Trans-Subsystem Dynamics: Policy Topography, Mass Opinion, and Policy Change

Michael D. Jones, University of Oklahoma
Hank C. Jenkins-smith, University of Oklahoma
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We argue that the treatment of trans-subsystem change, and particularly the role of public opinion in fostering such change, within the Advocacy Coalition Framework (ACF) has been underspecified. We propose a model of “policy topography” that combines the concepts of public opinion, clusters of linked subsystems, and policy issue venues. While the ACF has characterized subsystems as relatively self-contained, we argue that they are more usefully understood as operating in a relatively permeable fashion among evolving clusters of subsystems linked together by networked relations, strategically overlapping policy considerations, and public opinion disruptions. The “policy topography” model offers opportunities to assess the relationships across policy subsystems, and to better specify the critical relationship between public policy and mass opinions. We offer examples, and suggest hypotheses along with avenues for appropriate empirical analysis.

KEY WORDS: Advocacy Coalition Framework, public opinion, policy topography, trans-subsystem dynamics

Introduction

The Advocacy Coalition Framework (ACF) has made substantial headway in characterizing the conditions that lead to policy continuity as well as episodes of significant change in public policies. The ACF highlights the ways by which previously marginalized advocacy coalitions attempt to take advantage of exogenous events, resulting in the rearrangement of resources to overthrow the dominant coalition (Sabatier & Jenkins-Smith, 1993; Sabatier & Weible, 2007). The locus of policy change has been placed within issue-defined subsystems, wherein interested policy specialists—including legislators, agency personnel, interest group representatives, scientists, members of the press, and others—engage in evaluating and attempting to influence the course of policy in the relevant issue domain. While the ACF conceives of subsystems as operating alongside, or in parallel with other subsystems, we argue here that further theoretical specification of the interactions among linked subsystems is necessary to make sense of the systematic patterns by which such linkages constitute positive and negative feedback for policy change. The meso-level (i.e., individual subsystem) analysis characteristic of ACF scholarship has militated against the modeling of macro-level interactions between subsystems that
may influence both subsystem and coalition composition and offer important insights into policy change more generally. In keeping with the ACF approach, we offer a macro-level framework that characterizes clusters of linked subsystems operating within a “habitat” of institutionally defined venues from which advocacy coalitions (or, more broadly, policy entrepreneurs) actively seek to block or promote policy change. In conjunction, public opinion, the linked subsystem clusters, and the venues to which they extend constitute the “policy topography” within a political system. In specifying the macro-level policy topography, our aim is to provide a more extended framework through which patterns of relationships across subsystems and policy domains can be identified and characterized. The extended framework incorporates well-recognized features of varied policy models, including public opinion, group and coalition formation, and venue-specific rule structures. Ultimately, we hope to extend the ACF by permitting more complete specification of the conditions of policy change by accounting for macro-topographical features.

Policy Topography and Public Opinion

We focus on the role of public opinion as a foundational component of the policy topography for three reasons. First, conceptualization and placement of public opinion within the ACF has proven to be a difficult task for ACF scholars. Second, indications of the importance of public opinion to public policy maintenance and change (or lack thereof) in the literature are quite pervasive. Third, the relationship between public opinion and public policy speaks directly to norms of democratic systems. Or, stated more directly, while there is ample empirical evidence of strong relationships between public opinion and public policy, and while this relationship is critically important to democratic legitimacy, the ACF has nevertheless struggled with how to deal with this relationship.

Historically, two categorizations of public opinion findings have directed the treatment of public opinion in policy models: traditional and revisionist (Herron & Jenkins-Smith, 2006, p. 17). The traditional account of public opinion originates in the works of Walter Lippman (1922, 1925, 1955) and Phillip Converse (1964), both of whom were pessimistic about the cognitive capacities of the general public. More recently, Zaller (1992) argues that opinions are largely formed on the spot, rather than grounded in durable underlying predispositions, resulting in volatile individual preferences readily susceptible to elite manipulation. In sum, the traditional view posits a public that is unsophisticated and lacks the capacity to understand political phenomena (Herron & Jenkins-Smith, p. 17). For the traditionalist, public opinion follows and is manipulated by elite opinion.

The revisionist account posits a different citizenry. Exemplar works in this vein argue that public policy preferences are reasonably well structured (Jenkins-Smith, Mitchell, & Herron, 2004; Peffley & Hurwitz, 1987) and stable (e.g., Shapiro & Page, 1988, 1994); individuals rely upon information shortcuts in the form of heuristics (e.g., Sniderman, Brody, & Tetlock, 1991); and that the cognitive requirements are not as high as initially thought for coherent participation in the policy process (Lupia & McCubbins, 1998). Importantly, recent research indicates that national policy is
responsive to public “mood” (Erikson, MacKuen, & Stimson, 2002; Stimson, MacKuen, & Erikson, 1995). In sum, according to revisionist scholars, opinions are based upon rational shortcuts such as heuristics (e.g., culture, ideology, likability, etc.), selective information retention, reasonably well-defined belief systems, and, consequently, are capable of influencing public policy change in a consistent fashion (Herron & Jenkins-Smith, 2006).

A recent (and, in our view, underutilized) meta-analysis of research studying the relationship between public policy and public opinion summarizes key findings, indicating where the literature stands in relation to traditional and revisionist conceptions of public opinion. Casting doubt on the traditional account of public opinion, Paul Burstein’s (2003) meta-analysis finds that “public opinion affects public policy three-quarters of the time” (p. 36). However, the salience of particular policies and their respective issues conditions the role public opinion plays in government responsiveness, with high salience policies favoring public opinion (Burstein) and low salience policies favoring special interests (Burstein, 2006). He also finds that public opinion remains important even when one controls for elite behavior.2

Burstein’s meta-analysis confirms a consistent linkage between high salience policies and their relevant issues, public opinion, and policy. Yet, as pointed out by Burstein, data limitations are substantial, and as such our understanding of this relationship is provisional. Both traditional and revisionist assumptions about public opinion and policy require more thorough specification and evaluation within models of public policy. While traditionalists argue that public opinion is largely directed by elites, revisionists argue that opinion guides or constrains policy. Both accounts, we conjecture, are likely accurate. It is likely to be a question of context and degree, rather than a simple dichotomy.

