

Do economists make policies? On the political effects of economics¹

Daniel Hirschman^{1,*} and Elizabeth Popp Berman²

¹University of Michigan, Ann Arbor, MI, USA;

²University at Albany, SUNY, Albany, NY, USA

*Correspondence: dandanar@umich.edu

Economics is often described as the most politically influential social science and yet economic advice is often largely irrelevant to prominent policy debates. We draw on literatures in political science, sociology and science and technology studies to explain this apparent contradiction. Existing research suggests that the influence of economics is mediated by local circumstances and meso-level social structures, and that much of it flows through indirect channels. We elaborate three sites of analysis useful for unpacking these influences: the broad professional authority of economics, the institutional position of economists in government, and the role of economics in the cognitive infrastructure of policymaking, including the diffusion of economic styles of reasoning and the establishment of economic policy devices for seeing and deciding.

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JEL classification: Z18 public policy, A11 role of economics, role of economists, market for economists, Z13 economic sociology, economic anthropology, social and economic stratification

1. Introduction

Every sociologist, anthropologist and political scientist knows that economics is the most politically influential social science. In the USA, for example, economists have an office in the White House [the Council of Economic Advisers (CEA)], control of influential institutions (the Federal Reserve) and positions in every part of the executive and legislative branches. Every economist, on the other hand, knows that such influence is extraordinarily limited, when it exists at all. From the Euro

¹Inspired by MacKenzie *et al.* (2007).

crisis to climate change policy, politics ultimately outweighs economic expertise, even when economists speak with one voice. These discrepant interpretations are almost caricatures. But they raise an important question: how does economics influence policy?

In this article, we synthesize diverse literatures relevant to the role of economists in policymaking and identify productive questions for future research. Researchers in sociology, political science and science and technology studies agree on three conclusions. First, economists are most likely to be influential advisers in situations understood as technical, and in ill-defined situations where uncertainty forces policymakers to look for new solutions. Second, the indirect influence of economics on policymaking is likely as important as the direct role of economists. The spread of economic discourse reshapes how non-economist policymakers understand a given issue. The spread of economists' technical tools determines the information available to policymakers and changes the process of decision-making. Third, meso-level social orders affect the political influence of economics. Economists' actions in the political field must be understood in light of the dynamics of the semi-autonomous, globalizing professional field. Similarly, since the state itself is a collection of smaller organizations, organizational dynamics shape whether and how economists influence particular policy domains.

These insights provide the starting point for a new research agenda. Inspired by [Eyal and Buchholz's \(2010\)](#) call for a 'sociology of interventions', we argue for a reframing of the question. Rather than asking 'How does economics influence policy?', we should ask 'What must be accomplished for economists and economics to have policy effects?'

We attempt to provide a general framework for answering this question. Our goal is not to explain why a particular set of economic arguments dominates in a particular time and place (such as the late twentieth century victories of neoliberalism; see [Mudge, 2008](#); [Amable, 2011](#)), but to identify dynamics that mediate the ability of economists, their ideas and tools to influence policy in a variety of settings. In the tradition of the sociology of scientific knowledge ([Bloor, 1991 \[1976\]](#)), our approach is 'symmetric', in that we analyse the success and failure of particular economic interventions independent of current perceptions of their accuracy.

The patterns we identify are based primarily on empirical studies of the USA and western Europe in the twentieth century, but we also address more briefly the extent to which they may apply to other parts of the world. While economics is an increasingly global profession ([Fourcade, 2006](#)), its effects will always be mediated by local political institutions, and may vary in countries with strong indigenous economic traditions, like China and the former Soviet Bloc, and in those not governed by bureaucratized democratic systems.

Our reformulation also takes seriously the problem of identifying what, exactly, we mean by economists. Here, we are less concerned with definitional debates

around the profession itself (Fourcade, 2009) than with the level of aggregation relevant for analyses of policymaking: is it individual economists, or ideologically unified networks of economists, or the profession as a whole? Or do we want to examine the influence of economic ideas, economic data or economic models? Each of the literatures we review answers these questions differently, and we map these differences without fully resolving them.

Our proposed agenda bifurcates the question. We identify three modes through which economists and economics can influence policy: professional authority, institutional position and cognitive infrastructure. We then suggest an analytical division of the question. First, how are each of these achieved, and what role do economists play in the process? Second, once a change in professional authority, institutional position or cognitive infrastructure occurs, how does it then shape politics?

‘Professional authority’ refers to the overall status of the economics discipline, which is historically and geographically variable (Bernstein, 2001; Fourcade, 2009). In the seventeenth century, there were no professional economists and no chairs of political economy at universities. By the mid-twentieth century, economics had become a prestigious and well-funded field of study, with departments at every major university, and was seen as possessing a useful and rigorous set of intellectual tools. The professional authority of economics conditions the possibility of successful interventions in myriad ways.

‘Institutional position’ refers to the presence of economists in policymaking organizations or elite networks. Here, the distinction between economists and policymakers collapses, and economists may be making policy decisions directly as well as giving advice to others. Economists’ institutional position at the helm of central banks in many countries, for example, means that they often have relatively free rein to determine monetary policy. At the transnational level, economists run organizations such as the World Bank and the International Monetary Fund, which set the scope conditions within which national governments act (Babb, 2007; Chwioroth, 2010). At a more local scale, a wide range of government agencies have some formal office devoted to economic analysis, which ensures the voice of economists is at least heard if not heeded.

Finally, ‘cognitive infrastructure’ refers to economic *styles of reasoning* prevalent among policymaking elites, as well as the establishment of economic *policy devices* that produce knowledge and help make decisions. Styles of reasoning (Hacking, 1992) are similar to the core principles and ways of approaching problems that Reay (2012) identifies among US economists. While Reay focuses on economics PhDs, a soft version of the economic style of reasoning is widespread among policymakers, many of whom are exposed to it at law or policy schools (Allison, 2006; Teles, 2008). The economic style can shape how policymakers approach problems, even if they ignore the specific recommendations of trained economists.

Economic *policy devices* (cf. [Muniesa et al., 2007](#)) include the wide variety of sociotechnical tools that help policymakers see and make decisions about the world in economic ways. These include devices that produce information that helps us see the economic world, such as GDP, the inflation rate or the unemployment rate; and techniques that help with the process of making policy decisions, such as cost–benefit analysis, procedures for auctioning off the electromagnetic spectrum or guidelines for assessing when mergers are economically efficient. Policy devices have received relatively little attention from scholars. Political scientists and sociologists have focused more on debates over prominent issues than the incorporation of tools into bureaucracies; science and technology studies (STS) scholars, on the other hand, have looked at how economists’ devices affect markets rather than policy.

We review several literatures relevant to explaining how economists affect policy. From political science, we survey the ideas and politics literature and the epistemic community literature; from sociology, we examine the professions and expertise literature; and we look at multiple strands of research in STS. We build upon these to suggest that economists and economics can exercise policy influence by increasing their professional authority, acquiring positions of institutional power or reshaping the cognitive infrastructure of policymaking with their styles of reasoning or policy devices.

2. Non-rival views of economists’ influence

2.1 *Ideas and politics*

Since the 1980s, political scientists and political sociologists have increasingly theorized the role of ideas in politics. This movement emerged out of the state-centred approach, which argued that state elites have an independent role in policy formation and are not simply mediators of class conflict ([Block, 1977](#); [Evans et al., 1985](#)). If state elites have interests and capacities independent of their class allies, then what those elites believe is causally relevant in explaining policy ([Weir and Skocpol, 1985](#)). This literature emphasized the complexity and uncertainty of policymaking, and thus the need for ideas that could pare this down into a limited set of policy alternatives ([Kingdon, 1984](#); [Hall, 1989](#); [Blyth, 2002](#)). Since then, much work has established *that* ideas matter, while remaining conflicted about exactly what ideas *are* and precisely *how* they matter ([Mehta, 2010](#)). Moving beyond these ‘existence proof’ arguments for the causal power of ideas, recent research has addressed questions about *which* ideas matter and why ([Major, 2010](#)). As Vivien Schmidt frames it, in some sense all policies are based on ideas. Thus, the ‘big question for scholars of ideas is why some ideas become the policies, programs, and philosophies that dominate political reality while others do not’ ([2008](#), p. 307).

The ‘ideas’ in this literature cluster around different levels of analysis (Campbell, 1998, 2002), from macro-level economic paradigms (e.g. the rise and fall of Keynesianism; Hall, 1989; Blyth, 2002; Lindvall, 2009) to precise levels of well-specified policy instruments like interest rate ceilings (Hall, 1993; Anderson, 2008). While analysis often focuses on the interest group or professional community promoting a particular idea, the actor in this literature is really the idea itself (Weir, 1993; Berman, 1998; Parsons, 2003). The point is to show, for example, how Keynesianism became dominant, not how Keynesians advanced their agenda.

Much work in this area has focused on how particular sets of ideas play out differently under local political, economic and social circumstances. Not only did Keynesianism have different degrees of influence in different countries (to continue the example), but entirely different elements of it were implemented in, for example, Sweden when compared with Britain (Hall, 1989). Later work on the global impact of neoliberal economic ideas has similarly emphasized the extent to which their adoption is shaped by national conditions (Babb, 2001; Fourcade-Gourinchas and Babb, 2002; Ban and Blyth, 2013). This argument finds its culmination, perhaps, in Campbell and Pedersen’s recent (2014) argument that the production of such ideas, as well as their impact, is nationally specific, and that paradigms more often evolve and co-exist rather than switching dramatically (see also Schneiberg, 2007).

