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Public Policy Formation and Implementation

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INTRODUCTION

This chapter introduces contemporary approaches to research on public policy formation and implementation developed by sociologists, political scientists, and interdisciplinary social scientists. We have taken this broad view because most of the major theories of public policy formation straddle disciplinary boundaries. While we are in favor of interdisciplinary policy scholarship, we also think that sociologists have a great deal more to offer theories of policy formation and implementation, which are currently dominated by political scientists and economists.

Many theories see policy formation as something that is, or ought to be, understood systematically in a theory-driven and hypothesis-testing fashion. In fact, theories that do not conform to this social science model are often criticized as mere 'metaphor', for being too general for advancing our understanding of policy in practice, or for failing to ground the theory inside a well-established framework of human behavior (Dowding 1995; Fischer 2003; Schlager 2007). This is the case, for example, with one of the most widely-known accounts of policymaking, known primarily as 'policy process theory'. This theory describes policy as a ladder or cycle of discrete stages such as agenda setting, problem formulation, decision-making, policy implementation and evaluation (Howlett, McConnell, & Perl, 2015; Lasswell, 1956; Sabatier & Weible, 2014). Each of these procedures include the means to accumulate and evaluate options to formulate policy, including public consultations, deliberation, economic forecasting, cost–benefit analysis, rubrics for policy alternatives, brainstorms, stakeholder analysis and so on (Turnpenny et al., 2015). For instance, agenda setting is a period for information gathering, deliberation with the public, and the appraisal of alternatives while policy implementation requires the allocation of budgets, enforcement of regulations and the management of programs (Gill & Saunders,

1992; Howlett & Rayner 2009; Howlett et al. 2014; Wildavsky 1979).

As a heuristic, these stages offer a rough sense of how the Weberian state influences the formation of policy. Weber argued that the bureaucracy gained its power through an impersonal approach to decision-making. Administrative members of the state and their process are 'strangers' to most citizens, yet they best understand the institutions constraining policy change at each stage (Blau 1964; Heclo 1977; Wilmoth 1986). They can use these constraints either to influence change or prevent it from happening. They can also provide established and trusted organizations with information resources that enable them to gain the upper hand in the policy-making process. Evidence, or claims appealing to evidence, mark the primary distinction between policies developed rationally and those based on 'proverbs' (Simon, 1946). This distinction can serve a rhetorical purpose in the political sphere, but does little to help the process of evaluating one alternative against another (Simon, 1946, 1997). Most importantly, the movement from one stage of the policy process to another always requires a decision by someone in a role of authority. For example, while the policy agenda-setting process is seen as a general period of information gathering, the end result is a formal agenda brought forward to government officials for discussion.

While policy process theory remains a mainstay in government orientation training programs, few scholars accept the view that it describes the policy process as it actually occurs in Western democracies (Nakamura 1987; Sabatier and Weible 2014). It is an idealized view of what the policymaking process *could* be like, not a good explanation of how it actually works. Unlike policy process theory, the work we review in this chapter is primarily concerned with capturing how things *actually* work. Typically, this means more complex models.

We have organized this chapter into two core sections. The first reviews the most influential theories of policy formation, which we have categorized as historical institutional, organizational, cultural/interpretive, and complex systems. Across these theories, the role of political interests, ideas, and evidence in policymaking is contested. We explore this in more detail in the second section, beginning with a discussion of research on evidence-based policymaking, the role of experts and expertise in democratic societies, and the national and international origins of policy ideas, priorities, and institutional structures.

DOMINANT THEORIES OF POLICY FORMATION

A First Wave of New Policy Formation Theories

In the early 1970s, theories of policy formation started breaking from the simplified policy process model by emphasizing the role of institutions and 'organized anarchies' in policymaking. This development was based in part on the observation that policymakers are rarely in a position to spend time collecting all available information and consulting all available interests prior to decision-making (Heclo, 1974; Lidman & Sommers, 2005; Padgett, 1980). Further, there was a recognition that the state increasingly relied on transfers to increasingly local jurisdictions to ensure effective implementation of policies, which drew questions about the imperviousness of 'iron triangles' – the trinity of political elites (members of Congress in the US), powerful interest groups, and the bureaucracy – in the formation of policy decisions at the federal level (Heclo, 1978; Overman & Simanton, 1986; Ripley & Franklin, 1984).