The ACF has evolved to incorporate both traditional and revisionist findings. The earliest version of the ACF assumed a traditional posture with a minimalist role for public opinion, while later iterations have successively attempted to incorporate revisionist findings. Despite these changes, in our view, the ACF has not yet adequately integrated public opinion into its depiction of policy change. We argue that, in part, the difficulty in doing so is derivative of the ACF’s focus on isolated subsystems.

The ACF and Public Opinion

Over time, the ACF has incrementally incorporated public opinion as a driver of subsystem dynamics, adding nuance with each iteration of the framework. The earliest versions of the ACF scarcely acknowledged the importance of public opinion to policy subsystems, theoretically arguing that public opinion is “simply subsumed under changes in socioeconomic conditions and technology” (Sabatier, 1988; Sabatier & Jenkins-Smith, 1988, 1993, p. 223). ACF external system events were later modified to explicitly include public opinion (Sabatier; Sabatier & Jenkins-Smith, 1993). The authors argued that public opinion, when it changes, is theoretically important because of its ability to constrain elite strategies (Sabatier & Jenkins-Smith,
In the most recent articulation of the ACF, Sabatier and Weible (2007) provide a more elaborate theoretical treatment of public opinion. Two modifications to the framework are worth noting. First, the role of public opinion is expanded from an exogenous subsystem constraint to include that of a coalition resource. Importantly, the authors indicate that not only is public opinion a resource, but it is a considerable one as it is “a typical strategy for advocacy coalitions to spend a lot of time trying to garner public support” (Sabatier & Weible, p. 203). Second, the framework is modified to take note of the fact that major policy changes need not be induced exclusively by shocks external to the policy subsystem. The ACF now embraces the notion of internal shocks, or perturbations within the policy subsystem (Sabatier & Weible, p. 204). An internal shock is best understood as a “disaster within a subsystem” (Sabatier & Weible, p. 204) and is “...by definition affected by subsystem actors” (Nohrstedt, 2008, p. 275). A ready example of an internal shock to a subsystem is the Three Mile Island (TMI) incident within the nuclear power industry. The TMI incident, as well as other internal shocks, have the ability to “redistribute critical political resources” (Sabatier & Weible, p. 204), including public opinion. This is apparent in the case of TMI as public opinion supporting nuclear energy dramatically declined (Freudenburg & Baxter, 1985; Rosa & Freudenburg, 1993, pp. 47–48) and the nuclear industry soon found itself under the burden of more demanding regulations (Rosenbaum, 2005). Internal shocks also can “confirm policy core beliefs in the minority advocacy coalition(s) and increase doubt within the dominant coalition” (Sabatier & Weible, p. 205), thus altering opportunities for strategic action by agents within a subsystem. This theoretical expansion of shocks and the “public opinion as resource conception” have important implications for the treatment of public opinion more generally.

Recall that the early ACF treatment of public opinion as an exogenous event theoretically isolates this variable as a condition, albeit a dynamic one, outside of the policy subsystem. Sabatier and Jenkins-Smith (1993) recognized that this variable may be “more subject to manipulation by advocacy coalition elites,” but held that public opinion was “largely beyond the control of subsystem participants” (p. 235). The newest incarnation of the ACF views public opinion as a tripartite theoretical construct, existing as an external constraint, a coalition resource, and a potential source of internal shock. Thus, public opinion has received a promotion of sorts within the ACF, but given what we know about public opinion and public policy, has the ACF gone far enough? We argue that it has not, positing that the limitations of the current role attributed to public opinion within subsystems results in part from underspecifying macro interactions across subsystems.

Mass Opinion in Multiple Policy Subsystems

In order to address the theoretical difficulties traditionally associated with the treatment of public opinion in the ACF, we join James and Fournelle (1999) in positing public opinion as a three-dimensional policy topography, wherein each
issue within a policy domain (e.g., the economy and national defense) occupies a coordinate in the three-dimensional space. Two dimensions measure issue position in terms of ideological tendency and scope, while a third dimension captures issue salience (James & Fournelle, p. 402).

1. **Ideological tendency** refers to the orientation of public opinion toward a particular issue in terms of left-right or liberal and conservative (James & Fournelle, p. 402).

2. **Scope** represents the size of the group that is most affected by the issue outcome. For example, although many are affected by policy and issue outcomes, union members are readily identified as directly affected by policies toward union membership (James & Fournelle, p. 402).

3. The third dimension measures the **salience** of the issue, and provides the variance that shapes the topographical features within which the policy subsystem resides (James & Fournelle, p. 403), providing important chasms, peaks, and valleys that directly facilitate both the proximity of issues to each other and the actor linkages within and across policy domains.

When applying a three-dimensional policy space to the ACF, traditional discussions of exogenous and endogenous variables become blurred; public opinion certainly can be both—as the ACF has demonstrated. However, the theoretical import is that public opinion is now conceived of as foundational, and as such, is integral to a trans-subsystem framework. That is, all actors and institutions are positioned at some point in space relative to dimensions of public opinion. Contingent upon that placement in that three-dimensional space, actors are forced to explore, navigate, and even attempt to shape their relevant topographical features.