Beyond its focus on the intersection of ideas, institutions and politics, this literature emphasizes three factors affecting when and how economists’ ideas affect policy. First, they matter because they construct political interests, which only make sense in light of individuals’ ideas about how the world works (Dobbin and Dowd, 2000; Blyth, 2002; Anderson, 2008). Second, the importance of economists’ ideas fluctuates with the stability of the political situation. During times of relative stability, ideas recede into the background. In times of crisis, uncertainty about the connection between a proposed policy and its likely outcome, and even the range of options available, opens up space for ideas to make a difference (Blyth, 2002). Third, the factors affecting the success of economists’ ideas vary at different levels of analysis. Work by Hall (1993) and others (Campbell, 2002; Lindvall, 2009) has suggested that changes in technical ideas—which policy instruments to use and at what settings—are more likely to be decided by experts, while shifts in policy paradigms are more likely to be determined by electoral politics.

2.2 *Epistemic communities*

While the ideas and politics literature treats ‘ideas’, both broadly and narrowly conceived, as actors with the potential to affect policy, a closely related literature centred in international relations takes ‘epistemic communities’ (Haas, 1989, 1992) as its agent. Epistemic communities are networks of experts who share some set of

beliefs. They have more ideological unity than a whole profession, and thus can strategically promote policies consistent with their beliefs. The literature is organized around identifying conditions under which epistemic communities are able to exert such influence.² The framework's explanatory power, however, is somewhat limited by its assumption of a relatively unified collective actor with shared views on how its knowledge should be applied to policy (Carstensen, 2011).

While this literature does not focus specifically on epistemic communities of economists (though see Ikenberry, 1992), several of its findings seem likely to apply. For example, although many scholars in the ideas and politics tradition have treated neoliberalism as a new economic paradigm, another vocal group urges us to consider neoliberalism as an epistemic community, a 'thought collective', containing some economists but also policy advocates, businessmen and other influential actors (Mirowski and Plehwe, 2009). Understanding neoliberalism, or any other set of beliefs shared by some subset of economists, as underlying an epistemic community, rather than representing an economic paradigm, offers a different route to tracing its policy influence. As is true for any interest group, the capability of an epistemic community to achieve policy change is a function of its resources, including support from other powerful actors (e.g. business, unions, media or other elites) and institutional access (Campbell, 1998). Thus, we should expect the policy influence of networks of economists holding shared beliefs to depend on what set of resources they are able to command.

Epistemic communities are also more likely to be successful when advocating policies regarding issues around which policymakers have little knowledge and weak opinions. Thus economists should have less direct influence on well-defined, highly public and partisan issues (Ikenberry, 1992), like, for example, tax policy (Feldstein, 1994). And consistent with the ideas and politics literature, epistemic communities are more likely to have effects on the choice of policy instruments and their settings, and less likely to affect the actual objectives of policy (Anderson, 2008; Lindvall, 2009).

Both the ideas and politics and the epistemic community literature suggest that economists brandishing particular sets of ideas are best understood as just another interest group, though one that benefits from the resource of professional or scientific authority. Economists' success will be determined by their ability to ally with powerful, resource-rich actors and by the favourability of political institutions

²A parallel literature on science policy, not addressed here, takes a similar approach. It focuses on particular scientific communities and asks about the conditions under which scientific advice manages to influence policy. In line with research on epistemic communities, science policy research finds that scientific advice is most influential when debates remain technical and are not overtly politicized (Nelkin, 1975; Keller, 2009), and emphasizes the strategies used by scientists to demarcate science from non-science in order to acquire or maintain policy influence (Gieryn, 1999; Hilgartner, 2000; Bijker *et al.*, 2009).

and the historical moment to the ideas they are trying to advance. While this approach may be quite productive for explaining the role of ideas in shaping specific political outcomes, treating economists as just another interest group promoting one set of ideas or another tells us less about their distinctiveness from other such groups.

2.3 *Professions and expertise*

Although the literature on professions and expertise is based in sociology, not political science, it shares with the epistemic community literature a focus on particular groups organized around a shared body of knowledge. Since the 1970s it has emphasized the question of how professionals gain and maintain control of the market for a particular set of tasks based on abstract knowledge (Larson, 1977; Freidson, 1986; Abbott, 1988). More recently, a resurgence of scholarship on experts (Eyal, 2006; Fourcade, 2009; Medvetz, 2012; Eyal, 2013; Stampnitzky, 2013) has also examined how professions produce knowledge, and to what effect.

The professions literature looks only tangentially at how experts influence policy. Steven Brint called in 1990 for analysis of the conditions under which professionals have more or less policy influence, but his call was not taken up systematically. Our observations about how the professions influence policy are therefore inductive, rather than reflecting a clear consensus. We nevertheless identify several findings that seem likely to apply to the policy influence of economists as professionals.

The Federal Reserve or the International Monetary Fund may spring to mind most quickly as examples of economists' policy influence. But research on the professions suggests that economists' greatest political effects might occur through indirect means and informal channels, rather than advisory positions and formal policy roles (Brint, 1990, p. 371). Experts are more important in defining problems and setting agendas (O'Connor, 2001; Eyal *et al.*, 2010) than in telling politicians what to do (Bernstein, 2001).

Economists are also likely to have the greatest level of influence when they can define some policy question as essentially technical (Brint, 1990, pp. 373–374). This may allow them to convert technical authority into moral authority (Kevles, 1978; Halliday, 1987; Bernstein, 1995), or provide room for normative choices that remain invisible to non-experts, because they appear to be purely technical (Jacob, 1988; O'Connor, 2001; Steensland, 2006). Conversely, and in line with the political science literature, the more overtly politicized an issue is, the less likely economists will independently influence policy outcomes, since incentives to challenge expert recommendations will be high (Bernstein, 2001).

Economists' actions in the policy domain must also be understood with reference to their professional domain, since the two are partially independent, but

linked, ecologies (Abbott, 2005) or fields (Bourdieu, 1988) with their own rules and rewards. Economists in the policy field may simultaneously be acting in the professional field, and their policy actions are likely to reflect the position of the professional field regarding what constitutes core, high-status or legitimate knowledge (Breslau, 1998; Babb, 2001; Mudge and Vauchez, 2012; Reay, 2012). But because the two domains are partially independent, economic concepts such as the ‘Laffer curve’ may be influential in policy while being dismissed by academics (Berman and Milanes-Reyes, 2013), and economists may have a unified position on trade liberalization, for example, without creating a similar consensus among policymakers (Chorev, 2007).

Finally, world polity theory (Meyer *et al.*, 1997; Drori *et al.*, 2003) emphasizes the professions, science and their transnational organizations as disseminators of world culture. Despite persistent national differences (Fourcade, 2009), the American model of economics has disseminated broadly, often displacing local forms of expertise (Babb, 2001; Dezalay and Garth, 2002; Fourcade, 2006). Yet at the same time, this process often produces new, hybrid forms of knowledge (Bockman and Eyal, 2002; Bockman, 2011), particularly in countries with strong endogenous economic traditions, and its policy effects vary cross-nationally (Dezalay and Garth, 2002; Fourcade-Gourinchas and Babb, 2002; Montecinos and Markoff, 2010; Ban and Blyth, 2013).³ While many of these differences must be explained ideographically, Halliday and Carruthers’ work on the legal profession (2009) suggests that countries that are more dependent on transnational organizations for resources are also more likely to formally adopt and actually implement those organizations’ legal prescriptions, which has at least some resonance with work on economics (Fourcade-Gourinchas and Babb, 2002).

2.4 Science studies approaches

The ideas and politics literature sees ‘ideas’ as an actor with the potential to affect policy, and the epistemic community and professions literatures both focus on groups of individuals. A fourth approach, however, examines the role of sociotechnical tools. Under the broad label of science studies, we include literature on performativity and the social studies of finance (Callon, 1998*b*; Beunza and Stark, 2004; MacKenzie, 2006), sociological literature on technical processes such as quantification, accounting and market design (Carruthers and Espeland, 1991; Espeland and Stevens, 2008; Lampland, 2010; MacKenzie, 2011; Breslau, 2013), and anthropological literature on expert discourses and their governance effects (Ferguson, 1990; Miller and Rose, 1990; Scott, 1998). These share an interest in

³See also a recent special issue of *Review of International Political Economy* (volume 20, issue 2) on the BRICs after the Washington Consensus.

how sociotechnical tools—methods, measures and technical practices for producing knowledge—are assembled, stabilized, and have effects.

The science studies approaches assume that one cannot understand the effects of people or knowledge independently. Instead, stable patterns of relations among heterogeneous objects—people, knowledge, and the material world—constitute the actor with the potential to affect policy. Riffing off of [Callon *et al.* \(2007\)](#), we call these sociotechnical assemblages ‘policy devices’. Several findings across this literature help to answer the question, ‘Do economists make policies?’

The effects of economists’ tools are likely to be complex and unpredictable. This is highlighted across the literature, from the abject failure of the Thaba-Tseka livestock development project described by [Ferguson \(1990\)](#) to the unintended consequences of US prison sentencing reform discussed by [Espeland and Vannebo \(2007\)](#), to the sequence of performativity and counterperformativity [MacKenzie \(2006\)](#) found at play as the Black–Scholes–Merton model was put to work in financial markets.

Economic knowledge, if accepted as authoritative, may also be performative, shaping the behaviour of those who are exposed to it ([Callon, 1998a](#); [MacKenzie, 2003](#); [MacKenzie and Millo, 2003](#)). Markets, particularly financial markets, are probably the most fruitful sites for observing performativity. But policy decisions can sometimes have performative effects as well. The US Federal Communications Commission (FCC), for example, hired game theorists to help it design auctions of the electromagnetic spectrum. In response, telecommunications companies also hired game theorists, who helped the companies behave in the ways game theory expected ([Guala, 2001](#); [Nik-Khah, 2008](#)).

The process through which economists establish policy devices is itself highly political ([Breslau, 1997b](#); [Espeland, 1998](#); [Evans, 1999](#)). In the aforementioned FCC spectrum auctions, for example, experimental economists and game theorists each preferred to construct the auctions in ways that made sense within their epistemic community. Groups such as telecommunications companies that stood to benefit from one method or another then aligned with and advocated for the experts whose knowledge supported their perceived interests ([Guala, 2001](#); [Nik-Khah, 2008](#)).