Those researchers focused on the realities of making choices within constraints, tended to recognize how policy workers in the real world required mental short-cuts, routines and metaphors to cope with the 'cognitive costs'

of decision-making (Coase 1937; Ingram and Clay 2000). 'Institutions' – durable systems of norms, rules and routines – became influential in the study of policy, emphasizing how policy actors borrow ideas from past practices or from those that have been successful in other jurisdictions (March & Olsen, 1989; Peters, Pierre, & King, 2005; Rhodes, 2006; Rose, 1991). 'New institutionalism' sought an expansion of Weber's understanding of the bureaucracy and formal division of labor towards a more complex array of behaviors driven by a series of 'fundamental factors', including access to resources, systems of morality and identity, organizational routines, and cultural norms (Ingram & Clay, 2000; March & Olsen, 1984; Ostrom, 1990). Although initially considered by many to be 'incoherent' (see March & Olsen, 1984), institutionalist concepts became essential to theories of state formation through the latter part of the twentieth century, with rational choice, historical institutionalism, and sociological institutionalisms being the most influential (Hall & Taylor, 1996; Schmidt, 2010).[1]

Another strand of early policy formation theories stressed the challenges that even powerful policy actors met in getting their ideas through the decision-making process. Cohen, March, and Olsen (1972) developed the famous 'garbage can' model, which argued that policymaking happens through the serendipitous exchange of ideas, where 'solutions may be linked to problems more by chance than by design' (Bendor, 2001, p. 188). Seeing policy as 'basically institutionally free' and 'social structure … treated as exogenous', the garbage can approach understands policy formation as largely informal and adaptive to circumstance (Olsen, 2001, p. 193; Sager & Rielle, 2013). Ideas about problems, solutions, leadership and even institutions are accepted as independent elements of the process occurring on their own, but with occasional moments of convergence based on timing (March & Olsen, 1989). Although later theories (especially the Multiple Streams and Advocacy Coalition Frameworks described below) do integrate this process into a more substantive theory, the garbage can model offers an important reminder that policy actors rarely adopt decisions that have taken account of all the available information at the right time and place. As Heclo (1974) describes it, the process of policy formation is fragmentary where people are involved in 'collective puzzling' in an environment of 'uncertainty' with people 'collectively wondering what to do' (pp. 305–6). Continuity and serendipity, institutions and ideas, stability and change are all paradoxically interspersed through policy formation theory in this early stage.

Historical Institutionalism

Early historical institutional theories of the state strongly emphasized the role of institutions over ideas, giving particular weight to past decisions. For historical institutionalists, policy actors see and understand the world in ways that are strongly constrained by path dependent processes (Pierson & Skocpol, 2002). Following Weber, many historical institutionalists believe that the development of institutions constrain public worldviews, thus producing a set of 'iron cages' that create a path for policymakers to follow. By 'iron cages' they mean that once established, institutions are notoriously difficult to change, thus creating an environment that reduces the available options to policy makers.

Reversing the logic of Weber's 'iron cage' somewhat, Pierson (2004) later suggested that path dependence occurs because policy actors gain positive feedback by keeping in line with past actions. Other interpretations of the path dependence thesis include hypotheses that the costs of building institutions makes policy actors reticent to change them and/or that political actors purposely design institutions to make them difficult to change for future regimes (Campbell, 2004). Thus policy change occurs through an evolutionary process and differences can be

observed through historical comparisons of institutional developments by two or more nation-states.

Historical institutionalists emphasize recurring patterns in the history of states. For instance, Skocpol, Ganz, and Munson (2000) noticed the surprising lack of change within the voluntary sector over the course of United States history, following a path that developed in much the same way as state institutions. Unlike arguments that portray the state as a wasteful authoritarian juggernaut and voluntary organizations as flexible and innovative source of democratic influence, Skocpol, Ganz, and Munson (2000) identify state institutions such as the US Postal Service and the Bill of Rights as essential sources for both coordination and competition in US society.

Hall and Taylor (1996) have recognized similar continuities related to ideas called 'paradigms' in monetarist economic reforms attempted by the Margaret Thatcher government in the UK (Hall, 1989, 1993). Hall defines a paradigm as 'a framework of ideas and standards that specifies not only the goals of policy and kind of instruments that can be used to attain them, but also the very nature of the problems they are meant to be addressing' (Hall, 1993, 279). Inspired by Kuhn's (2012) well-known work on scientific knowledge, Hall argues that policies that fall outside accepted paradigms are rejected until a transformational shift in worldviews redefines policy in a new form, upon which another set of accepted ideas will take hold.

While historical institutionalism provides a compelling argument for the formation of policy, it has been challenged on a number of fronts. First of all, like most historical approaches, historical institutionalism is much better at describing how policy changed in the past rather than offering helpful ways to predict how it might change in the future (Drezner, 2010). Also, by focusing on elements in policy development that have continuity over time, it spends too little time acknowledging the more difficult to capture patterns of ideas that make institutions possible. Béland (2005) suggests that policy ideas are embedded in paradigms, but also act as an important framing mechanism through which policies can be deemed acceptable to a population that has become used to the way policy has been implemented in the past. So while the influence of historical paths remains a compelling approach in policy theory, there are a number of theories that offer more flexible and prescient access to the way policies form within the nation-state (Béland, 2007, see also 2009).

