

Re-Visiting the New Orthodoxy of Policy Dynamics: The Dependent Variable and Re-Aggregation Problems in the Study of Policy Change

- Michael Howlett, Simon Fraser University and Ben Cashore, Yale University¹

Abstract:

The new orthodoxy in studies of policy dynamics, including those of Baumgartner and Jones, Sabatier and Jenkins-Smith, and Hall, is that policy change occurs through a homeostatic process. "Perturbations" occurring outside of an institutionalized policy subsystem, often characterized as some type of societal or political upheaval or learning, are critical for explaining the development of profound and durable policy changes which are otherwise limited by 'endogenous' institutional stability. These homeostatic assumptions, while useful for assessing many cases of policy change do not adequately capture the historical patterns of policy development found in many sectors. The roots of this problem are traced back to the origins of the new orthodoxy in comparative policy research whereby different levels (orders) of policy-making have been incorrectly juxtaposed, providing a parsimonious, but sometimes empirically incorrect, view of policy change. Revising existing taxonomies of policy levels provides a superior identification of the processes of change, and uncovers more than one mechanism through which significant policy change can occur. Three of these alternative mechanisms - a "neo-homeostatic" one in which paradigmatic changes occur through endogenous shifts in goals; a 'quasi-homeostatic' in which exogenous factors influence changes in objectives and settings; and a 'thermostatic' one in which durable policy objectives require that settings adapt to exogenous changes - are discussed.

1. The Contemporary Study of Policy Dynamics: Moves Towards the Development of a New Orthodoxy in the 1990s.

The contemporary study of policy dynamics owes a broad debt to two studies which appeared 30 years apart: Charles Lindblom's 1959 work on incrementalism and Peter Hall 1989 study of policy paradigms. Both authors worked in a synoptic fashion, utilizing the insights of other scholars into aspects of politico-administrative behaviour - in Lindblom's case Herbert Simon's (1957) insights into organizational behaviour and in Hall's case Thomas Kuhn's (1962) ideas about the history of scientific advance - to propose and refine the notion that general patterns of policy development could not only be identified but predicted.

Hall's work served to break a long-term orthodoxy in studies of policy change dominated by Lindblom-inspired incrementalism, one which argued that a single type of policy dynamics – marginal increments from the status quo – characterized almost all instances of public policy change (Hayes 1992; Howlett and Ramesh 2003). Since Hall's identification of a second pattern of change – the broad 'paradigm' shift - scholars studying public policy dynamics have been involved in a 20 year process of attempting to reconcile the two patterns and their inter-relationships. This period has now witnessed the emergence of a new 'post-incremental' orthodoxy as policy scholars have generally accepted the idea borrowed from paleo-biology (Eldredge and Gould 1972) and first put forward in the context of policy dynamics by

¹ Michael Howlett, Burnaby Mountain Professor, Department of Political Science Simon Fraser University, Burnaby, British Columbia, Canada V5A 1S6, howlett@sfu.ca; Ben Cashore, Professor, School of Forestry and Environmental Studies, Yale University, New Haven, CT, USA 06511-2104, benjamin.cashore@yale.edu

Baumgartner and Jones in 1991 that periods of marginal adaptation and revolutionary transformation are typically linked in a ‘punctuated equilibrium’ pattern of policy change.

Research undertaken during this period has involved scholars in three related projects designed to understand better how incremental and paradigmatic patterns of policy change are related to each other. First, they have been interested in understanding exactly how longstanding policies which have tended to develop incrementally can become “punctuated” and shift toward a new “equilibrium” (Baumgartner and Jones 1991, 1993, 2002), after which policy-making, though of a different content, settles back into familiar incremental patterns. Second, they have been involved in investigating the manner in which enduring institutions structure policy dynamics, creating the “musts, mayes, and must nots” of policy development (Clemens and Cook 1999; Steinmo, Thelen et al. 1992). Thirdly, and relatedly, they have focused on understanding how changes in policy subsystems (Sabatier 1988; Hall 1993) interact with institutional characteristics and serve to, respectively, constrain and facilitate overall patterns of policy development.

The results of such efforts have been fruitful. The discipline now has a much stronger understanding about factors such as legislative “attention spans”, “policy windows”, and alterations in subsystem beliefs and membership that can result in certain issues coming to the fore on policy agendas, precipitating change by shaping what subsystem members deem to be appropriate types and modes of policy-making (Baumgartner and Jones 1993, 2002; Hall 1989; Kingdon 1995; Leach and Sabatier 2005). The field also has a much better understanding of the role played by macro, meso and micro-institutions, formalization of issue discourses, and routinization of political and administrative affairs in shaping the mobilization of actors and restraining change in policy agendas and processes (Weaver and Rockman 1993; Deeg 2005; Thelen 2003 and 2004). The well documented self-reinforcing, “path-dependent” effects of institutionalization on policy-making (Hacker 2004; Mahoney 2000; Pierson 1993, 2000; Kay 2006; Howlett and Rayner 2006) have promoted the idea that paradigmatic policy change, given the role played by policy subsystems in this process, requires institutional de-stabilization through some kind of exogenous ‘shock’.