Finally, economists’ policy devices will have political, normative, cognitive and symbolic effects, but tend to conceal them ([Ashmore *et al.*, 1989](#); [Ferguson, 1990](#); [Porter, 1996](#); [Barry, 2002](#); [Espeland and Vannebo, 2007](#)). They help determine which actors can legitimately intervene in a situation ([Breslau, 1997b](#); [Espeland, 1998](#)), shape which policy options can be discussed ([Ferguson, 1990](#); [Breslau, 2013](#)) and shift discretion to different parties ([Espeland and Vannebo, 2007](#)). They also serve as a form of ‘institutionalized cognition’, producing not only new objects of knowledge like the economy ([Mitchell, 2002](#)), growth ([Miller and Rose, 1990](#)) or credit scores ([Poon, 2009](#); [Carruthers, 2010](#)), but also new categories of thought ([Carruthers and Espeland, 1991](#); [Valverde, 2003](#)), and they direct attention in particular ways ([Miller and Rose, 1990](#); [MacKenzie, 2011](#)). We elaborate these points below.

2.5 Cross-literature findings

Despite their common interest in how expert knowledge affects policy, these literatures locate agency in very different places, placing limits on how fully their insights can be synthesized. The epistemic community and professions literature both look at a group of people (a professional group or an epistemic community) that shares a body of knowledge. The ideas of the ideas and politics literature and the sociotechnical tools of the science studies approaches have some similarities, in that both focus more on the effects of knowledge than the effects of humans. The latter, however, sees knowledge, people and material objects as inextricably bound together, and thus argues that the appropriate unit of analysis is this heterogeneous assemblage, rather than the ideas themselves.

Some patterns, nevertheless, cut across two or more literatures. Three empirical findings seem particularly strong. First, economists' policy recommendations are more likely to have effects under some conditions than others. In particular, economists will have a greater influence in situations that are ill-defined, including both situations of crisis (Blyth, 2002) and moments early in the policy process, during the problem definition and agenda-setting phases (Brint, 1990; Keller, 2009). This is a finding that holds across the ideas and politics and professions literatures, and seems likely to apply to a wide variety of political environments, given a government that is at least moderately bureaucratized. They will also have more influence when they are able to define some policy question as essentially technical, and thus one that they are uniquely qualified to answer. This finding is particularly strong, holding across the ideas and politics (Hall, 1993), epistemic communities (Ikenberry, 1992; Lindvall, 2009) and professions (Halliday, 1987; Jacob, 1988) literatures, and also seems likely to apply in a range of bureaucratic contexts. Thus, to understand the effects of economists on policy, one must understand how they establish certain domains as under their own jurisdiction and certain decisions as ones that require specialized expertise.

Second, despite the focus of both the ideas and politics and epistemic community literature on experts' advice, much of economists' influence is likely to occur through channels other than direct advising or policy decision-making. Paraphrasing Eyal (2013, p. 870) and Rose (1992, p. 356), we can say that the social consequences of economics are not the same as the social consequences of economists.

Several literatures suggest that what matters is not just which group of experts wins, but how their knowledge restructures politics as it becomes integrated into the policy process.⁴ This will most commonly involve small-'p' politics, as when the quality-adjusted life years introduced by health economists to rationalize the

⁴That economists' influence may be greater on the one hand in times of crisis and on the other when their work is hidden in the depths of the policy process may seem contradictory. But the modes of influence discussed below can reconcile these claims: economists as authoritative, advice-giving professionals may

UK's National Health Service provided ammunition for centralizing administrators and were resisted by physicians protective of their professional prerogatives (Ashmore *et al.*, 1989). But at times it may alter institutional procedures, as when the US courts made economic efficiency the core goal of competition policy, to the exclusion of competing goals it had once also considered (Eisner, 1991). Rarely can it be shown to matter at the level of realigning electoral politics, for example, though work like Mitchell (2002) does make the case that political consequences can be quite broad. The political implications of systems of measurement, calculation, evaluation and institutionalized knowledge production are explored most fully in the science studies literature (Espeland, 1998; Evans, 1999; MacKenzie, 2006; Nik-Khah, 2008; MacKenzie, 2011; Breslau, 2013), but also are consistent with work on the professions and the ideas and politics literature.

Similarly, discourses that originate within economics but then circulate beyond it also have political effects. In the broadest sense, concepts such as 'the economy' (Emmison, 1983; Mitchell, 1998) or 'growth' (Collins, 2000) enable new kinds of talk, and the conception of rational, self-interested *homo economicus* shapes policymakers' perceptions of how people act (Callon, 1998a). Beyond the effects of specific concepts, looser arguments based on economic theories can reshape political dynamics (Berman, 2012), and the authority of economic knowledge can legitimate policy choices (Breslau, 2013). More generally, work in the professions literature (O'Connor, 2001; Eyal, 2006; Eyal *et al.*, 2010), science studies (Ferguson, 1990; Scott, 1998; Mitchell, 2002) and ideas and politics (Schmidt, 2008; Schmidt, 2010) emphasizes how expert discourse shapes political action.

Finally, multiple literature identify the importance of meso-level social orders—in particular, professional or disciplinary fields and organizations—in mediating the effects of economists on policy. From the professions literature in particular, we observe that the structure of the field of expertise shapes action in the policy field (Abbott, 2005; Fourcade, 2009; Mudge and Vauchez, 2012). Experts may be pursuing goals simultaneously in both domains, or disciplinary agreements about what constitutes legitimate knowledge may affect what experts do in the policy sphere (Breslau, 1997a).

And across several literature we see that organizational dynamics shape the effects of experts. This finding, though often not stated in explicitly organizational terms, holds across the ideas and politics literature (Eisner, 1991; Chwieroth, 2010), the epistemic communities literature (Gutiérrez, 2010), the professions literature (Halliday, 1987; Babb, 2001, 2007) and work in science studies (Vaughan, 1996; Eden, 2004; Millo and MacKenzie, 2009, 2011).

come to the fore in crises, while economists as institutionally embedded bureaucrats have more success in the formative stages of routine policy-making.

3. An agenda for understanding economists' influence

In preceding sections, we synthesized four interwoven literature and extracted some common findings about the role of economists and economic ideas in policy-making. These findings are, overall, compatible, and contain few direct conflicts and contradictions. Given this rough synthesis, how should we best launch new inquiries into the influence of economics?

We suggest a different way of thinking about what constitutes a policy effect. Rather than starting with a political outcome and then trying to explain whether economists' advice contributed to it, or beginning with economists' policy recommendations and then looking for their political impact, we propose a focus on three sources of power.

Economists can have effects by achieving a certain level of *professional authority*, and then drawing on that authority in various ways. They can have effects by acquiring particular *institutional positions* within the policymaking apparatus, which may mean formal organizational roles or influential locations in social networks. And they can reshape the *cognitive infrastructure* of policymaking, either by spreading an economic *style of reasoning*—that is, by teaching policymakers to think about problems as economists do—or by helping to establish economic *policy devices*—the sociotechnical tools that allow policymakers to see the world in certain ways (like GDP, or the unemployment rate) or assist them in making decisions (like cost–benefit analysis).

To understand the policy effects of economics, we suggest that it is useful to divide analysis into two parts. First, we should look at preconditions: how each of these sources of power—professional authority, institutional position and cognitive infrastructure—is created, and what role economists play in that process. Second, we should then examine how each source of power affects policy.

Economists do not have to accomplish all three of these to have policy effects. Under some circumstances, they might have a great deal of professional authority, for example, but little ability to establish policy devices; or their technical influence in the production of data might be great, but their broader authority limited. Yet the three modes tend to feed into each other in important ways, a point we will return to below. Overall, this typology suggests a need to look for economists' influence in both narrow and diffuse ways, and through historical studies that cross boundaries between the intellectual and political arenas.

3.1 *Professional authority*

Professional authority refers to the prestige, status and legitimacy accorded to economists. This mode is not, therefore, primarily about direct policy effects. Rather, it suggests we ask, why are *economists*, rather than other experts, seen as particularly

relevant and authoritative on certain policy issues? Such an analysis must explain how the profession accumulates authority that then attaches to its members. Achieving professional authority means that economists are seen as the best people to ask about economic things, and that their knowledge in that domain is treated as more legitimate than other kinds of knowledge.⁵ Thus far, research has focused on establishing the role of ideas, and paid less attention to why some experts' ideas are taken seriously while others' are not. But, as research on the professions has shown, professional authority is historically variable, increasingly global and consequential for policy influence. Analysis of professional authority must explain both how economists achieve professional authority and how that authority translates into policy effects.

The history of economics in the twentieth century USA is a well-studied case of how an academic discipline gains professional authority. While this story is nationally specific, it is also of global importance, since the USA became the hub of a transnational network of economic expertise, and thus US dynamics affect the production of economic knowledge and practices around the world (Dezalay and Garth, 2008). Before 1900, US economists had almost no institutionalized role in policy, and only limited signs of professionalization (Bernstein, 2001; Fourcade, 2009; Franklin, forthcoming). Over the next several decades, their authority gradually increased, and they played a visible policy role in the New Deal era (Barber, 1985, 1996; Bernstein, 2001).

But the professional authority of economists increased most dramatically as a result of World War II. Through a sustained and coordinated effort, economists helped government manage wartime mobilization, contributing to the day-to-day struggles of war production, the larger problems of war finance and planning and the ongoing effort to use military resources more effectively (Bernstein, 1995; Guglielmo, 2008; Lacey, 2011). Their considerable success led Samuelson (1944) to call World War II not just a physicist's war, but 'an economist's war'. In this case, at least, the success of economists' policy devices increased their professional authority. At the same time, older institutional approaches to economics were being replaced with the modern mathematical-Keynesian synthesis (Yonay, 1998; Weintraub, 2002; Rutherford, 2011). Upping the mathematical ante attempted to make economics more of a science, and thus more deserving of authority.