Therefore, we conceive of public opinion as one of the primary nutrients (and toxins) in the policy topography; it may create conditions favorable to expansion of the level of activity within a subsystem (e.g., McBeth & Shanahan, 2004); it may starve the subsystem (e.g., Baumgartner & Jones, 1991, p. 1046). When sufficiently focused, the glare of public opinion may suffocate or “punctuate” a subsystem as described in the punctuated equilibrium theory (PET) literature. We posit that public opinion operates in a fairly complex and dynamic fashion in that issue salience is finite (at a given point in time) and is allocated across both issues within a domain and across policy domains in response to signals about events and elite positions transmitted (primarily) by the mass media (James & Fournelle, 1999). Moreover, contrary to traditionalist theories of public opinion that find little structure or coherence in the beliefs of mass publics (e.g., Converse, 1964), we argue that mass beliefs exhibit structure and cohere, within limits, around core beliefs such as ideology and political culture (Erikson et al., 2002; Herron & Jenkins-Smith, 2006; Page & Shapiro, 1992; Stimson et al., 1995). Broad themes of policy preference (or “moods”) and relative levels of issue salience characterize the linked subsystem clusters, with a negative but nonlinear relationship between salience and subsystem autonomy: at low to moderate **relative** levels of salience, subsystems are likely to be quite autonomous; at very high levels of salience, subsystems are in peril of being overwhelmed by punctuations that may sweep away extant institutional and interest arrangements.
Trans-Subsystem Interactions and Linkages

We conceive of two distinct mechanisms by which the interaction of public opinion and clusters of linked policy subsystems can interact. Primarily exogenous to subsystems, the first operates chiefly at the macro level (across all subsystems and policy domains within the national policy system), concerning ways in which events can ripple across multiple linked and unlinked subsystems. We refer to the first mechanism as *salience disruption*. This dynamic is governed by the combination of the broad and nearly continuous, parallel processing of inputs and feedback that takes place within subsystems, and the narrowing of national-level institutional attention forced by the trade-offs required as public opinion salience shifts from one locus to another. While probably not zero-sum, public opinion salience grows in one domain at the expense of others (James & Fournelle, 1999). This pattern is also evident in the press, wherein a surge of coverage of events in one domain can eclipse that in others (see, e.g., the discussion of terrorism reporting in Jenkins-Smith and Herron, 2005). Salience disruption is initiated by large-scale events that focus public attention on specific subsystems (or groups of them) and thereby generates enormous effort, resources, and change in those subsystems, while simultaneously drawing attention and resources away from others.

The second mechanism driving the relationship among linked clusters of subsystems is subtler, less event-specific, and more endogenous to the evolution of issue understanding. We refer to this second mechanism as *policy dimension-shift*. The linked nature of subsystems virtually assures that important changes in key variables affecting one subsystem will have spillover effects in others within and across domains. The outcome of debates in one subsystem can become a threat to coalitions engaged in advocacy in other subsystems; similarly, these outcomes may become a resource for others. We posit that this transmission of policy knowledge across previously unlinked subsystems is largely driven by policy entrepreneurs seeking advantage in policy advocacy through adapting elements of previously unused arguments (belief systems) drawn from other subsystems. One of the primary driving forces of the policy process is the activity of advocacy coalitions and policy entrepreneurs, operating within or across subsystems. As in the ACF and Kingdon’s (1995) policy streams approach, the entrepreneurs champion conceptions of policy problems and solutions, and successful efforts to initiate significant policy change capitalize on fluctuations in conditions within the subsystem and in those adjoining it. Among the most prominent strategies, entrepreneurs will seek to (foment and) capitalize on spikes in public opinion salience pertinent to their subsystem, and will strategically link those opinions to policy options. In the process, entrepreneurs will employ heresthetical arguments strategically linking policy options to important outcomes previously considered the province of other policy subsystems, in a manner designed to split the dominant coalition and render change possible (Riker, 1983, 1996).

Whereas traditional rhetorical devices are successful based upon persuasion, given a certain dimension of debate, heresthetics are strategically manipulative (Riker, 1996). A policy entrepreneur who anticipates losing a battle could be
expected to attempt to offer a new dimension of debate that serves to “divide the majority with a new alternative, one [some component of the majority] prefers to the previous alternative expected to win” (Riker, p. 9). For example, anti-immigrant advocates in the U.S. immigration subsystem in the post 9/11 environment might invoke a national security dimension, where previously the debate was considered on the primary dimensions of economic implications, ethics, and resource distributions (see, e.g., Domke, McCoy, & Torres, 1999).

Based upon our two proposed mechanisms of subsystem and mass opinion interaction, we assume a fundamental role for policy entrepreneurs. Policy entrepreneurs will either be attempting to direct policy dimension-shift or are directed by public opinion-induced salience disruption(s), but their actions are essential for shaping relationships across subsystems. Therefore, it seems reasonable to test for linkages across subsystems by examining the relationships between those most likely to play this entrepreneurial role. For example, the conception of elite networks as “hollow cores” posits that elites associate most with those with similar beliefs and have little, if any, contact with oppositional elites (Heinz, Laumann, Salisbury, & Nelson, 1990, p. 384). One might therefore conjecture that swings in public opinion favoring one subsystem are only likely to be capitalized on by those within close value proximity to the beneficiary of the public opinion swing as linked entrepreneurs carry the argument from one subsystem to another. However, the point to be made here is that it is the linkages themselves and how those linkages facilitate or obstruct the movement of strategic information that is of primary importance. Determining the frequency, proximity, and relative weight of these linkages, however conceived (e.g., budgetary links, elite associations, lobbying, or subcontracting), is critical in understanding trans-subsystem dynamics.