While alluring as a synthetic construction with the potential for great explanatory power in many empirical instances, most elements of the new orthodox punctuated equilibrium model have not been fully tested or proven (John and Margetts 2003). In what must be worrisome for followers of the new orthodoxy, some recent longitudinal studies have not found evidence of the exogenously-driven change processes typically associated with it (Cashore and Howlett 2007; Coleman, Skogstad and Atkinson 1996).¹ In these cases, researchers have found, dramatic policy change took place in the *absence* of institutional change and involved a more complex pattern of linkages and change among the levels or orders of policy identified by Hall. Cashore and Howlett (2007), for example, found paradigmatic change in US Pacific Northwest forest policy making to have occurred in a process in which existing institutions prompted paradigmatic changes in logging practices, ‘thermostatically’, in order to protect endangered species (Cashore and Howlett 2006; Cashore and Howlett 2007). Similarly, Coleman, Skogstad and Atkinson’s studies of agricultural policy changes in the EU, Canada and Australia over a two decade period revealed a pattern in which cumulative incremental changes in policy settings and instruments led, gradually, to paradigmatic change (Skogstad 1998; Coleman, Skogstad and Atkinson 1996). Both types of seemingly anomalous findings prompt the need for a reassessment of the foundations of the now prevailing orthodox view of policy dynamics.

This suggests either that some elements of the model have been misstated and/or that more than one overall model or process of policy dynamics exists and is at work in different policy-making circumstances (a possibility suggested by Mortensen, 2005).

2.0 Re-Visiting the Foundations of the New Orthodoxy

In re-examining the present orthodoxy it is important to note the four important methodological, epistemological, and causal elements of this model which have emerged from research over the last two decades. These are:

- First, there is widespread acceptance that any analysis of policy development must be historical in nature and cover periods of years or even decades or more (Sabatier 1993).²
- Second, it has generally been agreed that political institutions and their embedded policy subsystems act as the primary mechanisms of policy reproduction (Botcheva and Martin 2001; Clemens and Cook 1999; Howlett and Ramesh 2003).
- Third, “paradigmatic” change, a process in which there is a fundamental realignment of most aspects of policy development, is generally understood to occur only when the policy institutions themselves are transformed. In the absence of such processes any policy changes are hypothesized to follow “incremental” patterns (Deeg 2001; Genschel 1997).
- Fourth, many scholars studying policy dynamics agree that paradigmatic transformations or ‘punctuations’ usually occur due to the effects of “external perturbations” that cause widespread disruptions in existing policy ideas, beliefs, actors, institutions and practices (Smith 2000; Thelen 2003 and 2004; Sabatier and Jenkins-Smith 1993).

Taken together, these elements provide the basis for the current ‘orthodox’ view of policy dynamics: that is, (1) an expectation of a typical set of stability processes (path dependent institutionalization) in ongoing policy deliberations; (2) the expectation of a typical pattern of policy change (‘punctuated equilibrium’) resulting from the break-down of an institutionalized ‘policy monopoly’; and (3) a typical explanation for why this occurs (alteration in subsystem beliefs and membership usually owing to some type of societal ‘perturbation’).

The first and second raise several methodological concerns for scholars interested in policy dynamics; especially whether or not a lengthy period of time must elapse before the direction of policy change can be discerned, and determining the exact mechanisms through which institutions affect policy outcomes (and vice versa). More problematic are the third and fourth postulates, drawn from quite selective case and comparative studies on budgetary and economic policy-making, as they have difficulty explaining other sectors and cases. To address these challenges, we must revisit existing efforts to classify policy, and to characterize its change processes.

2.1. Hall’s Formulation: The Basis of the Current Orthodoxy and Its Problems

Peter Hall’s (1993) effort is undoubtedly the clearest single statement of the current orthodox position on policy dynamics and is the model and classification of policy change most often cited in the literature and applied in empirical studies.³ Hall’s work appropriately challenged the dominant view in existing scholarship that tended to conflate all the elements of a “policy” into a single dependent variable (Hecl 1976, Rose 1976) and to argue that all change was incremental in nature. Drawing on divergent cases of economic policy development in Great

Britain and France, Hall argued that distinguishing between the means and ends of policymaking and between abstract and concrete policy decisions was necessary to gain new insights into processes of policy stability and development.

Such an approach, for Hall, revealed three principal elements or components of a policy which, he argued, could change at different rates (small scale, typical, incremental and larger-scale, rarer, paradigmatic form) with different consequences for overall policy dynamics. “*First order*” changes occurred when the calibrations of policy instruments, such as increasing the safety or automobile emissions requirements, changed within existing institutional and instrument confines. “*Second order*” changes involved alterations to dominant types of policy instruments utilized within an existing policy regime, such as switching from an administered emission standard to an emissions tax. “*Third order*” changes involved shifts in overall abstract policy goals such as, in the pollution example, the 1990s shift in many countries from a focus upon *ex post* end-of-pipe regulation to *ex ante* preventative production process design. More significantly, Hall linked each change process to a different specific cause agent and to a specific overall pattern of ‘punctuated equilibrium’ policy dynamics. In his view first- and second-order changes were typically incremental and usually the result of activities endogenous to a policy subsystem while third-order changes were paradigmatic and occurred as anomalies arose between expected and actual results of policy implementation. The events triggering anomalies and the response to them on the part of policy-makers (such as contestation within a policy community on the best course of action to pursue, or the development of new ideas about policy problems and/or solution) were linked to exogenous events, especially societal policy learning

This model of change, which captures the current punctuated equilibrium orthodoxy is what cybernetic theorists referred to as a ‘*homeostatic*’ one; that is, one in which positive and negative feedback mechanisms allow a new equilibrium to be reached after stable system parameters have been altered by outside forces (Steinbruner, 1974). This change process involves a system which, like a spinning top, is constantly undergoing some kinds of (incremental) changes, but remains in one place (equilibrium) until an outside force (a foot, for example, in the case of the spinning top analogy) moves it to a new location where, after this “punctuation,” a new equilibrium is established (Steinbruner 1974; Mertha and Lowry 2006). Without exogenous shocks, in Hall’s model, it would be expected that existing policy elements would tend to arrange themselves in a self-perpetuating or equilibrating order, allowing (unspecified but incremental) changes in settings and instruments to occur but without altering policy goals.