What happened next shows how professional authority can lead to policy influence. After the war, economists' professional authority continued to increase, at least into the 1960s, and economists took advantage of this period to

⁵Professional authority is distinct from, albeit related to, professional control, the idea that professions may gain exclusive dominion over certain social problems (Abbott, 1988). Professional authority refers to how highly regarded the profession is when concerned with the problems seen as located within its domain.

institutionalize their gains. The Employment Act of 1946 created the CEA, which made economics the only social science with its own agency inside the White House. Prominent foundations saw the increasingly mathematical models of economists as rigorous and forward-looking, and worked to introduce economics into disciplines such as business management and public administration in the 1950 and 1960s (Gleeson, 1997; Amadae, 2003; Fourcade and Khurana, 2013; Solovey, 2013). Economics became part of the language of policy.

As this example shows, the rewards for professional authority are not just greater success with policy advocacy, but also resources to support the profession's expansion into new political realms and the institutionalization of its decision-making role in the state. While we draw on the US example of this process, acquiring professional authority has been a precondition to policy influence in a variety of locations. US-trained economists gained influence in Latin America because that training gave them cultural capital in their home countries (Babb, 2001; Dezalay and Garth, 2002), and Western-trained economists in China were similarly able to establish bureaucratic power bases in government as Marxist economics was increasingly delegitimized (Li, forthcoming). But professional authority also pays uneven dividends. Local struggles within a particular part of the bureaucracy, or between different professional fields, condition the extent to which authority translates into influence. For example, lawyers dominated US competition policy into the 1970s, long past the time when economists' overall prestige was at its highest (Eisner, 1991). And institutionalized expertise is difficult to dislodge. In the USA, the CEA was long associated with Keynesian macroeconomic management (Feldstein, 1992). But the CEA endured after that paradigm was abandoned, continuing to provide economists a direct conduit to the president. The next section elaborates on this mode of influence.

3.2 *Institutional position*

While studies of professional authority investigate the widespread, diffuse and public status of economics, studies of institutional position concern themselves with the place of economists inside the organizations that affect policy. When economists institutionalize their positions within a particular policy organization, they may become obligatory passage points in the policy process.⁶ At the extreme, economists become policymakers in their own right, as is the case in many central banks. As with professional authority, we can divide questions about institutional position in two. First, how do economists secure positions of importance? And second, how does the presence of economists inside policy organizations alter the process of policymaking?

⁶On the concept of obligatory passage points, see Callon (1986).

Achieving influence through institutional position is messy and political. The overall authority of the profession matters, but is far from decisive, as different institutions have their own local politics and competing groups of experts. Thus far, fewer studies have focused on how economists attained their positions inside the state and its networks than on their consequences for policymaking once there.

Once economists secure their position inside policymaking organizations or networks, they may influence the framing and formation of new policy, as well as the nitty-gritty details of implementing and evaluating of existing policy. Even when economists are not in charge of an agency, their positions within it may allow them to shape the direction of policy. For example, O'Connor (2001) shows how in the USA War on Poverty economists used their positions in federal agencies to promote both their approach to *defining* poverty (as an absolute lack), and their preferences for the evaluation of anti-poverty programmes. Similarly, Steensland (2006) shows how economists in the federal bureaucracy advanced a proposal for a guaranteed basic income to the national stage despite relatively little support from policymakers. As this example shows, the presence of economists inside policymaking organizations does not ensure control of the ultimate policy outcomes. Rather, it makes it likely that economists' voices will at least be heard.

Institutional position matters most when it means that economists become policymakers themselves. Monetary policy in much of the world works this way: economists are appointed to head central banks which are in turn staffed by economists, and these central banks have wide latitude to set the course of monetary policy based on accepted economic theories. Economists trained at prestigious institutions have increasingly taken lead positions in ministries of finance as well (Montecinos and Markoff, 2010).

Beyond the institutions of national policymaking, economists also staff major international economic organizations. The World Bank and the International Monetary Fund have a long history of setting the terms of macroeconomic and development policy from the reconstruction of Europe after World War II, to the recent bailout of Greece. Economists dominate these organizations, and thus prevailing economic doctrines heavily influence the policies they promote (Babb, 2009). In the 1980s, economists supported the 'Washington Consensus', a neo-liberal approach to development. In the 2000s, inspired in part by internal critiques, this approach was partially abandoned in favour of smaller-scale development projects, and an emphasis on experimentation, randomized trials and micro-credit (Ferguson, 2011; Banerjee and Duflo, 2012).

In addition to these formal positions of power, economists are often central in elite political networks. Members of Kennedy's CEA were politically well-connected as well as having an institutional base, which allowed them to influence fiscal policy proposals. The same can be said of President Obama's CEA and National Economic Council, which seem to have determined the magnitude and character of the White

House's economic stimulus (Grunwald, 2012). Positions in networks of elites made the advice of these economists more likely to influence policy, regardless of whether it reflected consensus in the larger field of economics.

3.3 Cognitive infrastructure

Above, we emphasized how economists have become obligatory passage points within policymaking agencies, or even become policymakers themselves. Clearly, economists affect policy when they are in political 'command posts' (Zald and Lounsbury, 2010) and in the guts of the policy process. But *economics* has many effects beyond the direct decisions of powerful economists. Here, we shift our analysis from economists as individuals to economics as shaping the *cognitive infrastructure* of policymaking. Just as the increasing status of economists helped to institutionalize the presence of economists in policymaking, the increasing prestige of economics created openings for economic tools. These allow 'economics' to influence policy even when policymakers are not economists and are ignoring economists' advice. We identify here two elements of cognitive infrastructure that have policy effects, economics as a *style of reasoning* and economic *policy devices*.

Economics as style of reasoning In his research on the history of statistics, Ian Hacking introduced the term 'style of reasoning' to capture the new and unique way of thinking made possible by the emergence of probability (Hacking, 1992). Styles of reasoning are not scientific paradigms, nor particular theories or models. Rather, styles of reasoning are collections of orienting concepts, ways of thinking about problems, causal assumptions and approaches to methodology that enable people to produce new kinds of statements and new explanations. Hacking, for example, argues that the advent of statistics made it possible to state that the population of New York on January 1, 1820 was 100 000, and to explain that the children of unusually intelligent parents were, on average, not as intelligent because of regression towards the mean (Hacking, 1992, pp. 143, 150).

The economic style of reasoning includes basic concepts such as incentives, growth, efficiency and externalities. It includes economic ways of approaching problems: by using models, systematically weighing costs and benefits, analysing quantitative empirical data, considering incentives, and thinking marginally. It suggests causal policy stories (Stone, 1989) linked to economic theories: that investing in education will increase human capital and thus raise wage levels, or that increased government spending will stimulate the economy. And it makes certain methodological assumptions: about the importance of quantification and the possibility of using monetary value as a means of commensuration, for example. Indeed, the economic style of reasoning is quite similar to the "core" of relatively simple ideas and techniques' that Reay (2012, p. 45) identified as distinctive to economists' analytical

toolkit. We suggest, though, that this style of reasoning circulates, at least in a weaker version, well beyond those who call themselves economists.

Like Hacking's statistical style, the economic style of reasoning is evolving, not fixed, and so a consideration of its effects must be historically specific. In recent decades, for example, randomized control trials have been reinstated as the methodological gold standard for development research (Banerjee and Duflo, 2012), and the 'nudges' of behavioural economics have provided new ways of responding to bounded rationality (Thaler and Sunstein, 2008).⁷ While economists often explicitly bracket normative questions from positive analysis, the style nevertheless has normative policy implications: that its objects of analysis (growth, efficiency, and so on) are, *a priori*, worth pursuing.

This style of reasoning can influence policy in several ways. The most obvious is through institutional position. As people trained in economics, whether at the undergraduate or graduate level, take jobs in think tanks, policy-focused research institutes, and government itself, their way of thinking will subtly shape policy. The professional authority of the discipline may also lead policymakers to perceive the economic style of reasoning as superior to other forms of knowledge.

The expansion of economic thinking in policymaking, however, is driven less by the number of bureaucrats with economics degrees than by the spread of economic analysis into the disciplines of law and public policy, and the associated change in how their students are trained to think about policy problems (Amadae, 2003; Allison, 2006; Teles, 2008). Since the 1970s, it has become standard for law and public policy students to receive basic education in economics, and many programmes are heavily grounded in economic reasoning (Fleishman, 1990; Hersch and Viscusi, 2012). The knowledge produced by policy devices, discussed in the next section, further facilitates the spread of the economic style by providing numbers that can be subject to economic analysis, like GDP, the inflation rate, or the unemployment rate. While working economists see it as an uphill battle to convince others in government to think like economists (Reay, 2012), policy debates have nevertheless become more focused on economic issues since the 1970s (Smith, 2007).

The economic style of reasoning, once established, can have a variety of political effects. For example, the late 1970s saw US policymakers become convinced that technological innovation was critical to economic growth, a belief that was derived from economic theory (Solow, 1957; Mansfield, 1972). Policies that could be

⁷Both the rise of experiments and the turn towards behavioural economics have received substantial criticism from within economics. Both have also been very influential in policy discussions. Thus, we should note that agreement among economists is not a pre-requisite for policy influence, neither at the level of specific policy prescriptions (as in the case of Keynesianism or monetarism, often discussed) nor in the case of methodological approaches such as randomized trials and behavioral economics. We thank an anonymous reviewer for this point.

argued to encourage innovation became easier to advance relative to those that claimed some other benefit, like the improvement of medicine. The new policies that resulted encouraged the growth of activities like patenting and entrepreneurship that saw science in terms of its economic value and linked it more closely with the marketplace (Berman, 2012).