Organizational Approaches

'Organization matters' is a central theme of Wilson's (1989) classic book, *Bureaucracy*. Understanding the organization of groups around social problems has become a major theme in the policy formation literature. Organizational approaches see policies as being formed within specialized 'domains' or 'subsets', variably described as sub-systems, networks, sub-domains, organizational networks and policy fields (e.g. Burstein, 1991; Laumann & Knoke, 1987). Many of these theories see policy subsystems in a stable equilibrium state until some important exogenous shock or new learning occurs, creating an environment for policy change (Birkland, 1998; Kingdon & Thurber, 1984; Sabatier, 1988). Following the historical institutionalists, organizationalists observe that policy actors prefer to make modest incremental changes based on negotiated adjustments among various actors in a process that (Lindblom, 1959) called 'muddling through'. This process, also called incrementalism or 'mutual adjustment' recognizes the degree of complex negotiation about the nature of problems and what to do about them, creating a tension that acts as a tether to substantive policy change.

Research on agenda setting is particularly focused on the idea that policymaking tends to be incremental, with occasional periods of rapid change. Punctuated equilibrium theory,

for example, attempts to explain shifts in attention from policy problem to policy problem over time by highlighting scarcity of attention among political actors. According to Jones and Baumgartner (2012), the theory 'was born of our unhappiness with policy process models that emphasized stability, rules, incremental adjustment, and 'gridlock' whereas we saw policy change as oftentimes disjoint, episodic, and not always predictable' (p. 1). Building from the idea that incrementalism aptly described most, but not all policy processes, Jones and Baumgartner (2012) borrowed from the observation in evolutionary biology that species tend to be in a period of stasis until subjected to rare events upon which evolutionary change will occur quite rapidly.

According to the theory, policy develops through subsystems of actors struggling to process information and set priorities. Deciding to act on some problems inevitably means ignoring others, creating 'policy friction' as resistence to change keeps attention away from a policy problem until it becomes a crisis. Policy punctuations or sudden increased attention to policy occurs as actors respond to the crisis (Jones & Baumgartner, 2005). These 'stick-slip' dynamics are suggested to be similar to tectonic plates formed in tension with each other until the pressure mounts and an earthquake occurs (Jones & Baumgartner, 2012). Among the most important consequences of this process of incremental policy change followed by puncutations is that 'cascades' form as sudden increased attention to a problem followed by a rapid government response creates feedback that in turn creates more attention to the problem, and thus more urgent policy development. The most commonly recognized example of this is the continual increase in budgets in the United States to deal with crime even while crime statistics have been steadily dropping (Jones & Baumgartner, 2005).

Adopting the garbage can model of institutional development, Kingdon and Thurber (1984) offers a similar theory of policy change by characterizing policy formation as 'primordial soup' of ideas that occasionally mix ways that are conducive to decision-making. Problems and their solutions ('policies') develop in different 'streams' of awareness, as do the resources and power that are required to put such ideas into action ('politics'). Each stream develops over time as policy entrepreneurs struggle to deal with the ambiguity of their circumstances (Zahariadis, 2007). The definition of ambiguity is key since, unlike uncertainty, more information does not resolve it, and may indeed cause it to increase. For example, the famous trolley problem where one must choose whether to kill one person and commit a crime but save a large number of people, or do nothing and by inaction kill the large group, is not resolved by knowing who the people are. This ambiguity can be observed through constantly shifting participants ('fluid participation'), unclear understanding of what people want ('problematic preferences'), and disputes about whose ideas best reflect the goals of a policy ('unclear technology') (Cohen et al., 1972; Howlett, 1998; Kingdon & Thurber, 1984).

In both punctuated equilibrium and multiple streams theories, attention-capturing events or government decisions proposing a direction for future policy will provide an opportunity for actors to converge on dealing with a particular problem (Birkland, 1998; Knoke, 2011; Sabatier & Weible 2007). This process of multiple streams meeting to form policy is facilitated and shaped by policy entrepreneurs, defined as 'well-informed and well-connected insiders who provide the knowledge and tenacity to help couple the 'streams'. They are 'surfers waiting for the big wave' more than powerful authorities (Cairney & Jones, 2015). Connecting Multiple Streams theories to cultural theories such as the Advocacy Coalition Theory (discussed later in this chapter), Mukherjee and Howlett (2015) identify policy entrepreneurs in the policy stream as members of 'epistemic communities' or groups of scientists or actors focused on identifying and understanding

significant social problems (Gough & Shackley, 2001; Haas, 1992). Entrepreneurs in the solutions stream are 'instrument constituencies' or actors who hold significant fidelity to a particular policy tool or set of tools (Mann and Simons, 2014; Mukherjee & Howlett 2015; Voß & Simons 2014).