Trans-Subsystem Networks: Actors and Strategic Relations

Based upon the hypothesized importance of linkages between subsystems via entrepreneurs, network analysis methodologies are a natural fit for evaluating a trans-subsystem approach for the ACF. This fit is appropriate for two reasons. First, a trans-subsystem approach provides a solid theoretical base (that is often missing) for network analysis (Adam & Kriesi, 2007). Second, an important part of our agenda is to shift the theoretical focus away from the isolated subsystem to the macro interactions among subsystems concerning policy change, policy design, and policy learning. Simply stated, we conjecture that traditional variable-centered approaches to social science are likely to provide less traction than a theoretically grounded application of network analysis concerning how relations among subsystems influence these critical variables.

Knoke and Yang (2008) identify three major assumptions of network analysis that are of relevance here. In the interest of conceptual clarity, we address each assumption of network analysis in sequence, focusing on the trans-subsystem treatment of that assumption. The first states that “...structural relations are more important to understanding [subsystem] relations than individual actor attributes” (e.g., the usual suspects: age, gender, ideology, values, etc.) (Knoke & Yang, p. 4). We
embrace this assumption with the caveat that individual actor attributes remain relevant, as it is likely that these attributes will influence network relations. Second, we assume along with mainstream network approaches that the strength and frequency of actor contacts “…dispose entities to [more] information, greater awareness, and higher susceptibility to influencing or being influenced by others” (Knoke & Yang, p. 5). Finally, we assume that structural relations are dynamic and that subsystem actors seek advantage within networks, thus altering the relational structures within those networks (Knoke & Yang, p. 6).

The dynamism of subsystem relational structures, and the manner in which these dynamics facilitate the flow of information, is a central feature of the trans-subsystem approach, and the policy entrepreneur’s strategic behavior is the motive force in shaping these relations. However, recall that both the relationships and the strategic behavior of subsystem actors takes place within a context of a specific policy topography defined, in part, by public opinion. The policy topography will shape the ebb and flow of relationships and provide opportunities and obstacles to an actor’s strategic behavior. In turn, that strategic behavior will guide advocacy coalitions to pursue strategies within opportune venues, which, in turn, will restructure the strength and intensity of future network relations. Ultimately, we conjecture that the cumulative effect of actor behavior, structural relationship constraints and opportunities, and the policy topography itself will interact to change the policy terrain for future networked relationships among potential and current advocacy coalitions.

Units of Analysis

At least three units of analysis are important to modeling trans-subsystem relations: policy subsystems, advocacy coalitions, and policy entrepreneurs. Recognizing that each of these concepts have been discussed in great detail by various authors, we seek only to briefly touch upon them in what follows, focusing on a few considerations for each. In identifying a subsystem we hold with the traditional means used by ACF scholars. Sabatier and Jenkins-Smith (1999, p. 136) define a mature policy subsystem as:

1. Participants regard themselves as a semiautonomous community who share a domain of expertise.
2. Participants have sought to influence public policy within the domain over a fairly long period of time (i.e., seven to ten years).
3. There exist specialized units within relevant governmental agencies to deal with the policy of interest.
4. There exist interest groups, or specialized subunits within interest groups, that regard this as a major policy topic.

However, Sabatier and Jenkins-Smith (1999) draw a distinction between mature policy subsystems defined above, and nascent, or newly developing policy subsystems—and both may exist within nested subsystems. Nascent subsystems
are of particular interest to trans-subsystem dynamics, as a change in relational configurations may be the result of (or result in) nascent policy subsystem development and growth. Although there is no convention for identifying nascent policy subsystems, utilizing the above criteria (excluding the second) should provide an appropriate means to identify such systems. Researchers should pay particular attention to the development of nascent subsystems (nested or otherwise) as their development is a possible indicator of changes induced by policy topographical features.

Advocacy coalitions exist within subsystems, consisting of policy participants clustered around policy core beliefs, which engage in a nontrivial degree of cooperation (Sabatier & Jenkins-Smith, 1993, p. 25; 1999, p. 138; Sabatier & Weible, 2007, p. 196). Network analysis has been an especially fruitful tool for ACF scholars, as it has been used to reveal that actors with congruent core beliefs within advocacy coalitions do engage in coordinated activity (Weible, 2005, 2006; Weible & Sabatier, 2005; Zafonte & Sabatier, 1998). As such, network analysis is directly applicable to the identification of advocacy coalitions and should be a tool of choice in conjunction with other means applied in ACF scholarship.

Policy entrepreneurs are the primary agent of interest operating within and across subsystems. Traditional ACF applications have defined these elites as “actors from a variety of public and private organizations who are actively concerned with a policy problem or issue . . . and who regularly seek to influence policy” (Sabatier & Jenkins-Smith, 1999, p. 119). Kingdon’s (1995) policy entrepreneurs have quite general internal incentive structures that operate concurrently within institutionally defined incentive structures or policy venues. Policy entrepreneurs may pursue policy change or maintenance for purposes of personal interest, promoting values, and because they enjoy the game (Kingdon, pp. 123–24). The ACF variant more narrowly assumes that policy entrepreneurs’ incentives derive from their desire to translate their belief systems into public policies. In addition, the agency of the entrepreneur is constrained by the structure of the policy venue—both the entrepreneur and the venue sit atop the topography of public opinion that can move with tectonic-like heaves or can be altered incrementally by the actions of agents. These actors exist at all levels of government and occupy a multitude of civil and governmental positions, as well as positions in the private sector.

**Resources and Relational Form and Content**

Network applications considered in conjunction with classic ACF categorizations of resources provide fertile opportunities for conceptual grounding and measurement of relationships spanning subsystems. Knoke and Yang (2008) define networked relations along two dimensions, form and content, which structure the relation between two actors. Relational forms are modes of interaction characterized by two dimensions. Intensity, strength, and frequency define the first dimension while direction defines the second (Knoke & Yang, p. 11). Relational content is the type of relation connecting the actors. We discuss several potential categories of relational content below that are likely to be central in modeling trans-subsystem relations. However, it must be emphasized that we do not consider all relations equal
within the model. The ebb and flow of ideas from, to, and through subsystems via actors is our primary consideration. All other categories of linkages are certainly relevant, yet it is how these linkages facilitate the transmission of ideas that gives the trans-subsystem approach traction.