Or consider the relationship between the efficient markets hypothesis and financial regulation. Starting in the 1960s, financial economics began to advance the theory that financial markets efficiently captured information about risk (MacKenzie, 2006). This implied that rational market actors would self-regulate because the market would penalize those who did not. By the 1980s, regulators at the Federal Reserve, the Securities Exchange Commission, and elsewhere drew on these theories to argue for deregulating finance. Scholars of financial regulation refer to this as the ‘cognitive’ or ‘cultural’ capture of regulators (FCIC, 2010; Kwak, 2013). For example, in the wake of the 2008 crisis, Federal Reserve Chair Alan Greenspan famously admitted that his basic ‘model’ of the financial system had a ‘flaw’ on this account: ‘I made a mistake in presuming that the self-interests of organizations, specifically banks and others, were such that they were best capable of protecting their own shareholders and their equity in the firms’ (Clark and Treanor, 2008). The model Greenspan referred to was not a particular technical model of the financial sector, but rather a broad way of thinking that emphasized the positive consequences of self-interested action.

The effects of economics as a style of reasoning are likely to be complex, and harder to pinpoint than, for example, whether an economist’s tax policy recommendation becomes law. Again, they are more likely to matter earlier in the policy process, before the goals of policy are defined and the terms of debate set. More generally, the economic style of reasoning is associated with the drive to formalize and quantify. We now turn to the concrete economic policy devices that help to do just that.

Economic policy devices While economic style of reasoning refers to the generic analytical process associated with economics, here we discuss more technical, locally specific *policy devices*. We adapt this concept from Muniesa *et al.*’s market devices: ‘the material and discursive assemblages that intervene in the construction of markets’ (2007, p. 2). Such sociotechnical devices bring together people, knowledge, and material things in ways that turn the messy, endlessly complex world into a formal, calculative order that can be used productively. While devices begin as fragile, unstable networks, in time they can become extremely durable and influential.

Martha Poon (2007, 2009), for example, shows how the market device of FICO credit scores came to be assembled, stabilized, and circulated over a fifty-year period. The FICO score originated with a firm (Fair Isaac Corporation) that

produced a scorecard, but over time it became a complex, formal, but evolving set of calculative practices embedded in a network of banks, government agencies, credit bureaus, consumers, computing machines, and so on. In turn, its circulation transformed lending practices and made it possible to restructure the mortgage market into prime and subprime segments, and has reshaped the behaviour of consumers who try to improve their scores or game the system.

Such devices are rife in government as well as in markets. Policy devices need not be economic; censuses, for example, are important devices for seeing the population, not the economy. But economics, with its penchant for quantification, plays a role in producing a wide variety of policy devices.

Such devices can usefully be grouped into two types: devices for seeing, and devices for choosing. The former includes those that produce numbers and categories that allow us to perceive the world in new or sharper ways. As scholars have long noted, policymakers suffer both from incomplete information and from too much of it (March and Simon, 1958; Lindblom, 1959). Faced with a vast array of choices, they rely on various tricks to narrow their field of vision enough to make it possible to act (Scott, 1998). The production of numbers that describe the world—numbers like GDP, the inflation rate, the unemployment rate—help policymakers to see crisply certain facets of it that, without the devices that produce them, would be blurry at best.

Devices for choosing go a step further by establishing formal, rational procedures for making decisions. These range from the bill-scoring practices of the US Congressional Budget Office (CBO), which produces numbers reflecting the expected costs of proposed legislation (Joyce, 2011); to calculations of the ‘value of a statistical life,’ which are used in decisions about the costs and benefits of regulation (Viscusi, 2009); to the technical procedures for auctioning off the electromagnetic spectrum (Guala, 2001). To the extent that economists and their knowledge play a part in the construction of such devices, and the devices themselves have effects, we can argue that economics has effects.

By definition, devices for choosing are made of myriad heterogeneous objects. These may include, but are never limited to, economists and their knowledge. For example, economists are very visible in the creation of devices that produce cost–benefit calculations and Quality-Adjusted Life Years (which quantify the benefit of medical treatments in terms of both years of life and their health quality), but these also draw on the knowledge of engineers (Porter, 1996) and physicians (Ashmore *et al.*, 1989; Sjögren and Helgesson, 2007). These devices require the enrolment of many different actors—those who collect the information that goes into the device, the machines and procedures for producing the calculations, an audience that comes to demand the output—if they are to gain significance. The mere production of a number is not enough: many government statistics are produced, but few garner much attention.

Policy devices vary in their degree of stability, which may change over time. National income statistics, for example, took decades to solidify globally. Before the 1930s they were available for only a handful of countries and were not produced by government agencies (Studenski, 1958). Economists in the US, UK, and Canada helped make national income accounting a useful tool for macroeconomic and military policymaking (Edelstein, 2001; Tily, 2009), then worked to produce an international standard that was adopted by the United Nations in 1953. By 1975, more than 100 countries reported GNP data to the United Nations (McNeely, 1995), and the politics of growth had become central in both developed and developing countries (Mitchell, 2002; O'Bryan, 2009; Yarrow, 2010). Today, the policy device that produces GDP is very stable. Though people still critique what GDP does and doesn't count (Waring, 1999; Abraham and Mackie, 2005), standards set decades ago and followed by more than a hundred countries are very difficult to renegotiate.

At the other extreme, efforts to establish a new policy device may gain some ground yet ultimately remain unsuccessful. In 1965 President Lyndon B. Johnson declared that all US government agencies would adopt the Planning-Programming-Budgeting System (PPBS) based on quantitative economic methods of analysing policy alternatives (Novick, 1966). While PPBS was by that point well-established in the Defense Department (Amadae, 2003), and other agencies used elements of it (Eisner, 1991; O'Connor, 2001), the attempt to further expand its use ran into organizational and political barriers, and by 1971 it was formally discontinued (Schick, 1973). But while the device was never stabilized outside the Defense Department, the effort to expand it had a variety of political effects, helping to centralize authority in some places (O'Connor, 2001) and creating new offices in the bureaucracy that would themselves long outlast PPBS (West, 2011).

In between is a wide range of devices that achieve some degree of stability, yet are still subject to reconfiguration. For example, CBO scoring uses procedures established in the 1970s by economists. While not as automated as the production of GDP, it is sufficiently systematized that both political parties see it as more-or-less objective (Joyce, 2011). Yet a longstanding debate exists over whether CBO should replace its static scoring of tax bills—meaning that the macroeconomic effects of the bills are not taken into account in estimating their cost—with dynamic scoring, which would include estimated macroeconomic effects. This debate is both technical and political, since dynamic scoring would tend to make tax cuts look less costly. It has been ongoing since the 1970s and is still active, though the change has not yet been made (Bartlett, 2013). The US poverty line, stable since 1965 yet continually disputed and on the verge of apparent change, is a similar example (Haveman, 1987; Fisher, 1992; NRC, 1996, 2005).

Once such devices become relatively stable, they have several kinds of political effects. First, while all policy devices involve political and moral choices, as they

solidify they tend to hide those choices. Most forms of cost–benefit analysis, for example, assume that distributional consequences are irrelevant; a decision that will provide \$10 000 worth of benefit to 100 poor families is, in theory, slightly inferior to one that will increase Bill Gates’ wealth by \$1 000 001. When such decisions become black-boxed, the fact that they have been made disappears.⁸

Similarly, when national income statistics were first developed, economists actively debated whether and how to include the value of unpaid labour like housework, which is clearly economically productive but not easily quantifiable (Waring, 1999; Abraham and Mackie, 2005). Ultimately it was left out, with the strange result that, as generations of economists have pointed out, if a man married his maid, GDP would fall.

Second, beyond the politics built into such devices, they also restructure the political relations around them. Some groups win, some lose. Breslau (1997b) shows that economists’ establishment of net impact analysis as the legitimate way to evaluate the success of labour market programmes politically disadvantaged local programme offices by making it harder to demonstrate success. Formalizing procedures for calculating the value of a statistical life benefits some groups by legitimating their claims of injury while weakening the claims made by others (Viscusi, 2009). The FCC’s auctions of the electromagnetic spectrum were, after much politicking, structured in a way that favoured large telecommunication companies (Nik-Khah, 2008). GDP of a nation has effects both economic (for example, affecting eligibility for World Bank assistance; see Jerven, 2013) and geopolitical (China’s surpassing of Japan as the world’s second-largest economy was widely read as having military implications; e.g. Dawson and Dean, 2011).

But beyond simply increasing the power of one group vis-à-vis another, policy devices can open up the possibility for new kinds of politics. For example, economists in the US government helped in the late 1960s to create a new kind of mortgage bond called a pass-through certificate. This was a way of collateralizing mortgage loans that transferred ownership, as well as the payment stream, directly to purchasers while retaining the risk of default. That creation, essentially the first mortgage-backed security, not only solved President Johnson’s immediate political problem of needing to keep mortgage loans off the federal budget, but also produced a host of new political opportunities: for expanding government lending without apparent budgetary consequences, and for promoting home ownership by attracting more capital to the mortgage market (Quinn, 2010).

⁸Distributional effects can be weighted in cost–benefit analysis, but because doing so requires explicit value judgments, it is politically easier to not weight them and say that they should be considered outside the cost–benefit analysis. The solidity of the numbers produced tends to erase the distributional assumptions from sight, however.

Finally, economic policy devices not only incorporate political choices and affect power relations and political possibilities, but as they proliferate through policy-making arenas, ‘seeing like a state’ comes to mean ‘seeing like an economist’ (cf. [Scott, 1998](#)). Our attention is drawn towards certain facets of the world and away from others. GDP, one of the best-established of such devices, persistently directs our attention to changes in the formal market economy; no equivalent device brings income inequality, for example, to the forefront of our minds each quarter ([Hirschman, 2013](#)). Policy evaluation practices made it easier to ‘see’ the failure of labour market programmes, by making it possible ‘that a program that reaches its target population and achieves high placement rates might actually be counted a failure’ ([Breslau, 1997b](#), p. 893). Cost–benefit analyses made the costs of regulation much more visible ([Derthick and Quirk, 1985](#)). Policy devices shape what we attend to.

