public virtually simultaneously (1997, 22).

A major critique of Kingdon's theory is that it has not been tested empirically. Zahariadis states Kingdon "has the dubious distinction of generating the highest ratio of citation/subsequent scholarship in political science...MS [multiple streams] does appear to be an argument that many scholars quote but few explicitly use" (2007, 79). Birkland's work is an exception to this, and this research seeks to be another exception.

Focusing Events within a Flow of Time

Prior research studying focusing events has analyzed the effect of a single event on agenda change or policy change (Kingdon 2003; Birkland 1997; Birkland 2006; Cobb and Primo 2003). Although these cases are interesting in context, it is worthwhile to consider focusing events within a policy domain in order to study their effect within a "flow of time." In order to fully make sense of the event, it is necessary to put it into context by relating it to other events.

A reason for a multiple events approach is to understand cumulative and interactive effects. Ideas and opinions that emerge after an earlier event, even if they are not implemented into policy change, may contribute to outcomes following later focusing events. For example, Cobb and Primo (2003) state "many policy changes in aviation security were unprecedented in their scope and in the speed at which they were enacted [following 9/11], but none of the issues was new to the political agenda" (121). Birkland (2004) agrees with this assessment when he demonstrates that aviation security cases such as Pan Am 103 and TWA Flight 800 made it easier for the quick adaptation of policy following the 9/11 attacks. Essentially, these prior events allowed for comprehensive debate of the ideas so that when the 9/11 attacks occurred many of these ideas were already "on the shelf" (Birkland, 2004). Birkland (2004) found that although 9/11 did provide the opportunity for sweeping change in terms of aviation policy, the prior events served in a sense as "dress rehearsals" in terms of raising ideas to the agenda (Birkland 2004, 356). Jones (2001) further confirmed this in an organizational sense when he found that organizations are not easily adaptive and events can lead to mimicking and path dependency in terms of policy change.

Framing is also an important concept when analyzing focusing events over time. Kingdon (2003), Cohen, March, and Olsen (1972), Jones (2001) among others recognize that the way a problem is defined and framed will ultimately determine which problems garner consideration and which do not. A consideration of these events within a "flow of time" at the domain level allows for a better understanding of how policymakers respond to problem framing, since past events help to provide framing for future events. The initial framing of any such event, like the attempts to identify proper solutions to the issues that policy elites highlight typically reflects political conflict and divergent understandings of causation. As Deborah Stone has argued:

> In politics, causal theories are neither right nor wrong, nor are they mutually exclusive. They are ideas about causation, and policy politics involves strategically portraying issues so that they fit one casual idea or another. The different sides in an issue act as if they are trying to find the "true" cause, but they are always struggling to influence which idea is selected to guide policy. Political conflicts over causal stories are therefore more than empirical claims about sequence of events. They are fights about the possibility of control and the assignment of responsibility (2002, 197).

The framing of previous events primarily drives policymakers' definitions of current events. Also, similar events will have similar frames, since policymakers will adopt "prepackaged solutions." In addition to the framing of an event, causal stories also assign blame, identify victims, legitimize certain actors as "fixers" and creates new political alliances (Stone 2002, 209).

Idea Emergence and the Role of Ideas within the Policy Process

The common approach to studying focusing events is to use the event as the unit of analysis (see Birkland 1997; Cobb and Primo 2003; Kingdon 2003). However, this approach misses the actions of the actors *between* events and the emergence of new ideas that are central to understanding event driven policy change. As previously stated, by studying focusing events within a "flow of time" one can identify when ideas emerge following events, how ideas are framed and by who, and when (or if) these ideas translate to policy change which may not happen until another similar crisis occurs. Therefore, this shift from the event as the unit of analysis to the policy idea moves us away from studying how events in isolation drive agenda change to gaining a better understanding of the nature of the policy process. In our new model, agenda change is the dependent variable. Ultimately, we are interested in policy change, as ideas play an instrumental role in event driven policy change. It can be argued that it is a truism that agenda change following a focusing event leads to policy change; however, proving this is beyond the scope of the study. The event in our model, therefore, is treated as an independent variable. For this current paper, however, we do continue to treat the focusing event as, in a sense, a unit of analysis so as to locate the point in time in which policy discourse is most likely to be manifest.