1. **Communication relations** are channels through which messages travel (Knoke & Yang). Information is recognized as an advocacy coalition resource (Sabatier & Weible, 2007), and increased trafficking of information is likely to benefit one party more than another. In particular, policy entrepreneurs will engage in heresthetical activities, dependent upon some form of communication network, as they attempt to redefine issues along new dimensions, thereby splitting their opposition or consolidating their support.

2. **Transaction relations** are relations where “actors exchange control over physical or symbolic media” (Knoke & Yang, p. 12). Logrolling in legislatures is a classic transactional relation.

3. **Boundary penetration** ties consist of those relations where an actor occupies two or more subsystems (Knoke & Yang). An obvious example is a congressman who sits on multiple committees and subcommittees. Another example would be a newly appointed bureaucrat, possibly resulting from a presidential administration change, who brings formal and informal ties from the private and/or public sectors. In all cases the networked relations are brought with the actor and, consequently, shape the relations of the penetrated subsystem.

Each relational type can be measured and examined based upon relational form in terms of strength and frequency. For example, one recent study (Scholz, Berado, & Kile, 2008) examines whether network structures solve collective action problems in estuary policy areas. Using centrality and density as the structuring component of interest in their networks, the authors test whether high-density or high-centrality networks are more likely to produce cooperative solutions. High-density networks are characterized by tightly knit relations where all (or most) individuals know each other, while networks with high centrality are characterized by many actors connected through another, but whose contact with the entire network is limited. Scholz et al. find that actors with higher centrality are more likely to collaborate than those with high density. As it applies to trans-subsystem dynamics, this finding indicates the potential importance of centrality and density and how relations, in their myriad of types, may filter and direct changes across subsystems, particularly in regard to the uses of information. More generally, it provides a strategy for measurement and analysis that is directly applicable to analyses in the ACF tradition.

**Policy Venues**

Policy venues “…are the institutional locations where authoritative decisions are made concerning a given issue” (Baumgartner & Jones, 1993, p. 32) and are understood as having their “…own language, set of participants, and limitations, leading to evolving sets of strategies among those who would try to affect the
agenda setting process” (True et al., 2007, p. 162). The multiplicity of venues in the American political system facilitates policy change, rather than contributing to static policy subsystems (Baumgartner & Jones). Defined policy venues include the courts, Congress, the bureaucracy, local governments, and cooperative intersections between levels of government (Pralle, 2003, pp. 236–37). The influence of public opinion in bureaucracies (Ringquist, Worsham, & Eisner, 2003), the courts (Ringquist et al.), the Congress (Eshbaugh-Soha, 2006), and the presidency (Eshbaugh-Soha) are well documented in the literature, thus justifying our treatment of public opinion as foundational in relation to venues within the trans-subsystem framework.

Given the obstacles and opportunities structured by each venue, actors and advocacy coalitions have been traditionally depicted as instrumentally weighing the benefits and costs of each venue and choosing as that analysis would direct to procure advantage (Baumgartner & Jones, 1993). Pralle (2003), in her case study of forest policy advocacy in Canada, expands this definition to include internal and external advocacy coalition constraints and policy learning, and argues that limited information may misdirect advocacy coalitions in their pursuit of optimum venues (Pralle). Following Pralle, when modeling venue shopping in trans-subsystem relations, we recommend the following considerations be attended to.

1. Advocacy coalitions are operating under conditions of imperfect information. Members of advocacy coalitions will vary in how accurately they perceive the benefits and costs of each venue—particularly if they are new to the subsystem.

2. In addition to selecting venues for substantive policy benefits, advocacy coalitions choose venues to “… mobilize supporters and create, maintain, or re-create organizational identities” (Pralle, p. 256).

3. Advocacy coalition beliefs about the causes of problems as well as the long-term viability of different policy solutions may influence venue shopping behaviors (Pralle, p. 256).

Summary and Illustrations

To summarize, competing and allying advocacy coalitions occupy subsystems, wherein relevant policy entrepreneurs engage in purposive strategizing. Policy venues offer rules and thus structure opportunities and obstacles. Spanning these subsystems are relational linkages (both form and content), ranging from trivial cocktail acquaintances to exchanges of favors and resources, all of which facilitate or obstruct the transmission of information and ideas. Public opinion is neither wholly exogenous nor endogenous to any of these facets of the policy topography. Public opinion is considered foundational, interacting with elements of the policy topography based upon salience, issue proximity, and the purposive behavior of networked actors. Consequently, at times, public opinion is a tapped resource for policy entrepreneurs; at other times, public opinion may erupt, thus overpowering and
reordering existing institutional and relational arrangements. This is what we mean by “policy topography.”

We recommend that ACF scholars examine the resilience and nature of network relations in terms of the salience disruptions and policy dimensional-shifts identified earlier. In doing so, several questions would be of particular relevance. How do the primary mechanisms of change structure and restructure network relations? Do these mechanisms affect some types of networks differently than others? Are different types of networks more conducive to adapting to rapidly shifting policy topographies than others? We believe that these and other important theoretical questions can be addressed using the trans-subsystem dynamics framework. Furthermore, in isolating trans-subsystem variation, network data must be cataloged over time. In many instances the relationships across subsystems are long-standing. For example, the nuclear energy and nuclear weapons debates have been connected both by generalized concerns about radiation and by concern that civilian nuclear energy generates plutonium, potentially facilitating nuclear weapons proliferation. But other connections can emerge relatively rapidly, sending significant ripples through these and other—previously unconnected—policy subsystems. A ready example is provided by the growth of confidence in, and concern about, anthropogenic greenhouse gasses on climate change. These examples are sketched in more detail below.