It would be incorrect to reduce the political effects of economic policy devices to the political effects of economists. This is why we draw a distinction between the process of stabilizing such devices, in which one can identify some specific role for economists or economics, and their subsequent impact. Yet studying the creation and effects of policy devices enriches the claim of several literature that economics is at its most influential in debates that are technical, far from the public eye, and most like ‘fine-tuning’ a policy instrument ([Hall, 1993](#)). Here, interactions between the cutting edge of the academic discipline and the on-the-ground work done in bureaucratic agencies can result in the stabilization of a policy device, which may in turn outlast the tenure of any particular economist or policymaker, and remain stable even as both fields evolve.

4. Studying influence across three modes

For economists to have political effects, then, they have to create a source of power. We suggest that there are at least three major sources of power that they can help to create: professional authority; institutional position; and cognitive infrastructure, including both styles of reasoning and policy devices. Thus, our proposed research agenda asks how economists and others produce these various sources of power in particular political contexts. While each source is conceptually distinct, the three often feed into one another. The successful creation of the policy device of GDP helped raise the professional authority of economists, which they were in turn able to parlay into formal and informal institutional positions as policymakers became more concerned with economic growth—something policymakers could not have ‘seen’ without GDP.

Yet success in one situation can give economists the power to make a very different set of decisions than they ones on which they first proved their capability. Just as physicists transformed their Manhattan Project success into durable institutional

positions as science advisers and professional authority over science policy in the USA, the success of US economists at solving logistical problems during World War II led to the creation of their own institutional positions and professional authority. Like the physicists, economists' newfound authority was the authority to make very different kinds of decisions than those on which they had demonstrated such skill.

Our agenda also suggests that the question of how each mode of power is exercised may be usefully separated from the question how it is created. Once economists have managed to acquire a certain degree of professional authority in a particular country, or on a particular issue, how does that authority then shape the policy process, both directly and indirectly? Once a certain position for economists has been institutionalized in government, how do the people who hold that position play a role in larger political battles? And once economic styles of reasoning have spread, or policy devices have been assembled, how do they shape the political decisions of the non-economists who then use them to think with?

Thinking in terms of these three modes can shed further light on the main findings of the literature reviewed above. Economists may have more independent effects under uncertain conditions, or when they can define decisions as technical. But being able to exercise these effects is dependent on their having some authority and some institutional position to begin with. If our question is, 'What has to be accomplished in order for economists to have policy effects?', the political conditions must be right, but the preconditions of having some authority and position, and possibly having policy devices in place, must also be met. Similarly, if we think that economists matter more because their knowledge restructures politics rather than because of the advice they give, we need to understand how they put policy devices into place, and where they first acquire the authority and position that allow them to do so.

The actual impact of economists on policy may be quite different outside the context of the US and western Europe, despite the globalization of the profession and the impact of transnational organizations such as the IMF and the World Bank. More attention is undoubtedly needed to the question of how global trends in economics play out at the national level, and the conditions that affect national adoption of transnational policy prescriptions. Yet we think this general framework will be useful for identifying the pathways through which economists create sources of political power, and through which those sources have policy effects, across a broad range of governments and configurations of political institutions, so long as they involve bureaucratic policymaking processes.

Thus, we close by suggesting that the answer to our initial question, 'Do economists make policies?', is 'Yes, but...' Yes, but a more productive way to think about the question is to split it: 'What has to be accomplished in order for economists to have policy effects?', and 'Once sources of political power are created,

through what paths do those effects occur?’ This reconceptualization may lead to less tidy research designs, but it will allow us to take advantage of the wealth of insights already generated to map the diverse and transformative, if fuzzy and diffuse, policy influence of modern economics.

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References

- Abbott, A. (1988) *The System of Professions: An Essay on the Division of Expert Labor*, Chicago, The University of Chicago Press.
- Abbott, A. (2005) ‘Linked Ecologies: States and Universities as Environments for Professions’, *Sociological Theory*, **23**, 245–274.
- Abraham, K. G. and Mackie, C. D. (2005) *Beyond the Market: Designing Nonmarket Accounts for the United States*, Washington, DC, National Academies Press.
- Allison, G. (2006) ‘Emergence of Schools of Public Policy: Reflections by a Founding Dean’. In Moran, M. and Rein, M. (eds) *The Oxford Handbook of Public Policy*, Oxford, Oxford University Press, pp. 58–79.
- Amable, B. (2011) ‘Morals and Politics in the Ideology of Neo-Liberalism’, *Socio-Economic Review*, **9**, 3–30.
- Amadae, S. M. (2003) *Rationalizing Capitalist Democracy: The Cold War Origins of Rational Choice Liberalism*, Chicago, University of Chicago Press.
- Anderson, E. (2008) ‘Experts, Ideas, and Policy Change: The Russell Sage Foundation and Small Loan Reform, 1909–1941’, *Theory and Society*, **37**, 271–310.
- Ashmore, M., Mulkey, M. J. and Pinch, T. (1989) *Health and Efficiency: A Sociology of Health Economics*, London, Open University Press.
- Babb, S. (2001) *Managing Mexico: Economists from Nationalism to Neoliberalism*, Princeton, Princeton University Press.
- Babb, S. (2007) ‘Embeddedness, Inflation, and International Regimes: The Imf in the Early Postwar Period’, *American Journal of Sociology*, **113**, 128–164.

- Babb, S. (2009) *Behind the Development Banks: Washington Politics, World Poverty, and the Wealth of Nations*, Chicago, University of Chicago Press.
- Ban, C. and Blyth, M. (2013) 'The BRICs and the Washington Consensus: An Introduction', *Review of International Political Economy*, **20**, 241–255.
- Banerjee, A. V. and Duflo, E. (2012) *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*, New York, PublicAffairs.
- Barber, W. J. (1985) *From New Era to New Deal: Herbert Hoover, the Economists, and American Economic Policy, 1921–1933*, Cambridge, Cambridge University Press.
- Barber, W. J. (1996) *Designs Within Disorder: Franklin D. Roosevelt, the Economists, and the Shaping of American Economic Policy, 1933–1945*, Cambridge, Cambridge University Press.
- Barry, A. (2002) 'The Anti-Political Economy', *Economy and Society*, **31**, 268–284.
- Bartlett, B. (2013) 'Dynamic Scoring Once Again', New York Times, accessed at <http://economix.blogs.nytimes.com/2013/04/02/dynamic-scoring-once-again/> on February 26, 2014.
- Berman, E. P. (2012) *Creating the Market University: How Academic Science Became an Economic Engine*, Princeton, Princeton University Press.
- Berman, E. P. and Milanes-Reyes, L. M. (2013) 'The Politicization of Knowledge Claims: The "Laffer Curve" in the U.S. Congress', *Qualitative Sociology*, **36**, 53–79.
- Berman, S. (1998) *The Social Democratic Moment: Ideas and Politics in the Making of Interwar Europe*, Cambridge, Harvard University Press.
- Bernstein, M. (1995) 'American Economics and the National Security State, 1941–1953', *Radical History Review*, **63**, 8–26.
- Bernstein, M. A. (2001) *A Perilous Progress: Economists and Public Purpose in Twentieth-Century America*, Princeton, Princeton University Press.
- Beunza, D. and Stark, D. (2004) 'Tools of the Trade: The Socio-Technology of Arbitrage in a Wall Street Trading Room', *Industrial and Corporate Change*, **13**, 369–400.
- Bijker, W. E., Bal, R. and Hendriks, R. (2009) *The Paradox of Scientific Authority: The Role of Scientific Advice in Democracies*, Cambridge, MIT Press.
- Block, F. (1977) 'The Ruling Class Does Not Rule: Notes on the Marxist Theory of the State', *Socialist Revolution*, **33**, 6–28.
- Bloor, D. (1991 [1976]) *Knowledge and Social Imagery*, Chicago, University of Chicago Press.
- Blyth, M. (2002) *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century*, Cambridge, Cambridge University Press.
- Bockman, J. K. (2011) *Markets in the Name of Socialism: The Left-Wing Origins of Neoliberalism*, Stanford, Stanford University Press.
- Bockman, J. and Eyal, G. (2002) 'Eastern Europe as a Laboratory for Economic Knowledge: The Transnational Roots of Neoliberalism', *American Journal of Sociology*, **108**, 310–352.
- Bourdieu, P. (1988) *Homo Academicus*, Stanford, Stanford University Press.