In order to analyze the effect of policy ideas on agenda change, we must first define it. Béland (2005) states that a "policy idea refers to specific policy alternatives (for example, personal savings accounts) as well as the organized principles and causal beliefs in which these proposals are embedded (for example, neo-liberalism)" (2). For the purposes of this study, we adopt the beginning of his definition and since we accept that fundamental core beliefs in American politics are secure and stable, we interpret the second part of his definition to relate to disaster policy. Therefore, our interpretation of a policy idea using Béland's definition is as follows: Policy idea refers to specific policy alternatives as well as the particular ways of thinking about disasters and their societal effects.

Ideas as drivers of agenda and policy change

Ideas play a major role within the policy process and influence policy change. Béland (2009) emphasizes the role ideas play in shaping the issues and problems that emerge on the agenda. This corresponds with Mehta's (2011) conception of ideas as problem definitions. Béland argues, "this social and political construction of problems is related to policy legacies, as actors regularly assess the impact of existing programs on such problems" (2009, 705). Furthermore, this demonstrates Hall's (1993) principle of social learning in which "one of the principle factors affecting policy at time-1 is policy at time-0" (277).

Understanding this process of social learning from past policy legacies is important, as one of its fundamental implications is that ideas are central to the policymaking process (Hall 1993). Within this process, policymakers work within a framework known as a policy paradigm. A policy paradigm is defined as, "a framework of ideas and standards that specifies not only the goals of policy and the kind of instruments that can be used to attain them, but also the very nature of the problems they are meant to be addressing" (Hall 1993, 279). Hall identifies three types of policy change: first-order change in which routine policy change occurs (i.e. budget adjustments); second-order policy change in which policy instruments may be altered but the underlying goals behind the policy remain the same; and third-order change which represents a radical shift or a "paradigm shift" (1993, 281-282). In times of high uncertainty, especially following a crisis or event, assumptions may alter, thus making third-order change possible. The degree to which the event has discredited the status quo will determine whether third-order change is possible and, if so, a shift in policy goals occurs. When the status quo is discredited,

actors with radically new ideas enter the discourse and attempt to get their ideas accepted (Baumgartner 2013; Hall 1993). The actors are taking advantage of the "window of opportunity" that is created by the focusing event (Kingdon 2003) and they battle over the way the problem is framed.

Ideas and the Role of Institutions and Policy Entrepreneurs

It is necessary to consider the role of both policy entrepreneurs and institutions in order to understand a policy idea's emergence (Béland 2005, 2009; Campbell 2002; Baumgartner 2013; Hall1993). Béland (2005) argues, "The role of policy entrepreneur underlines the relationship between timing, policy ideas, strategic interests, and political institutions" (10). He further argues, "formal political institutions largely determine which actors are in a strong position to campaign for a policy alternative on the legislative agenda" (Béland 2005, 10). Policy entrepreneurs often engage "rhetorical strategies" in order to advance their portrayal of issues (Mehta 2011; Stone 1989; Campbell 1998). Furthermore, these ideas can often become powerful ideological weapons that challenge institutions by invoking symbols, expressing metaphors, establishing causality, or telling a story (Mehta 2011; Blyth 2001; Béland 2009).

The Current Paper and the Larger Project

The preceding literature review is the preface to a project we intend to undertake in the next five to ten years, to help understand the origins and dissemination of policy ideas in domains prone to disaster. We are starting this project by looking at federal policies addressing earthquakes and hurricanes. We hope to, later in the project, turn to a discussion of technological crises, such as oil spills and aviation accidents. Our goal for all these projects is the same: when, and under what conditions, do *focusing events* induce policy change? Conversely, we ask: When do focusing events *not* generate policy change? And, a particularly curious aspect of what Birkland calls "domains prone to disaster" is the occasion when policy change occurs that is not easily relatable to one disaster. These are all broad and remarkably complex questions that no one research product will address fully. Our goals are to understand, and to be able to relate to each other, information about the timing and sources of policy ideas, and how they relate to those issuing statements about the ideas surrounding events. These *ideas* can include narratives about causes and possible solutions. Based on earlier research (Birkland 2006), we believe that events will trigger more discussion of both existing ideas and seemingly novel ideas—but, as Kingdon notes, only novel to the extent that the idea may not have recently surfaced, but that probably already had been discussed at some point.

This research derives its logic from previous work (Birkland 1997, 2006) that argued sudden *focusing events* could yield greater attention to policy problems. Thus motivating policy entrepreneurs to seek solutions to these problems. However, the matching of problems and solutions on the policy entrepreneur's part is not done out of seeking the best optimal way. Instead, it is the business of policy entrepreneurs to join these ideas about problems with ideas about solutions (policies) because it is in the best interest of the policy entrepreneur to have the solutions he/she favored adopted (Kingdon 2003). The period after an event is a propitious time for policy change because there is also a strong normative expectation that *something* should be done to relieve the pain—financial, emotional, or physical—done by a natural disaster.