The recent analyses of long-term policy change in areas such as agricultural and natural resource policy-making cited above, question the universality of this patterns and hence challenge the last two arguments in the now prevailing orthodoxy on the nature of policy dynamics. Revisiting the existing literature on policy change, a process justified given its inconsistency with these empirical studies, reveals two problems that require the reformulation of two of the basic building blocks upon which the current orthodoxy was constructed. First, existing taxonomies designed to measure policy conflate very different forms or elements of policy. Second, and related, classifications of the types of changes different policies can, and do, undergo has been both underdeveloped and limited. Failure to address these problems resulted in several erroneous conclusions being drawn by Hall and others about the factors underlying policy dynamics.

3.0. Measuring the Dependent Variable: The Need to Precisely Disaggregate Different Elements of Policy in Order to Construct Accurate Models of Policy Dynamics

The first problem with the current orthodoxy which must be rectified concerns the widely accepted model of policy composition used to describe historical patterns of policy development. This is the ‘dependent variable problem’ uncovered by research into social and welfare policy

change (Green-Pedersen 2004; Kuhner 2007; Knill 2001). As Green (2004) put it in his work on social welfare policy change:

It is clear that the dependent variable problem is crucial for the entire debate, and that disagreement about the dependent variable is a major obstacle for cumulative knowledge about welfare state retrenchment... To put it bluntly, the debate about explanations of variations in retrenchment cannot move beyond the stage of hypotheses before the dependent variable problem has been addressed, and the same goes for the debate about welfare state persistence or change. Addressing the dependent variable problem should have high priority within the retrenchment literature (p. 4).

Similarly, Paul Pierson (2001) has argued that “it is difficult to exaggerate” the obstacle the dissensus over the definition, operationalization and measurement of policy change creates for comparative research and theory construction into policy dynamics.

To date, the operationalization and measurement of the dependent variable in studies of policy dynamics - “policy change” – based mainly on Hall’s ‘three order’ model, has led many scholars to inadvertently conflate distinct change processes present in specific elements of policy. Uncovering these “hidden” and more complex patterns of policy development challenges the way most policy scholars measure and classify overall policy dynamics as either “paradigmatic” or “incremental” (Howlett and Ramesh 2002; Lindner 2003; Lindner and Rittberger 2003).

3.1. An Improved Model of Policy Composition

Halls’ work was path breaking in its linking of different overall policy development processes to changes in the order or level of policy in flux. Still, this initial conceptual effort at classification requires re-calibration in the light of his own logic, as well as in light of the empirical evidence gathered in many cases of policy change analyzed since his work was first published.

That is, according to Hall’s own emphasis on distinguishing abstract or theoretical/conceptual goals from specific programme content or objectives, and operational settings or calibrations, along with his distinction between the aims or “ends” of policy and its actual policy requirements (“means”), it is possible to discern six, rather than three, policy elements that can undergo change (see Figure 1).

The implication of this taxonomy is that every “policy” is in fact a more complex regime of ends and means-related goals (more abstract), objectives (less abstract), and settings (least abstract) than was suggested by the use of Hall’s original de-composition and definition of the elements of policy into three ‘orders’. Paying attention to these regime differences, and how each element changes or remains stable over long periods of time, results in a much more complex picture of policy dynamics than usually found in the existing literature derived from the orthodox model (Lieverink 2006).⁴

Reconceptualizing the number and type of policy elements found in Hall’s work has serious consequences for his (and the current orthodoxy’s) linking of policy elements to specific drivers of policy change and for the consideration of the number and type of possible overall patterns of policy regime change. In particular, two implications result. First, the links between policy components and endogenous and exogenous sources of policy change are more complex than Hall suggested (Bannink and Hoogenboom 2007). Second, existing classifications of “paradigmatic” and “incremental” policy development must be revisited so that we can better capture the complex interplay of change processes among the six different policy components. That is, in addition to distinguishing six different levels of policy, which can be used to generate more nuanced descriptions of historical patterns of policy development, it is equally necessary

that the proper classification tools be available to assess the degree and overall type of policy change found in any such description (Kuhner 2007).