While the policy streams approach puts the interests of policy entrepreneur at the heart of policy development, and the punctuated equilibrium approach identifies imperfect cognitive capacity as the main source of policy change, network approaches see actor beliefs, trust and resource relationships as the building-blocks of policy formation. Drawing from both quantitative (see Knoke, 2011; Wasserman & Faust, 1994) and qualitative (Bevir & Rhodes, 2003; Latour, 2005; Law, 2006; Marsh & Rhodes, 1992; Rhodes & Marsh, 1992) approaches, policy network theories contextualize actors and organizations in thick webs of relationships, for example exclusive 'policy communities' or more amorphous 'issue networks' outside the direct control of the state (Atkinson & Coleman, 1989; Rhodes, 1996). Perhaps the most important component of policy network theories, however, is that they illustrate the ways in which power can become concentrated in small groups or dispersed across departmental and/or organizational boundaries (Atkinson & Coleman, 1989). While access to resources and information are the key drivers of much network theory, as we shall see in the next section, networks can form based on systems of belief as well.

Cultural and Interpretive Approaches

Within the broad range of network approaches to understanding policy formation, two parallel schools identify coalitions as the primary source for the legitimization of policy: the Advocacy Coalition Framework (ACF) and the Discourse Coalition Framework (DCF). The former approach highlights policy environments that defy the rational approach to policy, by recognizing the tendency for some social problems to be 'wicked' in the sense that they cover the jurisdictions of several governments, have undefined or contested understandings of the main problem, cover a range of potential goals, and/or are complex to the extent that the uncertainties are unmeasurable or worse, completely impossible to predict given current understandings of the policy domain. The ACF has frequently been applied to a number of policy domains in the US, Canada and Europe, although most work focuses on debates about energy and the environment (e.g. Jasny, Waggle, & Fisher, 2015; Sabatier & Weible, 2007; Stoddart, Haluza-DeLay, & Tindall, 2016).

The ACF approach assumes a number of things about public policy. First, it assumes that most policy is formed by experts in the policy domain who are either constrained or influenced by behaviors outside the policy environment. In fact, a key idea in ACF is that decisions get made in complex political environments characterized by extreme levels of uncertainty and ambiguity, and that intense disagreements tend to cross multiple levels of government and civil society groups. Policymakers are connected to one another in networks formed from shared beliefs about the policy domain. Over a period of socialization, the networks stabilize into groups and sub-groups organized around the policy field with various levels of negotiating power, although broadly there will be agreed upon concepts such as the definition of 'sustainable' practices, or that carbon-based pollution is harmful to the planet.

The ACF also assumes that these groups are anchored by a system of immutable 'deep core beliefs'. These belief systems form on a normative rather than a purely rational basis. Claims to evidence are interpreted through policy-related beliefs, which in turn take on an epistemological dimension. For instance, Sabatier and Weible (2007) point out that March and Olsen's (1989) 'logic of

appropriateness' (following the right rules) and 'logic of consequences' (what constitutes the right consequences) align with traditional debates between sociologists and economists.

The ACF has generally focused on policy systems where ideas have developed to the point that the points of conflict are well-established and relatively stable after ten or more years of development. For this reason, the ACF has much in common with historical institutionalism because it sees policy as being tethered around fundamental arrangements that tend to be immutable. Those focused around more short-run movements in the policy world observe a less stable movement in recent times due primarily to changes in public awareness of political concerns and the availability of technology to access policy-related information. Whereas in the long run, policy is controlled by groups of elites, the day to day work of policy is operated amongst 'multiple and highly dynamic publics' who 'often in unexpected and original ways, find their route into the policy-making process, and at least claim to represent a public so as to lend more legitimacy and political weight to what they bring in' (Hajer 2010, pp 44-45). This understanding has led to a number of approaches that observe discourse as a major determinant of policy results. Adopting the theories of Habermas (1984) and Burchell, Gordon, and Miller (1991), these 'interpretive' approaches to policy formation identify common ways that people come to understand policy problems and decisions brought forth by others.