Sources of Data in the Broader Project

To assess the content and source of policy discourse, we will rely on three broad venues where we can find policy discourse. The first, and the one we focus on here today, is policy discourse in the news media. We have begun by coding articles on three earthquakes from the

New York Times. For reasons we explain below, this may not be the only or best way to capture policy discourse in the news, particularly for events that trigger local-level policymaking. We later plan to review and code the transcripts of major TV news programs for similar data.

The second source on which we will draw is discourse on policy ideas in Congress. We expect to see some overlaps between congressional and media discourse, but also, following Birkland and Lawrence's (2009) findings, we expect to find substantial diversion between the ideas that arise and gain attention in the news versus Congress. In large part, these differences are explained by the very nature of the two institutions. The news media are primarily focused on what is novel and "newsworthy" according to journalistic standards designed to attract readership and interest. Congress has a much more problem-solving orientation, and can be expected to, as ideas for policies pass through the legislative process, narrow down the range of ideas to ideas that are politically acceptable or considered more feasible by whatever standard (Lindblom 1959, 1979).

We will draw on statements made by members of Congress in the *Congressional Record* and in committee hearings. We will also code testimony in Congress in a manner similar to the method employed by Birkland (1996), but will extend that coding scheme to include policy ideas.

A third source of data on the emergence of ideas will be the interdisciplinary literature on disaster, typically published in journals like the *International Journal of Mass Emergencies and Disasters*, *Natural Hazards Review*, *Disasters, and the Journal of Contingencies and Crisis Management*. From a managerial perspective, journals such as *Public Administration Review* will also be reviewed and coded. We assume that these journals provide early evidence of the emergence of ideas that are potentially taken up in policy discourse when events trigger a search for solutions. We plan to code these journals for ideas and sources of these ideas so as to map them across time.

If our efforts are successful, the data and analysis to be gleaned from this effort promise to be useful to us and to all students of policy change. We believe the data will be useful both in terms of narrative policy analysis and in statistical modeling of the precursors of policy change. We plan to gather data on "domains prone to disaster" to understand what ideas emerged and when, which sources of ideas are speaking about particular issues, and when ideas co-occur with other ideas. When many ideas co-occur with each other, we believe that policy change is more likely because multiple discussions of related ideas means that the conditions are right for policy change. We hope that these data and our research help us understand the conditions under which event-driven policy change is more or less likely.

Preliminary Data and Research Question

The current paper is a very preliminary proof-of-concept study using news media to look at two major earthquakes, as well as a third that received less national attention. The two major earthquakes are the Loma Prieta (October 17, 1989) and the Northridge (January 17, 1994) earthquakes, both of which occurred in California. We chose to examine these two events specifically due to their size and scope of damage. We also included in this analysis the most damaging recent earthquake in the United States, the Nisqually earthquake on February 21, 2001. Though one of the largest recorded earthquakes in the state of Washington, there were no recorded deaths and the scope of damage and injury was less than that of the other two events. But we included this earthquake because, given the nature of the damage that did occur, the attention paid to it might be greater than that paid to other moderately damaging earthquakes.

For all three events, our analysis focused on idea emergence within the media with a beginning effort to look at story frames.

Methods and Data

To assist with the content analysis of newspaper articles, we used Dedoose both to analyze data and as a way of testing its capabilities. Dedoose is a cross-platform, cloud-based qualitative data analysis application designed to analyze text, as well as video and spreadsheet data. We sought to test this because all the authors were running different computers with different operating systems, and Dedoose was uniquely suited to this cross-platform application.

We collected all articles with the word *earthquake* in the headline and lead paragraph from 1988 to 2013 from the *New York Times* via the Lexis-Nexis database, only appearing on the Times' National Desk (as clearly indicated in each article). This yielded 1,847 articles. Our plan was to code every 10th article across all dates, but this became unwieldy. As a result, we decided to examine articles that emerged within the six-month period after each event because we know that the "half-life" of such events is short and that most of the immediate discussion happens in the six months following the event. We then coded every 10th article on the Loma Prieta and Northridge earthquakes and every fourth for Nisqually since there were so few stories. If the Nth article was not related to the earthquake phenomenon or was a terse episodic report of a small earthquake, the article was dropped and the next was coded. This yielded an N of 19 articles for Loma Prieta, 15 for Northridge, and 5 for Nisqually, respectively. In the future, our data will code all articles, and our decision to code every Nth article had some potential implications we describe below.