Figure 1 - A Modified Taxonomy of Policy Components Following Hall
(Cells contain examples of each measure)

		<i>High Level Abstraction</i>	<i>Policy Content</i>	<i>Specific On-the-Ground Measures</i>
			<i>Programme Level Operationalization</i>	
<i>Policy Ends or Aims</i>	GOALS What General Types of Ideas Govern Policy Development? (e.g. environmental protection, economic development)	OBJECTIVES What Does Policy Formally Aim to Address? (e.g. saving wilderness or species habitat, increasing harvesting levels to create processing jobs)	SETTINGS What are the Specific On-the-ground Requirements of Policy (e.g. considerations about the optimal size of designated stream-bed riparian zones, or sustainable levels of harvesting)	
Policy Focus				
<i>Policy Means or Tools</i>	INSTRUMENT LOGIC What General Norms Guide Implementation Preferences? (e.g. preferences for the use of coercive instruments, or moral suasion)	MECHANISMS What Specific Types of Instruments are Utilized? (e.g. the use of different tools such as tax incentives, or public enterprises)	CALIBRATIONS What are the Specific Ways in Which the Instrument is used? (e.g. designations of higher levels of subsidies, the use of mandatory vs voluntary regulatory guidelines or standards)	

Source: Modified from Cashore and Howlett (2007)

3.2. Characterizing Change Patterns the Dependent Variable Undergoes: Distinguishing Possible Patterns of Policy Development Based on More Accurate Models of Policy De-Composition

The effort to better distinguish possible patterns of policy development sensitive to a model with six regime elements rather than three requires revisiting widely accepted assumptions within policy studies that originated in Simon's (1957) and Lindblom's (1959) path-breaking works on the subject of satisficing and incremental policy-change. The general idea that emerged from these articles, which have influenced generations of scholars, including Hall, is that incremental change is associated with marginal changes in policy means and ends is treated as being synonymous with a pattern of relatively long-lasting policy stability (Bendor 1995; Hayes 1992). Paradigmatic change, on the other hand, has been treated as an abnormal, atypical,

relatively unstable, and usually short-lived process associated with changes in policy ends (Sabatier 1988; Baumgartner and Jones 1991 and 2002; Lustick 1980). The development of “punctuated equilibrium” models underlined the importance of understanding not just incremental or paradigmatic policy processes, per se, but also the manner in which these two types of change are linked together and the propensity different sectors, issue areas, or policy subsystems have to undergo these processes at different points in time (Baumgartner and Jones 2002).

Applying such an appreciation of policy dynamics, however, requires both a clear definition of what constitutes ‘incremental change’ so that it can be distinguished from ‘paradigmatic’, and proof that these two modes of change are the only ones possible in any given policy area. But, as has been pointed out for some time, neither a clear definition nor an exhaustive taxonomy of change types currently exists so that both incremental and paradigmatic change remain under-specified entities (Berry 1990; Bailey and O’Connor 1975; Kuhn 1974; Capano 2003).

An example of the problems encountered to date with respect to defining and classifying modes of change can be found in Durant and Diehl’s (1989) work which followed paleobiological practice in arguing that policy change types could be distinguished according to their *mode* (incremental versus paradigmatic) and speed or *tempo* (rapid versus slow) (see also Hayes 1992). This (see Figure 2 below) generated four distinct types of change:

FIGURE 2: A Basic Taxonomy of Policy Change by Mode and Speed
(cells contain typical ‘modes’ of change)

Mode of Change	Tempo or Speed of Change	
	<i>Fast</i>	<i>Slow</i>
<i>Paradigmatic</i>	Classic Paradigmatic	Gradual Paradigmatic
<i>Incremental</i>	Rapid Incremental	Classic Incremental
Source: Adapted from Durant and Diehl 1989		

Such formulations are useful but this specific method of classifying types of change is problematic in that (1) it includes the same concept (mode of change) as both a dependent and an independent variable; and (2) in doing so it ignores the significant dimension of the *directionality* of changes as opposed to simply a concern for speed or rapidity. That is, what is most important is not the “size” of moves away from the status quo over time per se, but whether these changes are *cumulative*, i.e., leading away from an existing equilibrium toward another, or whether they represent a fluctuation consistent with an existing policy equilibrium (on directionality see Nisbet 1972). Reconceptualizing modes of policy change as the resultant of the interplay of tempo and cumulative directionality provides a superior model of policy dynamics to that found in earlier work focusing on mode and tempo.

3.3. Transcending the Current Orthodoxy: Thermostatic, Neo- and Quasi-Homeostatic versus Homeostatic Models of Policy Change

Advancing the study of policy dynamics beyond the current orthodoxy requires a new taxonomy of policy change processes which takes the criteria of directionality seriously in re-aggregating shifts in specific policy elements. The homeostatic model, as suggested above, is only one possible overall model or pattern of policy change (Mortensen 2005). Other arrangements of system elements and change drivers exist and should not be ruled out *a priori* as appropriate templates for the forms of policy dynamics found in specific sectors or issue areas. For example, one obvious such alternative would be a Hall-type regime, but where changes in goals are driven endogenously in a process of gradual paradigmatic change or what might more accurately be referred to as “progressive incrementalism.” Empirical evidence for this “*neo-homeostatic*” model can be found in Coleman et al’s 1996 work on agricultural policy change and in Capano’s 2003 study of Italian administrative reform where small-scale changes in policy settings built up over the years until the origins of the overall policy were unrecognizable – in the agriculture case through the alteration of the level of subsidies, and in the Italian administrative case through variations in hiring and personnel policies.