Discursive approaches share many of the fundamental tenets of the ACF. For one, discursive analysts see ideas and learning as central to the formation of policy as are the development of cultural norms as a way to give meaning to policy-related information (Fischer 2003; Hajer 2010). Interconnection of actors inside networks is another common theme of the 'discursive turn' in policy analysis. Where the two approaches differ, according to Fischer (2003), is in terms of methodology, whereby a lack of contextual information leaves ACF analyses unable to explain why policy change occurs, except to place 'important explanatory factors' into 'black boxes' leaving the empirical hypotheses they produce to be too general to help explain the temporal and spatial dynamics that make policy change occur (Fischer, 2003, 101; Hajer, 1995). By contrast, the DCF makes the process of framing and reframing policy the focus of analysis, usually by identifying how policy is influenced by the social constructions of events, root causes of social problems, the worthiness or unworthiness of political leaders, failures and successes and so on (Fischer, 2003; Stone, 1989). In turn, the process of studying such discourses is not just a way of observing policy in action, but also an integral part of the discourse itself and therefore participatory as well as observational.

Perhaps the most important contribution of such interpretive approaches to policy-making is the observation that modern day policy is increasingly mediatized, meaning that actors increasingly must simplify policy-related information for public consumption. Communication to a population requires increasing attention to the packaging with which the message is presented, based on targeting different frames for the policy to different groups. The influence of Internet media such as YouTube, Twitter, and Facebook enables this kind of policy development not only by policy elites, but by anyone with an interest in highlighting policy issues or advancing alternatives to like-minded groups. For Hajer (2010) this creates a 'politics of multiplicities' where 'nearly everybody is empowered to register and contribute' (pp. 45). The politics of multiplicities also challenge the assumptions made by the historical institutionalists and the ACF that policy is formed through entrenched institutions and beliefs that are formed over time. Couldry (2012), for instance, offers the example of the Twitter hashtag as a source for unauthorized commentary on policy, where 'groups can cohere … without previous identity or

symbolic capital' (pp. 44). Couldry fails to note that the use of a hashtag requires previous identity in the form of being Twitter users, but his point highlights the spontaneity with which ideas forms inside such virtual spaces. Although the literature in this area is far from establishing counter-theory that can contest the more established institutional, ACF, punctuated equilibrium and 'streams' theories, there is a growing literature around the development of social movements using information technologies like social media to monitor state goings-on and highlighting policy decisions in the public sphere (see also Earl & Kimport, 2011).

Complex Systems Approaches

Finally, some social scientists have started drawing on ideas from complex systems theory (Bilge, 2015; Cairney, 2012; Geyer & Cairney, 2015; Hadzikadic, Whitmeyer, & Carmichael, 2015). This new development may help align policy research traditions in the social, natural, and health sciences, and engineering, which have developed more or less independently of one another. In their overview of this recent development, Geyer and Cairney (2015) emphasize five generic ideas, including (1) a focus on interdependent elements within broader systems, (2) the effects of positive and negative feedback loops, (3) the effects of path dependence, (4) the production of global patterns out of local interactions, and (5) patterns of ongoing stability interpreted by quick and rapid change (e.g. punctuated equilibrium).

Geyer and Cairney (2015) directly reference punctuated equilibrium theory in their discussion of the key ideas in systems thinking. In fact, one of the central questions they raise in the *Handbook on Complexity and Public Policy* is the extent to which applications of complex systems theory to policy-making and implementation is 'new theory or old wine in new bottles'. While some of the general ideas may not be entirely new, applications of complex systems theory typically involves the use of methods that are new (e.g. agent-based models) or relatively uncommon in the policy literature (e.g. methods from social network analysis). While there is a vibrant tradition of policy networks research, some of which we discussed above, a considerable amount of research in the policy literature uses ideas from network analysis metaphorically rather than actually developing and applying network models, although as Knoke (2011) has pointed out, this is becoming less common.

The introduction of complex systems theories has been accompanied by new methodological approaches such as agent-based modeling (ABMs) (Bilge 2015; Hadzikadic et al., 2015). As in sociology and computational social science more broadly, ABMs are a clear methodological and conceptual break with traditional quantitative approaches (Macy & Willer, 2002; Padgett & Powell, 2012). ABMs are premised on the idea that the emergence and disappearance of global patterns are grounded in the local interactions of adaptive agents, whose behavior is fundamentally situational and in response to their immediate social neighbors. While many models, particularly those coded by economists, make assumptions about cognition and strategic interaction that are based on game theory and theories of bounded rationality, it is not strictly necessary to model agent cognition and behavior along these lines. Agent-based models are computer simulations of local interactions, *not* of individual agents or for that matter of the global system. As such, ABMs rely on carefully specified interactional processes, which in this case can and should be informed by theory and substantive research in political sociology and related social science fields.