The characteristic dynamics of trans-subsystem policy change can be observed in two recent cases that spanned multiple policy subsystems: the September 2001 terror attacks in New York and Washington, and the gradual accretion of scientific support for the climate-changing effects of anthropomorphic greenhouse gas emissions. We offer the following observations and conjectures about the dynamics associated with these events, with an eye toward developing more systematic data for hypothesis testing.

The 9/11 Salience Disruption

Following the 9/11 attacks, there was an immediate and obvious response in public opinion as the percentage of nationwide survey respondents perceiving terrorism to be the “most important” problem facing the United States jumped dramatically (Hillygus & Shields, 2005), indicating a salience disruption as public opinion shifted from previous foci to the obvious threat. Over the same time period, measures of the national focus on environmental issues, previously quite stable, were dramatically reduced by attention to issues of terrorism following the September 11 terror attacks in New York and Washington, DC. Trends in media coverage (Figure 1) and congressional hearings (Figure 2) show that, following September 2001, a surge in congressional and media attention on terrorism radically displaced environmental issues on the national agenda.

Overall, the shifts in attention and public opinion salience indicate that the 9/11 attacks had the effect of drawing attention and concern to the security domain and away from others. In both of the data series noted, the quantum of attention is approximately finite at any period. Peaking attention in one domain has the effect of drawing it down in others. The effect of such a dramatic shift in salience was to
sweep away many existing institutional structures, force the reorganization of extant networked relationships, and ultimately to facilitate actor-guided dimensional-shift in many existing subsystems. Within the 9/11 salience disruption, we use the issue of immigration to illustrate both the extent of the reorganization and how dimensional-shifts can be driven by primarily exogenous salience disruptions.

Figure 1. New York Times Coverage: Terrorism and the Environment, 1980–2003

The data used here were originally collected by Frank R. Baumgartner and Bryan D. Jones, with the support of the National Science Foundation (NSF) grant number SBR 9320922, and were distributed through the Center for American Politics and Public Policy at the University of Washington and/or the Department of Political Science at Penn State University. Neither NSF nor the original collectors of the data bear any responsibility for the analysis reported here.

Figure 2. Congressional Hearings: Terrorism and the Environment, 1980–2004

The data used here were originally collected by Frank R. Baumgartner and Bryan D. Jones, with the support of the National Science Foundation (NSF) grant number SBR 9320922, and were distributed through the Center for American Politics and Public Policy at the University of Washington and/or the Department of Political Science at Penn State University. Neither NSF nor the original collectors of the data bear any responsibility for the analysis reported here.
Prior to 9/11, immigration was considered to fall within the purview of domestic policy (Rudolph, 2003, p. 604), and considered primarily on the dimensions of economics, ethics, and resources (Domke et al., 1999). The Immigration and Naturalization Service (INS), the primary agency responsible for administering immigration policy, historically suffered attacks from all levels of government and citizen groups for its failure to implement its conflicting charges of both admitting and deporting immigrants, while simultaneously enforcing controversial policies such as the Chinese Exclusion Act (Donovan, 2005). As a result of these conflicting charges and the criticism that came with their implementation, the INS had been plagued with instability, as leadership had been regularly shuffled and the organization was transferred no less than six times to different cabinet-level departments (Donovan, p. 575). Following 9/11, the INS’s instability came to an end with the creation of the Department of Homeland Security (DHS), as the INS was soon after dissolved and its component parts absorbed by other agencies.

While immigration policy was directed in part by issues of internal security pre 9/11, (Rudolph, 2003, p. 615), the post 9/11 policy topography created the necessary incentives for a significant shift in priorities as the focus of newly generated immigration agencies under the guidance of DHS focused on the dimension of national security and the threat of terrorism (Rudolph, p. 615). The institutional restructuring resulted in the division of INS responsibilities across three new DHS agencies, and all were appropriately retitled to remove the bureau designation and thus any insinuation that the agencies had significant autonomy (Donovan, 2005). In addition to reorganization, legislative tools such as the USA PATRIOT Act of 2001 and the Military Commissions Act of 2006 (Ridgley, 2008), an unprecedented mandate that local law enforcement agencies cooperate in immigration enforcement (Ridgley), and newfound cooperation from other agencies such as the willingness of the Social Security Administration to share its social security number database (Wells, 2004), facilitated a more vigorous immigration enforcement along the dimension of national security. Clearly, a salience disruption had occurred.

We conjecture that the events described above were driven by agent-centered dimension shift as both actors internal and external to the immigration issue attempted to strategically navigate the newly formed policy topography. Of course, some actors were probably better positioned than others to benefit from the new topography, and we expect that assessing the prior positions of these actors in relation to the form and content of their arguments and their networked relationships will draw considerable light to how and why change took place.

The Accretion of Climate Change Science

The evolution of the climate change subsystem provides an opportunity to illustrate dimensional-shifts that are integral to trans-subsystem dynamics (Figure 3). At the outset of the climate change debate, before receiving significant attention beyond the community of atmospheric scientists, the issue primarily was of concern within the air pollution/air quality subsystem and predictably understood along the dimension of air quality.15 Over the course of the 1970s and 1980s, the issue
of climate change gained considerable scientific traction thus garnering the attention of the electricity generation subsystem (Brunner, 2001) (particularly representatives of the coal industry, which attempted to argue that atmospheric concentration of CO₂ would be beneficial). As the focus broadened and intensified, the prospect of climate change became sufficiently noteworthy—and controversial—to develop its own subsystem: direct congressional attention, specialists, regular and focused attention by scientists and science writers (Bodansky, 1995), and controversies over national and international policy all emerged over time (Orr, 2006). As debates over the implications of continued reliance on fossil fuels and CO₂ emissions developed, other energy subsystems—notably those focused on renewable and nuclear energy (Stoett, 2003)—became linked because of the obvious connections and high stakes associated with carbon reductions, carbon taxes and caps, and subsidies for non-greenhouse gas (GHG)-emitting energy sources (see Cowie, 2007, pp. 426–31).¹⁶ From nuclear energy, the issue spilled over into policy debates about nuclear waste, leading to a boost for efforts to reach a policy solution for management of spent nuclear fuel in order to facilitate prospects for licensing new nuclear energy reactors (Stoett). Indeed, the addition of the climate change element has scrambled many of the long-standing alliances within the nuclear subsystems, as several prominent environmentalists (including James Lovelock and Patrick Moore) have become advocates of expanded reliance on nuclear energy (Cravens, 2007, pp. 258–61).