This variant on the homeostatic model does not in anyway exhaust the number of possible overall patterns of change. Others would include a “*quasi-homeostatic*” pattern in which goals are stable but where exogenously driven changes in end- or means-related objectives can cause paradigmatic shifts to occur. This was what appeared to happen, for example, in welfare reform driven by international organizations or influenced by “lesson-drawing” (Lee and Strang 2006; Rose 1991; Ramesh and Howlett 2006) in which efforts to re-order welfare programs to make them more efficient and market oriented resulted in changes in policy goals (from ‘welfare’ to ‘workfare’). Finally, as pointed out above and has been observed in the case of US Pacific Northwest forest policy, a ‘*thermostatic*’ model (Buckley 1968; Gell-Mann 1992) also exists in which goals are set broadly enough to allow, or simply do not figure in, paradigmatic change driven endogenously by major alterations in end-related objectives and settings (Wlezien 1995; Cashore and Howlett 2007).⁵ In the PNW forestry case durable objectives can create an institutionalized, “logic of appropriateness” (March and Olson 2004) in which policy settings are likely to follow a classic incremental pattern of development until such time a built-in thermostatic mechanism is “tripped,” resulting in classic paradigmatic change through changes in policy settings and objectives.⁶ The nature of these overall patterns and their relationship to the exogenous or endogenous origins of, and the key policy element assumed to lead, change, is set out in Figure 3.

FIGURE 3: Basic System Possibilities and Significant/Paradigmatic Change Processes
(cells contain general system type and policy change pattern)

	Policy Element Leading Change		
	<i>Change in Abstract Ideas</i>	<i>Change in Programmatic Objectives</i>	<i>Change in On-the-Ground Specifications</i>
<i>Ends</i>	Classic (I) Homeostatic “ <i>Punctuated Equilibrium</i> ”	Thermostatic “ <i>Planned Paradigmatic</i> ”	Neo-Homeostatic “ <i>Gradual Paradigmatic</i> ”
<i>Means</i>	Classic-Homeostatic (II) “ <i>Instrumental Policy Learning</i> ”	Quasi-Homeostatic (II) “ <i>Instrument Objectives Lesson-Drawing</i> ”	Neo-Homeostatic (II) “ <i>Gradual Paradigmatic</i> ”

4. Conclusion

Three findings and recommendations emerge from this analysis for current and future studies of policy change. The first is that scholars must be aware of the ‘dependent variable’ problem in studies of policy dynamics must develop taxonomies that disentangle the policies they are measuring and describing (Mortensen 1995; Robinson and Caver 2006; Robinson, Caver, Meier, O’Toole 2007). Failing to distinguish between different levels of policy can improperly juxtapose several distinct types of policy development and present a misleading picture of the actual pattern of change present in an empirical case.

Second, and relatedly, assessments of policy dynamics must take the “direction” of change into account. That is, rather than focus on the ‘mode’ of change in assessing possible change types, they should distinguish policy developments that move slightly in different directions over time but never deviate much from the status quo (policies in equilibrium), from those that move in the same (new) direction over time (cumulative change) (Deeg 2001; Goldstone 1998; Pierson 2000).

Third, broad-based theories of institutional and policy change need to be careful in attributing exogenous or endogenous sources of policy development. Path-breaking work by Hall on homeostatic models linking exogenous change in goals to changes in end and means-related objectives and settings may need to be modified to take into account both the possible endogeneity of change processes and the different institutional structures that can permit change to occur in other ways: for example, through neo- or quasi-homeostatic means or in a thermostatic fashion (Braun and Benninghoff 2003; Daugbjerg 1997 and 2003).

In summary, the reconceptualization of the ‘dependent variable’ in studies of policy dynamics undertaken above, and the subsequent identification of six levels of policy, and four patterns of historical policy development, has helped to uncover additional overall patterns of policy development often elided by the current punctuated equilibrium orthodoxy on policy change. While more research is required in order to determine if other patterns exist, and which patterns prevail in different circumstances and why, this is an essential re-conceptualization if studies of policy dynamics are going to continue to progress.

Endnotes

¹ In a related critique, Hacker (2004) found that studies finding significant changes policy stasis failed to assess the changing impacts of institutional stability when the problem the policies were seeking to address were undergoing significant changes.

² This observation is explicitly raised in every project by Baumgartner and Jones on punctuated equilibrium and in Paul Sabatier and Hank Jenkins-Smith’s work on “advocacy coalitions,” as well as being implicit in the broad field of historical institutionalism (Sabatier 1988 and 1993; Sabatier and Jenkins-Smith, Mahoney 2000; Lindner and Rittberger 2003).

³ Baumgartner and Jones many works on the subject provided the empirical backing required to support the idea that incremental policy making was in fact routinely punctuated by dramatic change. Their focus on budgetary policy was not matched by the development of generalizable taxonomy for measuring policy dynamics in other spheres (Baumgartner and Jones 1993 and 2002; Mortensen 2005; John and Margettes 2003).

⁴ For similar models based on a similar critique of Hall, see Daugbjerg (1997) and Smith (2000). These six categories are inspired from much of the work on applied policy analysis that teach students to break policy down into their “goals,” “operationalized” objectives, and specific criteria and who likewise take pains to distinguish policy instruments from “on-the-ground” policy requirements (Weimer and Vining

1999). Such a distinction is also consistent with the work of Howlett (2000) who has hypothesized and empirically demonstrated the important and independent causal impacts of process (means) based policy instruments. Similarly, Sabatier's ACF distinguishes different causal influences on different measures of policy, theorizing that "core values" or ideas behind policy can rarely change in the absence of societal transformation, but that "secondary belief systems" can lead to changes in what we are defining as "means-oriented" policy objectives and policy settings, as advocacy coalitions undergo "learning" about causal mechanisms within the policy process (Sabatier 1988).