A focus on complex systems theory means greater alignment with policy oriented research in the natural sciences and engineering. This has both advantages and disadvantages. The most important disadvantage and serious challenge, in our view, is the uncritical adoption of theories and methods from the natural sciences

and engineering that are not well-equipped to handle the problems that social scientists have been engaged with for a very long time, including but not limited to the complexity of culture, institutions, reflexive and purposive action, etc. While there is a long tradition of adopting ideas and methods from the natural sciences, it would be naive to think that imports from the sciences will necessarily be an improvement over social scientific theories and methods. There are well-established traditions of network analysis and even agent-based modeling in the social sciences (Borgatti et al., 2009; Carrington, Scott, & Wasserman, 2005; DellaPosta, Shi, & Macy, 2015; Freeman, 2004; Macy & Flache, 2009; Macy & Willer, 2002; Mäs, Flache, & Kitts, 2014; Robins, 2015; Scott & Carrington, 2011; Wasserman & Faust, 1994), and so the turn towards complexity in policy research and political sociology should look to these developments in computational social science as much or more than to the natural science literatures on networks and complex systems modeling because much of the work of adapting these approaches to types of problems social scientists work on has already been started.

On the positive side, greater alignment between natural and social scientific approaches to understanding and shaping policy might be exactly what is needed in order to leverage the necessary expertise in the face of 'wicked' global problems such as climate change. For example, Lloyd and Schweizer (2014) develop a methodology – cross-impact balance analysis (CIB) – that can improve the integration of socio-economic scenario analysis (e.g. population dynamics, energy use, etc.) and climate modeling that are essential for contemporary research on emission outcomes and climate change assessment more broadly. CIB is explicitly a systems dynamics approach, and responds to the challenges faced, for example, by the IPCC, in assessing expert knowledge from a wide range of disciplinary and interdisciplinary experts.

Sociologists and other policy researchers in the social sciences have often criticized the policy-oriented research and initiatives in the natural sciences and engineering for being too focused on what information to provide to policymakers, and then for being frustrated when policymakers do not respond as desired to recommendations from the scientific community (Cairney, 2016; Cairney, Oliver, & Wellstead, 2016). Without a doubt, natural and social scientists *should* be concerned with presenting the best possible evidence to policymakers. However, as Cairney (2016) has argued, this is also clearly an opportunity for experts on the social science of policy formation and implementation to improve the strategies and effectiveness of influencing policy. We turn to this is more detail below.

Science, Expertise, & Evidence: The National Origins of Policy Ideas?

There is now a large and rapidly growing set of practitioner literatures, primarily in health fields, about the barriers to bringing scientific evidence into policymaking. In a new book, Cairney (2016) argues that this collective frustration – and more generally the feeling that that policymaking seems to be guided more by 'politics based evidence' than 'evidence based policy' – is due in part to a lack of understanding about how policymaking actually happens. He argues that most scientists and engineers are, ironically, unable to see policymaking as occurring in complex and messy systems (see also Cairney, Oliver, & Wellstead, 2016). Relative to social science research, the practitioner literatures are dominated by descriptive case studies rather than research articles that engage or develop theory or hypotheses. The heavily idealized 'policy process' theory discussed earlier is a common model. This prevents a more sophisticated understanding of the relationship between science and policymaking, and inevitably generates unrealistic expectations in the scientific community about using evidence to guide policymaking.

For Cairney (2016) and others, a clear solution for bettering the state of evidence-based policymaking is that experts and practitioners must learn more about how policymaking actually happens in the real world. He argues that they must get up to speed on the theory-driven social science literature, which among other things would enable them to more systematically and strategically influence policy. However, there are more fundamental questions about the relationship between science and policymaking in democratic societies that are not discussed in practitioner literatures or in the main social science theories of policymaking: what counts as scientific expertise, who is considered an expert, and what is the appropriate balance between expert decision making and public deliberation (Collins & Evans, 2007; Collins, Weinel, & Evans, 2010; Durant, 2011, 2015; Epstein, 1996; Evans, 2008; Parthasarathy, 2010, 2011, 2012)? In the contemporary sociology of science, this uncertainty around the boundaries of legitimate expertise and the balance of expert knowledge and public deliberation is often called the 'problem of extension'. A relatively new line of research known as 'Studies of Expertise and Experience' (SEE) – launched in a classic paper by Collins and Evans (2002, see also 2007) – intervenes in debates about expert knowledge and democratic policymaking within the 'policy wing' of science studies (Durant, 2011; see also Jasanoff, 2003, 2009, 2011). To that end, SEE is primarily concerned with developing new ways of classifying expertise and new quasi-experimental methodologies to test for them (Collins & Evans, 2013; Collins et al., 2015).