The steady accumulation of evidence implicating GHG emissions in climate change has rippled in other directions as well. Concerns over increased storm severity, particularly along coastlines, has become a factor in contests over infrastructure (levies, rebuilding New Orleans), weather forecasting for severe storms, and resource allocations for emergency and disaster management (Frumkin, Hess, Luber, Malilay, & McGeehin, 2008). Arguments for resources are fueled by the prospect of greater frequency and severity of storms, requiring more resources for monitoring, predicting, and responding to such events. Interestingly, the ripples of the climate change phenomenon into the emergency management subsystems have

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¹⁶ Figure 3. Climate Change-Induced Subsystem Linkages.
come from two directions: storm responses and the prospect of increased risks from
the transport of nuclear materials (National Research Council, 2006). Furthermore,
the endogenous subsystem dimensional-shifts, induced by internal subsystem
actors, have migrated outward to help direct public opinion as support for GHG
regulation has increased substantially since the early 1970s. Recent survey research
found that by 2003, strong bipartisan majorities in the United States support govern-
mental regulation of GHGs (Leiserowitz, 2006, p. 62). Importantly, as the debates
about climate change have migrated out of the scientific community and become
more politicized, the use of scientists as news sources for the general public has
decreased, while the use of politicians, interest group representatives, and relevant
industry representatives have increased (Trumbo, 1996). Furthermore, with the shift
of news source emphasis came a shift of focus moving from scientific causes to
political solutions to climate change, indicating that the early dimensions of the
debate have been usurped by new dimensions brought on by the inclusion of
previously unconnected subsystems (Trumbo).

Both the 9/11 and climate change cases appear to us to provide the basis for
testing propositions drawn from the trans-subsystem framework advanced in this
article. Of signal importance in the case of climate change is that the growth of
information and salience of an issue within a subsystem can become sufficient to
generate new subsystems, and ripple out to have important implications across a
larger cluster of subsystems that were not necessarily previously linked. Our
primary point in the case of the 9/11 salience disruption is that events can lead to
dramatic shifts in public opinion, and that consequent institutional and network
alterations will radically alter subsystem arrangements. We conjecture that such
patterns of variation in subsystem linkages are relatively common, creating linked
clusters of subsystems in which the implications of ideas can flow relatively rapidly
across subsystem boundaries. The primary triggering mechanisms for such changes
are either significant shifts in content and salience of public opinion affecting mul-
tiple subsystems (directed by large-scale events such as 9/11), or developments
within one or more subsystems that permit heresthetic strategies by entrepreneurs to
adopt arguments that change the balance of resources (chiefly by invoking public
opinion) among competing coalitions.

Preliminary Thoughts on Next Steps

Developing empirical support for such conjectures will require the collection
and coding of data that permit testing an array of related hypotheses. For immediate
purposes, we urge scholars to focus on the United States and the European Union,
where data are more readily available, with the intent to explore extensions to
developing countries. Scholars will need measures that include codes of the pres-
ence of individuals and groups in visible, national policy venues (e.g., legislative
hearings) over spans of two or three decades in order to observe the waxing and
waning of issue subsystems and the migration of ideas and arguments across sub-
systems. For each group or individual, researchers will need to code (i) the issues
addressed; (ii) the primary arguments made, as well as the policy addressed; (iii)
venue and pertinent group or individual-level characteristics; and (iv) the pattern of network relations (both content and form) in which the individual is engaged. Data of this kind would permit tracking of (i) people and groups; (ii) ideas and arguments; and (iii) the changing and persistence of network relations over time and across subsystems, given policy topographical features.

Coupled with legislative hearing data, data on issue attention with the news media on relevant topics would be readily obtainable. The more difficult component will be continuous public opinion data. Absent more specific time-series data, scholars would need to rely on trends in issue salience using Gallup and Roper questions concerning the most important or pressing problems facing the United States.

In combination, these data would permit the empirical identification of subsystems via the patterns of interaction among clusters of individuals and groups concerning sets of policy issues over time. We expect that such data would permit measurement of changes in subsystems, as the number of coalition members waxes and wanes, and as policy arguments develop and are transmitted across subsystems. Once developed, these data would permit tests of the following kinds of hypotheses:

_Hypothesis 1:_ Transmission of knowledge from one subsystem to another will result from policy entrepreneurs seeking to capitalize on potential gains for existing policy advocacy positions.

_Hypothesis 2:_ More heavily linked (or networked) subsystems are both (i) more constrained; and (ii) pose greater potential for indirect change.

_Hypothesis 2a:_ During periods of relatively stable public opinion, the greater the array of linkages across subsystems, the greater the resistance to change (or mobilization of resources to avoid change) from threatened overlapping subsystems.

_Hypothesis 2b:_ During periods of substantial public opinion change, the greater the array of linkages across subsystems, the greater the ripple effects of changes in the relative balance of power among coalitions across linked subsystems.

_Hypothesis 3:_ As salience increases, the role of public opinion in policy as a constraint and resource will increase. Conversely, as salience decreases, the role of public opinion in policy as a constraint and resource will decrease.