Coding scheme

Two of the authors coded the articles and then met to go over the whole set and reconcile the coding. As a result, we didn't measure interrater reliability. Two broad types of codes were developed, concepts and frames. As often occurs with coding qualitative data, we started the analysis anticipating a series of codes derived from the literature. However, as we became immersed in the coding process several additional themes emerged that were important to include for the purposes of the study. Therefore, our coding structure is the product of both deductive and inductive processes.

Preliminary Results

Table 1 provides a list of the concepts coded for and how many times they occurred for each event. As shown, the majority of articles examined discussed the property damage that occurred as a result of the earthquake. This is unsurprising, as the physical damage is the most obvious manifestation of this geological phenomenon; indeed, were there no property damage, the event would be largely unremarkable from a human perspective, and there'd be little reason for news coverage.

There are some idiosyncratic features of news coverage of each earthquake that deserve additional attention. For example, we found an unusually large number of stories about evacuation after the Nisqually earthquake. We found this to be a function of the particular kind hazards created by secondary events, such as mudslides.

Table 1: Concept Occurrences by Earthquake

Concept	Loma Prieta	Northridge	Nisqually	Total
Property Damage	15.3%	14.7%	18.2%	15.4%
Death	14.1%	6.7%	4.5%	9.9%
Infrastructure	9.4%	9.3%	9.1%	9.3%
Politics	4.7%	10.7%	9.1%	7.7%
Government Funding	5.9%	8.0%	9.1%	7.1%
Aftershocks	7.1%	5.3%	9.1%	6.6%
Displaced People	5.9%	9.3%	0.0%	6.6%
Injuries	4.7%	4.0%	9.1%	4.9%
Housing	1.2%	9.3%	4.5%	4.9%
Secondary Event	3.5%	1.3%	4.5%	2.7%
Anti-Social Behavior	2.4%	2.7%	0.0%	2.2%
Minorities	1.2%	4.0%	0.0%	2.2%
Vulnerability	4.7%	0.0%	0.0%	2.2%
Risk	2.4%	1.3%	4.5%	2.2%
Charitable Aid/Other Aid	2.4%	1.3%	0.0%	1.6%
Economy	0.0%	4.0%	0.0%	1.6%
Children	3.5%	0.0%	0.0%	1.6%
Communication	3.5%	0.0%	0.0%	1.6%
Planning	2.4%	0.0%	4.5%	1.6%
Evacuation	0.0%	1.3%	9.1%	1.6%
Survivor	2.4%	0.0%	0.0%	1.1%
Building Codes	0.0%	2.7%	0.0%	1.1%
Pro-Social Behavior	1.2%	1.3%	0.0%	1.1%
Military	0.0%	1.3%	4.5%	1.1%
Warning	1.2%	0.0%	0.0%	0.5%
Resilience	1.2%	0.0%	0.0%	0.5%
Public Health	0.0%	1.3%	0.0%	0.5%
Total	100.0%	100.0%	100.0%	100.0%
N	85	75	22	182

Students of disasters divide the "disaster cycle" into four phases: preparedness, response, recovery, and mitigation. Thus, these concepts were an important feature of our coding structure and the results for each event can be seen in Table 2. Additionally, we were interested in the co-occurrence of these concepts and whether they tended to appear in conjunction with one another. As seen in Table 3, there was not much overlap of the phases found in the media articles, with response and recovery occurring together more than any other combination. If discourse were oriented toward policy change, we'd expect to see more discussion of mitigation and preparedness. This is because preparedness and mitigation work to save money and reduce casualties. However, very few of the coded articles discussed mitigation or preparedness. While this may seem surprising given that disaster professionals often claim that the post-disaster period is the best time to promote attention to preparedness and vulnerability—during the "window of opportunity" for attention and change—it appears that the news media are less concerned with such matters than are policy makers. Our larger study will test this theory in further detail when we compare idea emergence by the media with idea emergence of Congress and experts.

Of course, this finding is likely a function of our data set and sampling frame. We might have better results if we focused on, say, the *San Francisco Chronicle*, *Los Angeles Times*, or *Seattle Times* for thematic stories about disaster mitigation and preparedness. These papers may be more likely to publish service journalism stories that provide more useful information for local residents in these affected areas.