- Breslau, D. (1997a) 'Contract Shop Epistemology: Credibility and Problem Construction in Applied Social Science', *Social Studies of Science*, **27**, 363–394.
- Breslau, D. (1997b) 'The Political Power of Research Methods: Knowledge Regimes in U.S. Labor Market Policy', *Theory and Society*, **26**, 869–902.
- Breslau, D. (1998) *In Search of the Unequivocal: The Political Economy of Measurement in U.S. Labor Policy*, Westport, CT, Greenwood Publishing Group.
- Breslau, D. (2013) 'Designing a Market-Like Entity: Economics in the Politics of Market Formation', *Social Studies of Science*, **43**, 829–851.
- Brint, S. (1990) 'Rethinking the Policy Influence of Experts: From General Characterizations to Analysis of Variation', *Sociological Forum*, **5**, 361–385.
- Callon, M. (1986) 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay'. In Law, J. (ed.) *Power, Action and Belief: A New Sociology of Knowledge?*, London, Routledge, pp. 196–223.
- Callon, M. (1998a) 'The Embeddedness of Economic Markets in Economics'. In Callon, M. (ed.) *The Laws of the Markets*, Oxford, Blackwell, pp. 1–57.
- Callon, M. (ed.) (1998b) *The Laws of the Markets*, Oxford, Blackwell.
- Callon, M., Millo, Y. and Muniesa, F. (eds) (2007) *Market Devices*, New York, Wiley.
- Campbell, J. L. (1998) 'Institutional Analysis and the Role of Ideas in Political Economy', *Theory and Society*, **27**, 377–409.
- Campbell, J. L. (2002) 'Ideas, Politics, and Public Policy', *Annual Review of Sociology*, **28**, 21–38.
- Campbell, J. L. and Pedersen, O. K. (2014) *The National Origins of Policy Ideas: Knowledge Regimes in the United States, France, Germany and Denmark*, Princeton, Princeton University Press.
- Carruthers, B. G. (2010) 'Knowledge and Liquidity: Institutional and Cognitive Foundations of the Subprime Crisis', *Research in the Sociology of Organizations*, **30**, 157–182.
- Carruthers, B. G. and Espeland, W. N. (1991) 'Accounting for Rationality: Double-Entry Bookkeeping and the Rhetoric of Economic Rationality', *American Journal of Sociology*, **97**, 31–69.
- Carstensen, M. B. (2011) 'Ideas Are Not as Stable as Political Scientists Want Them to Be: A Theory of Incremental Ideational Change', *Political Studies*, **59**, 596–615.
- Chorev, N. (2007) *Remaking U.S. Trade Policy*, Ithaca, Cornell University Press.
- Chwieroth, J. M. (2010) *Capital Ideas: The IMF and the Rise of Financial Liberalization*, Princeton, Princeton University Press.
- Clark, A. and Treanor, J. (2008) 'Greenspan - I Was Wrong About the Economy. Sort Of', *The Guardian*, accessed at <http://www.theguardian.com/business/2008/oct/24/economics-creditcrunch-federal-reserve-greenspan> on February 26, 2014.
- Collins, R. M. (2000) *More: The Politics of Economic Growth in Postwar America*, Oxford, Oxford University Press.

- Dawson, C. and Dean, J. (2011) 'Rising China Bests A Shrinking Japan', *Wall Street Journal*, accessed at <http://online.wsj.com/news/articles/SB10001424052748704593604576140912411499184> on February 26, 2014.
- Derthick, M. and Quirk, P. J. (1985) *The Politics of Regulation*, Washington, DC, Brookings Institution Press.
- Dezalay, Y. and Garth, B. G. (2002) *The Internationalization of Palace Wars: Lawyers, Economists, and the Contest to Transform Latin American States*, Chicago, University of Chicago Press.
- Dezalay, Y. and Garth, B. G. (2008) 'National Usages for a "Global" Science: The Dissemination of New Economic Paradigms as a Hegemonic Global Strategy and a National Strategy for the Reproduction of Governing Elites'. In Mallard, G., Paradiise, C. and Peerbaye, A. (eds) *Global Science and National Sovereignty: Studies in Historical Sociology of Science*, London, Routledge, pp. 143–167.
- Dobbin, F. and Dowd, T. J. (2000) 'The Market That Antitrust Laws Built', *American Sociological Review*, **65**, 631–657.
- Drori, G. S., Meyer, J. W., Ramirez, F. O. and Schofer, E. (2003) *Science in the Modern World Polity: Institutionalization and Globalization*, Stanford, Stanford University Press.
- Edelstein, M. (2001) 'The Size of the U.S. Armed Forces During World War II: Feasibility and War Planning', *Research in Economic History*, **20**, 47–97.
- Eden, L. (2004) *Whole World on Fire: Organizations, Knowledge, and Nuclear Weapons Destruction*, Ithaca, Cornell University Press.
- Eisner, M. A. (1991) *Antitrust and the Triumph of Economics: Institutions, Expertise, and Policy Change*, Chapel Hill, University of North Carolina Press.
- Emmison, M. (1983) "'The Economy:": Its Emergence in Media Discourse'. In Davis, H. and Walton, P. (eds) *Language, Image, Media*, Oxford, Basil Blackwell, pp. 139–155.
- Espeland, W. N. (1998) *The Struggle for Water: Politics, Rationality, and Identity in the American Southwest*, Chicago, University of Chicago Press.
- Espeland, W. N. and Stevens, M. L. (2008) 'A Sociology of Quantification', *European Journal of Sociology*, **48**, 401–436.
- Espeland, W. N. and Vannebo, B. I. (2007) 'Accountability, Quantification, and Law', *Annual Review of Law and Social Science*, **2007**, 21–43.
- Evans, R. (1999) *Macroeconomic Forecasting: A Sociological Appraisal*, New York, Routledge.
- Evans, P., Rueschemeyer, D. and Skocpol, T. (eds) (1985) *Bringing the State Back In*, Cambridge, Cambridge University Press.
- Eyal, G. (2006) *The Disenchantment of the Orient: Expertise in Arab Affairs and the Israeli State*, Stanford, Stanford University Press.
- Eyal, G. (2013) 'For a Sociology of Expertise: The Social Origins of the Autism Epidemic', *American Journal of Sociology*, **118**, 863–907.
- Eyal, G. and Buchholz, L. (2010) 'From the Sociology of Intellectuals to the Sociology of Interventions', *Annual Review of Sociology*, **36**, 117–137.

- Eyal, G., Hart, B., Onculer, E., Oren, N. and Rossi, N. (2010) *The Autism Matrix*, Cambridge, Polity Press.
- Feldstein, M. (1992) 'The Council of Economic Advisers and Economic Advising in the United States', *Economic Journal*, **102**, 1223–1234.
- Feldstein, M. (ed.) (1994) *American Economic Policy in the 1980s*, Chicago, University of Chicago Press.
- Ferguson, J. (1990) *The Anti-Politics Machine: Development, Depoliticization, and Bureaucratic Power in Lesotho*, Minneapolis, University of Minnesota Press.
- Ferguson, J. (2011) 'Toward a Left Art of Government: From "Foucauldian Critique" to Foucauldian Politics', *History of the Human Sciences*, **24**, 61–68.
- Financial Crisis Inquiry Commission, Rock Center for Corporate Governance, Stanford Law School (2010) *FCIC Staff Audiotape of Interview with Lord Adair Turner*, Financial Services Authority (UK), accessed at <http://fcic.law.stanford.edu/interviews/view/102> on February 26, 2014.
- Fisher, G. M. (1992) 'The Development and History of the Poverty Thresholds', *Social Security Bulletin*, **55**, 3–14.
- Fleishman, J. L. (1990) 'A New Framework for Integration: Policy Analysis and Public Management', *American Behavioral Scientist*, **33**, 733–754.
- Fourcade, M. (2006) 'The Construction of a Global Profession: The Transnationalization of Economics', *American Journal of Sociology*, **112**, 145–194.
- Fourcade, M. (2009) *Economists and Societies: Discipline and Profession in the United States, Britain, and France, 1890s to 1990s*, Princeton, Princeton University Press.
- Fourcade-Gourinchas, M. and Babb, S. L. (2002) 'The Rebirth of the Liberal Creed: Paths to Neoliberalism in Four Countries', *American Journal of Sociology*, **108**, 533–579.
- Fourcade, M. and Khurana, R. (2013) 'From Social Control to Financial Economics: The Linked Ecologies of Economics and Business in Twentieth Century America', *Theory and Society*, **42**, 121–159.
- Franklin, J. S. (forthcoming) *Irrelevant Genius: The Emergence of Professional Economics in the United States, 1885–1929*, PhD thesis in History, College Park, University of Maryland.
- Freidson, E. (1986) *Professional Powers: A Study of the Institutionalization of Formal Knowledge*, Chicago, University of Chicago Press.
- Gieryn, T. F. (1999) *Cultural Boundaries of Science: Credibility on the Line*, Chicago, University of Chicago Press.
- Gleeson, R. E. (1997) *The Rise of Graduate Management Education in American Universities, 1908–1970*, PhD thesis in History, Pittsburgh, Carnegie Mellon University.
- Grunwald, M. (2012) *The New New Deal: The Hidden Story of Change in the Obama Era*, New York, Simon & Schuster.
- Guala, F. (2001) 'Building Economic Machines: The FCC Auctions', *Studies in History and Philosophy of Science*, **32**, 453–477.

- Guglielmo, M. (2008) 'The Contribution of Economists to Military Intelligence during World War II', *Journal of Economic History*, **68**, 109–150.
- Gutiérrez, R. A. (2010) 'When Experts Do Politics: Introducing Water Policy Reform in Brazil', *Governance*, **23**, 59–88.
- Haas, P. (1989) 'Do Regimes Matter? Epistemic Communities and Mediterranean Pollution Control', *International Organization*, **43**, 377–403.
- Haas, P. (1992) 'Introduction: Epistemic Communities and International Policy Coordination', *International Organization*, **46**, 1–36.
- Hacking, I. (1992) 'Statistical Language, Statistical Truth, and Statistical Reason: The Self-Authentication of a Style of Scientific Reasoning', *Social Dimensions of Science*, **3**, 130–157.
- Hall, P. A. (ed.) (1989) *The Political Power of Economic Ideas: Keynesianism Across Nations*, Princeton, Princeton University Press.
- Hall, P. A. (1993) 'Policy Paradigms, Social Learning and the State: The Case of Economic Policymaking in Britain', *Comparative Politics*, **25**, 275–296.
- Halliday, T. C. (1987) *Beyond Monopoly: Lawyers, State Crises, and Professional Empowerment*, Chicago, University of Chicago Press.
- Halliday, T. C. and Carruthers, B. G. (2009) *Bankrupt: Global Lawmaking and Systemic Financial Crisis*, Stanford, Stanford University Press.
- Haveman, R. H. (1987) *Poverty Policy and Poverty Research: The Great Society and the Social Sciences*, Madison, University of Wisconsin Press.
- Hersch, J. and Viscusi, W. K. (2012) 'Law and Economics as a Pillar of Legal Education', *Review of Law and Economics*, **8**, 487–510.
- Hilgartner, S. (2000) *Science on Stage: Expert Advice as Public Drama*, Palo Alto, Stanford University Press.
- Hirschman, D. (2013) 'An Economy Free of Inequality: How Economics Rediscovered Income Distribution', paper presented at the Annual Conference of SASE, University of Milan, Milan, Italy, June 27.
- Ikenberry, G. J. (1992) 'A World Economy Restored: Expert Consensus and the Anglo-American Postwar Settlement', *International Organization*, **46**, 289–321.
- Jacob, H. (1988) *Silent Revolution: The Transformation of Divorce Law in the United States*, Chicago, University of Chicago Press.
- Jerven, M. (2013) *Poor Numbers: How We Are Misled by African Development Statistics and What to Do About It*, Ithaca, Cornell University Press.
- Joyce, P. G. (2011) *The Congressional Budget Office: Honest Numbers, Power, and Policy-making*, Washington, DC, Georgetown University Press.
- Keller, A. C. (2009) *Science in Environmental Policy: The Politics of Objective Advice*, Cambridge, MIT Press.