We offer these macro-level revisions to the ACF and the accompanying hypotheses fully understanding that further theoretical specification, rooted in empirical analysis, will be necessary. We expect that further analysis will do just this, and encourage interested scholars to employ and modify this framework in a collaborative effort to better specify the relationships between policy subsystems, policy change, and public opinion.

Michael D. Jones is a doctoral candidate in the Department of Political Science at the University of Oklahoma. His research focuses on theories of the policy process, public opinion, and environmental policy.

Hank C. Jenkins-Smith is a professor at the University of Oklahoma, jointly appointed to the Department of Political Science and the Center for Applied Social Science. His research focuses on environmental policy, energy policy, and national security.
Notes

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1. Beyond the Advocacy Coalition Framework (ACF), we expect the concept of policy topography to apply to other theories of the policy process as well. For example, based upon Punctuated Equilibrium’s emphasis on conditions that lead to successful attacks, mounted through multiple venues, on dominant policy issues (Baumgartner & Jones, 1993; True et al., 2007), the policy topography would describe the overall terrain within which such attacks can be mounted.

2. All of these summary findings implicate traditional treatments of public opinion; however, Burstein’s observations about method and generalizability caution against a wholesale shift in the direction of the revisionists. Burstein observes that our ability to generalize is compromised because research is too heavily directed toward high-salience issues and that the heavy reliance upon cross-sectional data limits our ability to make causal assertions relevant to models of public policy process (Burstein, 2003).

3. We agree with the general characterization of the model of policy space set forth by James and Fournelle (1999). However, in modeling public opinion, the authors explicitly seek to remove political actors from the analysis, to determine if natural linkages occur (James & Fournelle, p. 401). We seek to integrate a three-dimensional policy space with already existing models of actor behavior.

4. James and Fournelle (1999) utilize an operationalization of the left-right distinction that measures left-leaning tendencies, defined narrowly as anti-status quo (p. 402). We do not, however, strictly advocate this operationalization. Other operationalizations such as Erikson et al.’s (2002) policy mood (which operationalizes this dimension as the desire for more government) (p. 25) may prove more fruitful.

5. One of the most promising, but perhaps understudied, theoretical approaches to demonstrate coherent belief systems is Cultural Theory. Cultural Theory measures of belief systems regularly outperform ideology, partisanship, and traditional demographic measures in predicting individual policy opinion. See Kahan and Braman (2006) for an overview and summary of findings.

6. We argue that this mechanism is primarily exogenous, although not exclusively so, because public opinion punctuations may erupt from within a particular subsystem, rippling out. In such a case, the subsystem in question would become the epicenter of this mechanism, identifying an endogenous origin of the punctuation—at least to that subsystem. Furthermore, we are also aware that this concept seems very familiar to the ACF’s “exogenous shocks.” However, the key difference to note is that salience disruption operates across subsystems and not simply in relation to one, as is typically studied in traditional ACF scholarship.

7. There is of course a large literature on diffusion of innovations and policy adoption that attempts to account for the spread of public policies (see, e.g., Berry & Berry, 2007; Rogers, 1983). Additionally, we recognize that our conception of policy dimension-shift is similar to the policy image conception offered by Baumgartner and Jones (1993). However, the primary difference between our mechanism of change and punctuated equilibrium (PE)’s (as well as other diffusion explanations), is the presence of a testable causal driver in the model. Whereas PE explains positive feedback in terms of an ambiguous form of diffusion (Baumgartner & Jones, pp. 16–17; True et al., 2007, pp. 160–61), we conceive of positive feedback as driven by purposive actor behavior. That is, while most accounts attribute innovation to linkages within networks, we argue that innovation is purposive, and is undertaken by policy entrepreneurs seeking to win advantage in subsystem policy debates.

8. Again, we would like to emphasize the malleability of this framework. Many approaches to message structuring, ranging from narrative (McBeth, Shanahan, & Jones, 2005) to prospect theory (Tversky & Kahneman, 1986) may be appropriately merged with heresthetics, provided the model is structured to emphasize the strategic behavior of actors.

9. An alternative form of linkage would consist of the movement of ideas, information, and arguments pertaining to policy dimension shifts as entrepreneurs scan the content of potentially linked sub-
systems for potent ingredients for their advocacy efforts. Such movements may require no direct contact among entrepreneurs, although surely such contact would facilitate the linkage. This process is similar to that characterized in the policy diffusion literature (e.g., Berry & Berry, 2007), although here we are concerned with the transmission of policy ideas and arguments, rather than policies per se.

10. Given the preliminary uncertainty in the trans-subsystem model regarding causality and the proper categorization of variables as exogenous and endogenous, vector autoregression may also be an especially useful tool in analyzing trans-subsystem relationships. See Freeman, Williams, and Lin (1989) for an overview of this method.

11. We do not intend to provide a complete overview of network analysis. We emphasize the relevant linkages between network methodology and a trans-subsystem approach. For an overview of network analysis, we guide the readers to Knoke and Yang (2008) and Scott (2002).

12. The second assumption of network analysis states that the strength and frequency of actor contacts leads to better information. We do not share that assumption and opt for the usage of the term “more” in lieu of “better.” We feel that the former encapsulates both strength and frequency, in that relational strength is likely to make the relationship more salient, while frequency will simply increase the quantity of the relational content. Moreover, the term “more” does not carry the normative baggage of “better,” and as such is easier to operationalize and quantify.


14. The finite nature of attention, and the implication that salience of one issue comes at the expense of another, extends beyond public opinion to institutions such as Congress and bureaucratic agencies. May, Workman, and Jones (2008) point to the limits of institutions in handling information as a critical constraint within the policy process.

15. See Fleagle (1971) for an overview of the early meteorological positions on climate change.

16. Interestingly, many of the electric utilities within the subsystem are conflicted, given that they operate both coal- and nuclear-powered generators.

References