⁵ In the Pacific Northwest forest policy case, formalized policy objectives were very durable and survived changing or fluctuating policy goals. This type of change process involves a system in which policy objectives obtain "institutional status" and prevent or control the amount of change possible in policy settings. Whether such institutionalized objectives will prevent or require changes in policy settings depends on their internal logics. (Cashore and Howlett 2006 and 2007).

⁶ Clemens and Cook's (1999) work shows that "institutions" can be seen as involving formal and informal rules, policies and standard operating procedures that bind and guide behavior. The "binding" aspect is important because not all institutions, even those emanating from constitutional sources, are enduring. They can be, rather "soft" institutions (Abbott and Snidal 2000; Giuliani 1999; Pollock, Lilie and Vittes 1993) that quickly adapt to outside pressure and allow significant changes to occur in policy outcomes.

References

- Abbott, Kenneth W., and Duncan Snidal. 2000. "Hard and Soft Law in International Governance." *International Organization* 54 (3): 421–56.
- Bailey, J. J., and R. J. O'connor. 1975. Operationalizing incrementalism: Measuring the muddles. *Public Administration Review* 35, : 60-66.
- Bannink, Duco, and Marcel Hoogenboom. 2007. Hidden change: Disaggregation of welfare regimes for greater insight into welfare state change. *Journal of European Social Policy* 17, (1): 19-32.
- Baumgartner, Frank, and Bryan Jones. 1991. "Agenda Dynamics and Policy Subsystems." *The Journal of Politics* 53 (4): 1044–74.
- Baumgartner, Frank, and Bryan Jones. 1993. *Agendas and Instability in American Politics*. Chicago: University of Chicago Press.
- Baumgartner, Frank R., and Bryan D. Jones, eds. 2002. *Policy Dynamics*. Chicago: University of Chicago Press.
- Bendor, Jonathan. 1995. "A Model of Muddling Through." *American Political Science Review* 89 (4): 819–40.
- Berry, W. T. 1990. The confusing case of budgetary incrementalism: Too many meanings for a single concept. *Journal of Politics* 52, : 167-196.
- Botcheva, Liliana, and Lisa L. Martin. 2001. "Institutional Effects on State Behaviour: Convergence and Divergence." *International Studies Quarterly* 45 (1): 1–26.
- Braun, Dietmar, and Martin Benninghoff. 2003. "Policy Learning in Swiss Research Policy: The Case of the National Centres of Competence in Research." *Research Policy* 32: 1849–63.
- Buckley, Walter. 1968. "Society as a Complex Adaptive System." In *Modern System Research for the Behavioural Scientist*, ed. W. Buckley. Chicago: Aldine Publishing Company, pp. 490-513
- Capano, G. 2003. Administrative traditions and policy change: When policy paradigms matter, the case of Italian administrative reform during the 1990s. *Public Administration* 81, (4): 781-801.
- Cashore, B., and M. Howlett. 2006. Behavioural thresholds and institutional rigidities as explanations of punctuated equilibrium processes in pacific northwest forest policy dynamics. In *Punctuated equilibrium and the dynamics of U.S. environmental policy.*, ed. R. Repetto, 137-161. New Haven: Yale University Press.
- Cashore, Benjamin, and Michael Howlett. 2007. Punctuating which equilibrium? understanding thermostatic policy dynamics in pacific northwest forestry. *American Journal of Political Science* 51, (3).