Currently, SEE and other policy-oriented scholarship in the sociology of science tend not to address the relationship between the production of policy ideas and macro-level contexts such as states or the international community (although see Jasanoff, 2005; Weinel, 2007), and to date comparative research on the relationships between experts and policymakers across countries is rare despite the fact that there is considerable evidence that national traditions and political and economic institutions have a major influence on policymaking. Dobbin (1994), for example, has shown how cross-national policy variation can be explained in part by national variations in the development of political and industrial cultures. Similarly, in a new book on Obama's Affordable Care Act in the US, Béland, Rocco, and Waddan (2016) reveal how national institutions, institutional fragmentation, and policy legacies shape the implementation of new policies. Recently, these questions have also been taken up in the growing literature on think tanks and the production of policy ideas (Abelson, 2009; Denham & Stone, 2004; McLevey, 2014, 2015; Medvetz, 2012; Rich, 2004), on the role of policy entrepreneurs in promoting academic theories and policy ideas (Boothe & Harrison, 2009; Harrison, 2010), and in several major comparative historical studies on the national origins of economic policymaking (Babb, 2001; Campbell & Pedersen, 2014; Fourcade, 2009; Medvetz, 2010). This work has helped fuel the development of a new theory of the national origins of policy ideas, mostly clearly elaborated by Campbell and Pedersen (2014), who focus on the evolving nationally-specific relationships between production regimes, policymaking regimes, and *knowledge regimes*. They argue that these regimes are three legs of a comparative political economy 'stool', but that researchers have focused on production and policymaking regimes at the expense of knowledge.

Broadly, Campbell and Pedersen (2014) argue that the rise of globalization and the decline of the 'golden age of capitalism' in the 1980s caused sweeping transformations in national production and policymaking regimes, which in turn caused the perception of breakdown in institutional complementarity and the development of new nationally specific knowledge regimes. In the US, for instance, these institutional changes resulted in a crisis of partisanship and the rapid proliferation of private organizations. In France, there was a period of institutional fragmentation and

a process of 'state-led externalization to semi-public organizations'. The crisis of corporatism in Germany resulted in the creation of more competitive private organizations as well as more coordinated scientific capacity and analysis within semi-public organizations. Finally, there was a crisis of party ideology in Denmark, which led among other things to the 'state-led improvement of scientific analysis', deepening of negotiation and consensus in analysis, and a 'shift to expertise'. These national differences shaped the ways policymakers made sense of and responded to globalization and crisis.

This historical argument from knowledge regimes theory is at odds with well-known theories of policy diffusion, including constructionist world polity and learning theories (which stress the role of ideas and culture) and coercion and economic competition theories (which stress the role of economic incentives and political influence) (Simmons, Dobbin, & Garrett, 2007). World polity theory, like these others, was developed to explain the remarkable global convergence of institutional structures and policy priorities despite radically different national contexts and interests (e.g. Boli & Thomas, 1997; Drori, Meyer, & Hwang, 2006; Drori et al., 2003; Krücken & Drori, 2009; Meyer et al., 1997; Strang & Chang, 1993). According the world polity theory, global values, cultural scripts, and models dictate how nations must act in order to be considered legitimate (Meyer et al., 1997). National policymaking is driven by an attempt to achieve legitimacy in global political culture by aligning with these values, scripts, and models and *not* in nationally specific ways. In other words, the key to global policy diffusion is in perceptions of legitimacy and social acceptance, not in response to homegrown policy ideas. For example, Drori et al. (2003) show how the rapid adoption of ministries of science around the world is driven by the legitimacy of Western science in world culture regardless of national institutional contexts. Most case studies within this tradition focus on education (Meyer et al., 1977; Schofer & Meyer, 2005), although there is also now considerable work on many other policy areas, including human rights (Boyle & Preves, 2000; Ramirez, Suárez, & Meyer, 2007), environmental policy (Frank, Longhofer, & Schofer, 2007; Hironaka, 2002; Schofer & Hironaka, 2005), women's political participation (Fallon, Swiss, & Viterna, 2012; Ramirez, Soysal, & Shanahan, 1997; Swiss, 2009), and now on foreign aid institutions and policy (Swiss, 2016).

Campbell and Pedersen (2014) argue that the convergence of institutional structures and policy priorities documented by world polity researchers is in fact a superficial similarity, more the result of using cross-sectional survey data than of real, deep, meaningful convergence. While world polity researchers typically use event history and other sophisticated quantitative models, knowledge regimes theory is grounded in political economy-inspired comparative historical methods. This more qualitative approach is intended to emphasize the causal mechanisms that may or may not result in institutional and policy convergence. These mechanisms are nationally specific, grounded in the historical development of production, policymaking, and knowledge regimes. However, world polity theorists are not the only people to tackle the rapid diffusion of concrete policy ideas and institutions across countries.