Table 2: Disaster Cycle				
	Mitigation	Recovery	Preparedness	Response
Loma Prieta	2	11	1	3
Northridge	0	12	1	2
Nisqually	0	3	0	1

The focus on recovery in disasters is remarkable, and suggests that journalism remains interested not simply in the drama of the disaster itself, but also in the depiction of what happens after the disaster. Normatively, however, the imbalance between the focus on recovery and the relatively little attention paid to preparedness and mitigation suggests that the news media again focus on the more immediate concerns relating to the "return to normal" after a disaster. We need to carefully analyze media stories about what the return to normal means, but we need to also consider the extent to which this focus on returning to the status quo ante creates greater disaster vulnerability when redevelopment doesn't take into account the "lessons" putatively "learned" in the recent event.

Table 3: Disaster Cycle Co-Occurrence				
	Mitigation	Recovery	Preparedness	Response
Mitigation	-	1	1	0
Recovery	1	-	1	2
Preparedness	1	1	-	0
Response	0	2	0	-

Given our small sample size, the number of co-occurrences of discussions of the disaster cycle would be expected to be small, but our preliminary results suggest that news stories about these events are quite unlikely to connect the immediate recovery aspects of a disaster with the longer-run issues of preparedness and mitigation.

Conclusions and Limitations

As should be clear from this paper, this proof-of-concept study contains some significant shortcomings. However, we did test Dedoose's suitability for this project. While we found many of its features wanting, we remain open to using it while exploring other qualitative data analysis applications. And we began to refine our coding system that will be used as the project proceeds.

The shortcomings include, among other things, the small sample size of the data, and the small time span between the event and the end of the sampling time, sixth months after the event. The data also focus on only one news outlet—*The New York Times*—and we failed to gather and code similar coverage in local newspapers, which could yield locally important news coverage that would be more useful for understanding the motivations for policy change, because the regulation of building in seismic areas is largely a state and local responsibility.

Of course, this study also focused only on one particular form of news media—newspapers—and did not consider television news. In our future research, we plan to code the transcripts of major TV news programs, although simply coding the words used will likely miss the imagery that accompanies these stories. Furthermore, as outlined at the outset of this paper, we need to consider the source of ideas from other sources besides the news media. And our coding effort here has only begun to look at, for example, who was discussing particular ideas. The complexity of the coding scheme may outstrip Dedoose's basic functionality, and we are looking for alternative applications.

A final, perhaps more fundamental, shortcoming in our data is our focus on the *events* themselves and not the flow of time in which ideas and events mingle and connect. This pilot study suggests that, indeed, considering how ideas about earthquakes and how they can be addressed in policy should occur over a long span of time to better understand when ideas ebb and flow. That ebb and flow may be associated with particular events, but events will not likely be the unit of analysis in future studies.

One approach about which we are currently learning, and which appears more promising than the attempt to track ideas through a large sample of newspaper articles, is a body of methods associated with an emerging mode of analysis called the Narrative Policy Framework, or NPF (McBeth et al. 2005; Jones & McBeth 2010; Shanahan, et al. 2013). This approach relies on understanding how policy actors frame stories about public problems, including, among others, the depictions of villains and heroes, the assignment of blame for policy failure, and types of policy entrepreneurs being promoted to address the problems that are framed by policy actors. While the methods for coding and analyzing policy narratives are still in their earliest stages of development, the NPF has begun to provide a framework for powerful yet parsimonious models of policy change that do not rely on the massive coding of documents, but, rather, focus on the stated claims of the most important actors in a policy domain. Our next step in our project will be to explore NPF methods and ideas to develop more appropriate methods for analysis given the limitations of both human coding and machine coding.

References

Baumgartner, Frank R. 2013. "Ideas and Policy Change: Ideas and Policy Change." *Governance* 26 (2) (April): 239–258. doi:10.1111/gove.12007.

Baumgartner, Frank R., and Bryan D. Jones. 1993. *Agendas and Instability in American Politics.* Chicago: University of Chicago Press.

Béland, Daniel. 2005. "Ideas and Social Policy: An Institutionalist Perspective." *Social Policy & Administration* 39 (1): 1–18.

———. 2009. "Ideas, Institutions, and Policy Change." *Journal of European Public Policy* 16 (5) (August): 701–718. doi:10.1080/13501760902983382.

Birkland, Thomas A. 1997. *After Disaster: Agenda Setting, Public Policy, and Focusing Events.* Washington, D.C.: Georgetown University Press.

———. 2004. "Learning and Policy Improvement After Disaster: The Case of Aviation Security." *American Behavioral Scientist* 48 (3) (March 1): 341 364. doi:10.1177/0002764204268990.