- Clemens, Elisabeth S., and James M. Cook. 1999. "Politics and Institutionalism: Explaining Durability and Change." *Annual Review of Sociology* 25: 441–66.
- Coleman, W. D., G. D. Skogstad, and M. Atkinson. 1996. Paradigm shifts and policy networks: Cumulative change in agriculture. *Journal of Public Policy* 16, (3): 273–302.
- Daugbjerg, Carsten. 1997. "Policy Networks and Agricultural Policy Reforms: Explaining Deregulation in Sweden and Re-regulation in the European Community." *Governance* 10 (2): 123–42.
- Daugbjerg, Carsten. 2003. "Policy Feedback and Paradigm Shift in EU Agricultural Policy: The Effects of the MacSharry Reform on Future Reform." *Journal of European Public Policy* 10 (3): 421–37.
- Deeg, Richard. 2001. "Institutional Change and the Uses and Limits of Path Dependency: The Case of German Finance." Max Planck Institute fur Gesellschaftsforschung MPIfG.
- Deeg, Richard. 2005. Change from within: German and Italian finance in the 1990s. In *Beyond continuity: Institutional change in advanced political economies.*, eds. Wolfgang Streeck, Kathleen Thelen. Oxford: Oxford University Press.
- Durant, Robert F. and Paul F. Diehl. 1989 "Agendas, Alternatives and Public Policy: Lessons from the U.S. Foreign Policy Arena." *Journal of Public Policy* 9 (2): 179–205.
- Eldredge, N., and S. J. Gould. 1972. Punctuated equilibria: An alternative to phyletic gradualism. In *Paleobiology.*, ed. T. J. M. Schopf, 82–115. San Francisco: Freeman, Cooper.
- Gell-Mann, Murray. 1992. "Complexity and Complex Adaptive Systems." In *The Evolution of Human Languages*, ed. J. A. Hawkins and M. Gell-Mann. Redwood City: Addison-Wesley, pp. 3–18.
- Genschel, Philipp. 1997. "The Dynamics of Inertia: Institutional Persistence and Change in Telecommunications and Health Care." *Governance* 10 (1): 43–66.
- Giuliani, Mark. 1999. "'Soft' Institutions for Hard Problems: Instituting Air Pollution Policies in Three Italian Regions." In *The Politics of Improving Urban Air Quality*, ed. W. Grant, A. Perl and P. Knoepfel. Cheltenham: Edward Elgar, pp. 31–51
- Goldstone, Jack A. 1998. "Initial Conditions, General Laws, Path Dependence, and Explanation in Historical Sociology." *American Journal of Sociology* 104 (3): 829–45.
- Gould, S. J., and N. Eldredge. 1977. Punctuated equilibria: The tempo and mode of evolution reconsidered. *Paleobiology* 3, (115–151).
- Green-Pedersen, Christoffer. 2004. The dependent variable problem within the study of welfare state retrenchment: Defining the problem and looking for solutions" *Journal of Comparative Policy Analysis* 6, (1): 3–14.
- Hacker, Jacob. 2001. *The Divided Welfare State*. New York: Cambridge University Press.
- Hacker, Jacob. 2004. "Privatizing Risk without Privatizing the Welfare State: The Hidden Politics of Social Policy Retrenchment in the United States." *American Political Science Review* 98 (2): 243–60.
- Hall, Peter. ed. 1989. *The Political Power of Economic Ideas: Keynesianism across Nations*. Princeton: Princeton University Press.
- Hall, Peter. 1993. "Policy Paradigms, Social Learning, and the State: the Case of Economic Policymaking in Britain." *Comparative Politics* 25 (3): 275.
- Hayes, Michael. 1992. *Incrementalism and Public Policy*. New York: Longman.
- Hecl, Hugh. 1976. "Conclusion: Policy Dynamics." In *The Dynamics of Public Policy: A Comparative Analysis*, ed. R. Rose. London: Sage, pp. 237–266
- Howlett, Michael. 2000. "Managing the "Hollow State": Procedural Policy Instruments and Modern Governance." *Canadian Public Administration* 43 (4): 412–31.
- Howlett, Michael. 2002. "Do Networks Matter? Linking Policy Network Structure to Policy Outcomes: Evidence from Four Canadian Policy Sectors 1990–2000." *Canadian Journal of Political Science* 35 (2): 235–67.
- Howlett, Michael, and M. Ramesh. 2002. "The Policy Effects of Internationalization: A Subsystem Adjustment Analysis of Policy Change." *Journal of Comparative Policy Analysis* 4 (3): 31–50.
- Howlett, M., and M. Ramesh. 2003. *Studying public policy: Policy cycles and policy subsystems*. Toronto: Oxford University Press.
- Howlett, Michael and Jeremy Rayner, 2006 "Understanding the historical turn in the policy sciences: A critique of stochastic, narrative, path dependency and process-sequencing models of policy-making over time, *Policy Sciences* 39(1) 1–18
- John, P., and H. Margetts. 2003. Policy punctuations in the UK: Fluctuations and equilibria in central government expenditure since 1951. *Public Administration* 81, (3): 411–432.