CONCLUSION

As this chapter hopefully makes clear, there has been an enormous amount of productive growth in sociological and more broadly social scientific scholarship on public policy formation and implementation. We have categorized these theories into historical institutional, organization, cultural/interpretive, and complex systems. We also discussed some important new work being done on the relationship between expertise, evidence, and policymaking. In an era of 'wicked' problems, this seems

to us to be a pressing/important area for future scholarship and applied research. We have also attempted to emphasize the methodological and epistemological diversity of policy scholarship, ranging from historical, quantitative, qualitative, and networks, simulations, and other systems methodology. We think there is much interesting work being done in the systems line of work more specifically, in part because it casts longstanding systems approaches in policy analysis in a new light (e.g. punctuated equilibrium), because it introduces promising new methodologies (e.g. agent-based models and new methods from social network analysis), and because of the opportunities of greater alignment with work being done in the policy-oriented natural sciences (e.g. climate science). We see this last point as an especially important opportunity given current wicked problems like climate change and energy crises that will require the expertise of both natural and scientists.

One serious limitation of policy scholarship is that most influential theories of the policy process have tended to ignore or de-emphasize gender and race.[2] Unsurprisingly, then, one of the major contributions of feminist theory has been demonstrating the many ways in which policymaking and policies themselves are gendered. Feminist institutionalism, for example, emphasizes gender as a central dimension of institutions and promotes a deeper analysis of power and change (Chappell, 2006; Chappell & Waylen, 2013; Kenny & Mackay, 2009; Krook & Mackay, 2011; Krook & O'Brien, 2012; Lowndes, 2014; Mackay, Kenny, & Chappell, 2010). This approach has resulted in a vibrant empirical literature, including, for example, research on the gendered effects of informal institutions on candidate recruitment and selection (Annesley, 2015; Bjarnegård & Kenny, 2015; Kenny, 2013). Despite these advances, Kenny and Mackay (2009) argue that mainstream institutional theory remains mostly gender-blind. Other theories challenge the role of structure and discourse in policy formation, especially the consideration that perfect rational communication can exist that ensures a fair contribution of ideas from diverse groups (Mouffe, 1999). Related scholarship in the social construction in policy rightly criticizes influential theories of policymaking for failing to adequately focus on how policies protect the interests of some while harming others (Ingram, Schneider & deLeon, 2007; Lasswell, 1950).

Feminist scholars have also developed new ways of forming and implementing gender policies. Gender mainstreaming, for example, was a fairly controversial initiative that emphasized developing policies that explicitly acknowledge gender difference rather than focus on the interests of a specific group (e.g. women). A core component of gender mainstreaming is a focus on evaluating whether and how policies reduce or increase gender inequalities, including through mechanisms like 'gender-audits' or 'gender-proofing' (True, 2003). These initiatives tend to be promoted not only by feminist social scientists, but also by international women's movements and organizations like the United Nations (Keck, Sikkink, & Sikkink, 1998; Pietilä, Vickers, and others, 1990).

Like gender, there is an enormous policy-relevant social science literature on race, including on urban poverty (e.g. Wilson, 2012), racial segregation and equity-based integration policies (e.g. Carter, Caruthers, & Foster, 2009), educational inequalities (e.g. Carter, 2005), and systemic 'color-blind' racism (Bonilla-Silva, 2006; Golash-Boza, 2016). In fact the sociology of race and ethnicity has had strong policy roots as far back as Du Bois, who argued that social science can and should be used to reveal factual social problems, and to promote equality and social justice (Du Bois & Granville Dill, 1914; Lewis & Embrick, 2016). Despite much high-quality empirical research on these issues – typically by sociologists – other major intellectual movements in interdisciplinary scholarship on race have not had a major impact on the mainstream theories of public policy formation. For example, critical race theory (Crenshaw, 2010; Delgado &

Stefancic, 2012) has been influential in legal studies, but has yet to make inroads into research on public policymaking. This is likely due in part to its difficult relationship with the kinds of hypothesis-driven social science theories and methodologies that dominate the policy world (see Carbado & Roithmayr, 2014; Parks, 2007). In short, most mainstream theories of public policy formation do not focus on race and ethnicity, but there is an enormous volume of policy-oriented scholarship that can, and should, inform policymaking in a time of persistent racial inequality.

Research on policy formation and implementation is an exciting line of work in interdisciplinary social science. While we are broadly supportive of the trend toward crossing disciplinary boundaries, we also think sociologists have much more to offer. While our discipline continues to make important contributions to the study of policy formation and implementation, theories of policy formation and implementation are dominated by economists and political scientists. There is value in continuing to bring distinct sociological insights into policy.

Notes

1 A full review of institutional theory across the social sciences is beyond the scope of this chapter, but see DiMaggio and Powell (1991) and Thorton and Ocasio (2008).

2 Although Feminist scholarship has significantly influenced debates about the restructuring of welfare states (e.g. O'Connor, 1993; O'Connor & Olsen, 1998; O'Connor, Orloff, & Shaver, 1999; Porter, 2003).

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