———. 2006. *Lessons of Disaster.* Washington, D.C.: Georgetown University Press.

Birkland, Thomas A., and Regina G. Lawrence. 2009. "Media framing and policy change after Columbine." *American Behavioral Scientist* 52(10): 1405-1425.

Blyth, Mark. 2001. "The Transformation of the Swedish Model: Economic Ideas, Distributional Conflict, and Institutional Change." *World Politics* 54 (1): 126. doi:10.1353/wp.2001.0020.

Campbell, John L. 1998. "Institutional Analysis and the Role of Ideas in Political Economy." *Theory and Society* 27 (3) (June 1): 377–409. doi:10.1023/A:1006871114987.

———. 2002. "Ideas, Politics, and Public Policy." *Annual Review of Sociology* 28: 21–38.

Cobb, Roger W., and Charles D. Elder. 1983. *Participation in American Politics: The Dynamics of Agenda-Building.* Baltimore: Johns Hopkins University Press.

Cobb, Roger W., and David M. Primo. 2003. *The Plane Truth: Airline Crashes, the Media, and Transportation Policy.* Washington: Brookings Institution.

Cohen, Michael D., James G. March, and Johan P. Olsen. 1972. "A Garbage Can Model of Organizational Choice." *Administrative Science Quarterly* 17 (1) (March 1): 1–25. doi:10.2307/2392088.

Hall, Peter A. 1993. "Policy Paradigms, Social Learning, and the State: The Case of Economic Policy Making in Britain." *Comparative Politics* 25 (275-96).

Heclo, Hugh. 1988. "The In-and-Outer System: A Critical Assessment." *Political Science Quarterly* 103 (1) (April 1): 37–56. doi:10.2307/2151140.

Hilgartner, Stephen, and Charles L. Bosk. 1988. "The rise and fall of social problems: A public arenas model." *American journal of Sociology* 94(1): 53-78.

Jones, Bryan D. 2001. *Politics and the Architecture of Choice : Bounded Rationality and Governance.* Chicago: University of Chicago Press.

Jones, Michael D., and Mark. K McBeth. 2010. "A Narrative Policy Framework: Clear Enough to be Wrong?" Policy Studies Journal 38 (2): 329-353.

Kingdon, John W. 2003. *Agendas, Alternatives, and Public Policies.* 2nd ed. Longman Classics in Political Science. New York: Longman.

Lawrence, Regina G., and Thomas A. Birkland. 2004. "Guns, Hollywood, and School Safety: Defining the School–Shooting Problem Across Public Arenas*." *Social Science Quarterly* 85(5): 1193-1207.

Lindblom, Charles E. 1959. "The Science of 'Muddling Through'." *Public Administration Review* 19: 79–88.

———. 1979. "Still Muddling, Not Yet Through." *Public Administration Review* 39: 517–526.

May, Peter J. 1991. "Reconsidering Policy Design: Policies and Publics." *Journal of Public Policy* 11 (02): 187–206. doi:10.1017/S0143814X0000619X.

McBeth, Mark. K., Elizabeth A. Shanahan, and Michael D. Jones. 2005. "The Science of Storytelling: Measuring Policy Beliefs in Greater Yellowstone." *Society & Natural Resources* 18: 413–29.

Mehta, Jal. 2011. "The Varied Roles of Ideas in Politics: From 'Whether' to 'How'." In *Ideas and Politics in Social Science.* Oxford University Press.

Pierce, Jonathan J., , Aaron Smith-Walter, and Holly L. Peterson. 2014. "Research Design and the Narrative Policy Framework," Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago, April 2014

Shanahan, Elizabeth A., Michael. D. Jones, Mark K. McBeth, and Ross R. Lane. 2013. "An Angel on the Wind: How Heroic Policy Narratives Shape Policy Realities." *Policy Studies Journal* 41(3): 453-483.

Stone, Deborah A. 1989. "Causal stories and the formation of policy agendas." *Political science quarterly* 104(2): 281-300.

———. 2002. *Policy Paradox : the Art of Political Decision Making*. New York: Norton.

Walker, Jack L. 1977. "Setting the Agenda in the U.S. Senate: A Theory of Problem Selection." *British Journal of Political Science* 7: 423–445.

Zahariadis, Nikolaos. 2007. "The Multiple Streams Framework: Structure, Limitations, Prospects." In *Theories of the Policy Process*, edited by Paul A.Sabatier, 2nd ed., 65–91. Boulder, Colo.: Westview