- Jones, Bryan D., Frank R. Baumgartner, and James L. True. 1998. "Policy punctuations: U.S. Budget Authority, 1947–1995." *Journal of Politics* 60 (1): 1–33.
- Jones, Bryan D., Tracy Sulkin, and Heather A. Larsen. 2003. "Policy punctuations in American political institutions." *American Political Science Review* 97 (1): 151–69.
- Kay, Adrian. 2006. *The dynamics of public policy: Theory and evidence*. Cheltenham: Edward Elgar.
- Kingdon, J. W. 1995. *Agendas, alternatives and public policies*. Boston: HarperCollins College Publishers.
- Knill, C. 2001. *The Europeanization of national administrations: Patterns of institutional change and persistence*. Cambridge: Cambridge University Press.
- Kuhn, T. S. 1962. *The structure of scientific revolutions*. Chicago: University of Chicago Press
- Kuhn, T. S. 1974. Second thoughts on paradigms. In *The structure of scientific theories.*, ed. F. Suppe, 459-482. Urbana: University of Illinois Press.
- Kuhner, Stefan. 2007. Country-level comparisons of welfare state change measures: Another facet of the dependent variable problem within the comparative analysis of the welfare state. *Journal of European Social Policy* 17, (1): 5-18.
- Leach, William D., and Paul A. Sabatier. 2005. "To Trust an Adversary: Integrating Rational and Psychological Models of Collaborative Policymaking." *American Political Science Review* 99 (4): 491-503
- Lee, C. K., and D. Strang. 2006. The international diffusion of public-sector downsizing: Network emulation and theory-driven learning. *International Organization* 60, (3): 883-909.
- Liefferink, Duncan. 2006. The dynamics of policy arrangements: Turning round the tetrahedron. In *Institutional dynamics in environmental governance.*, eds. Bas Arts, Pieter Leroy, 45-68. Dordrecht: Springer.
- Lindblom, Charles E. 1959. "The Science of Muddling Through." *Public Administration Review* 19 (2): 79–88.
- Lindner, Johannes. 2003. "Institutional Stability and Change: Two Sides of the Same Coin." *Journal of European Public Policy* 10 (6): 912–35.
- Lindner, Johannes, and Berthold Rittberger. 2003. "The Creation, Interpretation and Contestation of Institutions- Revisiting Historical Institutionalism." *Journal of Common Market Studies* 41 (3): 445–73.
- Lustick, Ian. 1980. "Explaining the Variability Utility of Disjointed Incrementalism: Four Propositions." *American Political Science Review* 74 (2): 342–53.
- Mahoney, James. 2000. "Path Dependence in Historical Sociology." *Theory and Society* 29 (4): 507–48.
- March, James G. and Johan P. Olsen. 2004. *The Logic of Appropriateness*. Oslo: University of Oslo Centre for European Studies.
- Mertha, Andrew C., and William R. Lowry. 2006. Seminal events and policy change in china, Australia and the united states. *Comparative Politics* 39, (1): 1-20.
- Mortensen, Peter B. 2005. "Policy Punctuations in Danish Local Budgeting." *Public Administration* 83 (4), pp. 931-950.
- Nisbet, Robert. 1972. "Introduction: The Problem of Social Change." In *Social Change*, ed. R. Nisbet. New York: Harper and Row, pp. 1-45.
- Pierson, Paul. 1993. "When Effect Becomes Cause: Policy Feedback and Political Change." *World Politics* 45 (4): 595–628.
- Pierson, Paul. 2000. "Increasing Returns, Path Dependence, and the Study of Politics." *American Political Science Review* 94 (2): 251–68.
- Pierson, Paul. 2001. Coping with permanent austerity: Welfare state restructuring in affluent democracies. In *The new politics of the welfare state.*, ed. Paul Pierson, 410-456. Oxford University Press: Oxford.
- Pollock III, Philip H., Stuart A. Lilie, and M. Elliot Vittes. 1993. "Hard Issues, Core Values and Vertical Constraint: The Case of Nuclear Power." *British Journal of Political Science* 23 (1): 29–50.
- Ramesh, M., and Michael Howlett. 2006. *Deregulation and its discontents : Rewriting the rules in Asia*. Cheltenham, UK ; Northampton, MA: Edward Elgar.
- Robinson, S. E., and F. S. R. Caver. 2006. Punctuated equilibrium and congressional budgeting. *Political Research Quarterly* 59, (1): 161-166.
- Robinson, Scott E., Flou'say Caver, Kenneth J. Meier, and O'Toole Jr., Lawrence J. 2007. Explaining policy punctuations: Bureaucratization and budget change. *American Journal of Political Science* 51, (1): 140-150.

- Rose, Richard. 1976. "Models of Change." In *The Dynamics of Public Policy: A Comparative Analysis*, ed. R. Rose. London: Sage, pp. 7-23
- Rose, R. 1991. What is lesson-drawing? *Journal of Public Policy* 11, (1*): 3-30.
- Sabatier, Paul. 1988. "An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein." *Policy Sciences* 21 (2): 129-68.
- Sabatier, Paul, and Hank Jenkins-Smith, eds. 1993. *Policy Learning and Policy Change: An Advocacy Coalition Approach*. Boulder: Westview Press.
- Sabatier, P. 1993. Policy change over A decade or more. In *Policy change and learning: An advocacy coalition approach.*, eds. P. A. Sabatier, H. C. Jenkins-Smith, 13-40. Boulder: Westview.
- Simon, Herbert A. 1957. *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization*. New York: MacMillan.
- Skogstad, G. 1998. Ideas, paradigms and institutions: Agricultural Exceptionalism in the European union and the united states. *Governance* 11, (4): 463-490.
- Smith, Adrian. 2000. "Policy Networks and Advocacy Coalitions: Explaining Policy Change and Stability in UK Industrial Pollution Policy." *Environment and Planning C: Government and Policy* 18 (1): 95-114.
- Steinbruner, John D. 1974 *The Cybernetic Theory of Decision: New Dimensions of Political Analysis*. Princeton: Princeton University Press
- Steinmo, S., K. Thelen, et al., Eds. 1992. *Structuring Politics: Historical Institutionalism in Comparative Analysis*. Cambridge Studies in Comparative Politics. Cambridge, Cambridge University Press.
- Thelen, Kathleen. 2003. "How Institutions Evolve: Insights from Comparative Historical Analysis." In *Comparative Historical Analysis in the Social Sciences*, ed. J. Mahoney and D. Rueschemeyer. Cambridge: Cambridge University Press, pp. 208-240.
- Thelen, Kathleen. 2004. *How institutions evolve: The political economy of skills in Germany, Britain, the United States and Japan*. Cambridge: Cambridge University Press.
- True, James L., Bryan D. Jones, and Frank R. Baumgartner. 1999. "Punctuated-Equilibrium Theory: Explaining Stability and Change in American Policymaking." In *Theories of the Policy Process*, ed. P. A. Sabatier. Boulder: Westview, pp. 97-116.
- Weaver, R. Kent, and Bert A. Rockman, eds. 1993. *Do Institutions Matter?* Washington: The Brookings Institution.
- Weimer, David L., and Aidan R. Vining. 1999. *Policy Analysis: Concepts and Practice, 2nd ed.* Englewood Cliffs, NJ: Prentice-Hall.
- Wlezien, Christopher. 1995. "The Public as Thermostat: Dynamics of Preferences for Spending." *American Journal of Political Science* 39 (4): 981-1000.
- Wood, Robert S. 2006. The Dynamics of Incrementalism: Subsystems, Politics, and Public Lands." *Policy Studies Journal* 34 (1): 1-16.