- Kevles, D. J. (1978) *The Physicists: The History of Scientific Community in Modern America*, Cambridge, Harvard University Press.
- Kingdon, J. W. (1984) *Agendas, Alternatives, and Public Policies*, New York, HarperCollins Publishers.
- Kwak, J. (2013) 'Cultural Capture and the Financial Crisis'. In Carpenter, D. and Moss, D. A. (eds) *Preventing Regulatory Capture: Special Interest Influence and How to Limit It*, Cambridge, Cambridge University Press, pp. 71–98.
- Lacey, J. (2011) *Keep From All Thoughtful Men: How U.S. Economists Won World War II*, Annapolis, Naval Institute Press.
- Lampland, M. (2010) 'False Numbers as Formalizing Practices', *Social Studies of Science*, **40**, 377–404.
- Larson, M. S. (1977) *The Rise of Professionalism: A Sociological Analysis*, Berkeley, University of California Press.
- Li, J. (forthcoming) *Economist and State: The Rise of a Profession in Contemporary China*, PhD thesis in Sociology, Albany, University at Albany, SUNY.
- Lindblom, C. E. (1959) 'The Science of "Muddling Through"', *Public Administration Review*, **19**, 79–88.
- Lindvall, J. (2009) 'The Real but Limited Influence of Expert Ideas', *World Politics*, **61**, 703–730.
- MacKenzie, D. (2003) 'An Equation and Its Worlds: Bricolage, Exemplars, Disunity and Performativity in Financial Economics', *Social Studies of Science*, **33**, 831–868.
- MacKenzie, D. (2006) *An Engine, Not A Camera: How Financial Models Shape Markets*, Cambridge, MIT Press.
- MacKenzie, D. (2011) 'The Credit Crisis as a Problem in the Sociology of Knowledge', *American Journal of Sociology*, **116**, 1778–1841.
- MacKenzie, D. and Millo, Y. (2003) 'Constructing a Market, Performing Theory', *American Journal of Sociology*, **109**, 107–145.
- MacKenzie, D., Muniesa, F. and Siu, L. (eds) (2007) *Do Economists Make Markets? On the Performativity of Economics*, Princeton, Princeton University Press.
- Major, A. (2010) 'Monetary Orders, Financial Dependence, and Idea Selection: The International Constraints on American Monetary Policy, 1961–1963', *Political Power and Social Theory*, **21**, 49–92.
- Mansfield, E. (1972) 'Contribution of R&D to Economic Growth in the United States', *Science*, **175**, 477–486.
- March, J. and Simon, H. (1958) *Organizations*, Oxford, Wiley.
- McNeely, C. L. (1995) *Constructing the Nation-State: International Organization and Prescriptive Action*, Westport, CT, Greenwood Press.
- Medvetz, T. (2012) *Think Tanks in America*, Chicago, University of Chicago Press.

- Mehta, J. (2010) 'The Varied Roles of Ideas in Politics'. In Béland, D. and Cox, R. H. (eds) *Ideas and Politics in Social Science Research*, Oxford, Oxford University Press, pp. 23–46.
- Meyer, J., Boli, J., Thomas, G. M. and Ramirez, F. O. (1997) 'World Society and the Nation State', *American Journal of Sociology*, **103**, 144–181.
- Miller, P. and Rose, N. (1990) 'Governing Economic Life', *Economy and Society*, **19**, 2–31.
- Millo, Y. and MacKenzie, D. (2009) 'The Usefulness of Inaccurate Models: Towards an Understanding of the Emergence of Financial Risk Management', *Accounting, Organizations, and Society*, **34**, 638–653.
- Mirowski, P. and Plehwe, D. (eds) (2009) *The Road From Mont Pelerin: The Making of the Neoliberal Thought Collective*, Cambridge, Harvard University Press.
- Mitchell, T. (1998) 'Fixing the Economy', *Cultural Studies*, **12**, 81–101.
- Mitchell, T. (2002) *Rule of Experts: Egypt, Techno-Politics, Modernity*, Berkeley, University of California Press.
- Montecinos, V. and Markoff, J. (eds) (2010) *Economists in the Americas*, Cheltenham, UK, Edward Elgar Publishing.
- Mudge, S. (2008) 'What Is Neoliberalism?', *Socio-Economic Review*, **6**, 703–731.
- Mudge, S. L. and Vauchez, A. (2012) 'Building Europe on a Weak Field: Law, Economics, and Scholarly Avatars in Transnational Politics', *American Journal of Sociology*, **118**, 449–492.
- Muniesa, F., Millo, Y. and Callon, M. (2007) 'An Introduction to Market Devices', *Sociological Review*, **55**, 1–12.
- National Research Council (1996) *Measuring Poverty: A New Approach*, Washington, DC, National Academies Press.
- National Research Council (2005) *Experimental Poverty Measures: Summary of a Workshop*, Washington, DC, National Academies Press.
- Nelkin, D. (1975) 'The Political Impact of Technical Expertise', *Social Studies of Science*, **5**, 35–54.
- Nik-Khah, E. (2008) 'A Tale of Two Auctions', *Journal of Institutional Economics*, **4**, 73–97.
- Novick, D. (1966) *Origin and History of Program Budgeting*, RAND Paper Series P-3427, Santa Monica, RAND Corporation.
- O'Bryan, S. (2009) *The Growth Idea: Purpose and Prosperity in Postwar Japan*, Honolulu, University of Hawaii.
- O'Connor, A. (2001) *Poverty Knowledge: Social Science, Social Policy, and the Poor in Twentieth-Century U.S. History*, Princeton, Princeton University Press.
- Parsons, C. (2003) *A Certain Idea of Europe*, Ithaca, Cornell University Press.
- Poon, M. (2007) 'Scorecards as Devices for Consumer Credit: The Case of Fair, Isaac & Company Incorporated', *Sociological Review*, **55**, 284–306.
- Poon, M. (2009) 'From New Deal Institutions to Capital Markets: Commercial Consumer Risk Scores and the Making of Subprime Mortgage Finance', *Accounting, Organizations and Society*, **34**, 654–674.

- Porter, T. M. (1996) *Trust in Numbers*, Princeton, Princeton University Press.
- Quinn, S. (2010) Government Policy, Housing, and the Origins of Securitization, 1780–1968, PhD thesis in Sociology, Berkeley, University of California.
- Reay, M. J. (2012) ‘The Flexible Unity of Economics’, *American Journal of Sociology*, **118**, 45–87.
- Rose, N. (1992) ‘Engineering the Human Soul: Analyzing Psychological Expertise’, *Science in Context*, **5**, 351–369.
- Rutherford, M. (2011) *The Institutional Movement in American Economics, 1918–1947: Science and Social Control*, Cambridge, Cambridge University Press.
- Samuelson, P. A. (1944) ‘Unemployment Ahead: A Warning to the Washington Expert’, *New Republic*, **111**, 297–299.
- Schick, A. (1973) ‘A Death in the Bureaucracy: The Demise of Federal PPB’, *Public Administration Review*, **33**, 146–156.
- Schmidt, V. A. (2008) ‘Discursive Institutionalism: The Explanatory Power of Ideas and Discourse’, *Annual Review of Political Science*, **11**, 303–326.
- Schmidt, V. A. (2010) ‘Taking Ideas and Discourse Seriously: Explaining Change through Discursive Institutionalism as the Fourth “New Institutionalism”’, *European Political Science Review*, **2**, 1–25.
- Schneiberg, M. (2007) ‘What’s on the Path? Path Dependence, Organizational Diversity and the Problem of Institutional Change in the US Economy, 1900–1950’, *Socio-Economic Review*, **5**, 47–80.
- Scott, J. C. (1998) *Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed*, New Haven, Yale University Press.
- Sjögren, E. and Helgesson, C.-F. (2007) ‘The Q(U)alyfying Hand: Health Economics and Medicine in the Shaping of Swedish Markets for Subsidized Pharmaceuticals’, *Sociological Review*, **55**, 215–240.
- Smith, M. A. (2007) *The Right Talk: How Conservatives Transformed the Great Society Into the Economic Society*, Princeton, Princeton University Press.
- Solovey, M. (2013) *Shaky Foundations: The Politics-Patronage-Social Science Nexus in Cold War America*, New Brunswick, Rutgers University Press.
- Solow, R. M. (1957) ‘Technical Change and the Aggregate Production Function’, *Review of Economics and Statistics*, **39**, 214–231.
- Stampnitzky, L. (2013) *Disciplining Terror: How Experts Invented “Terrorism,”* Cambridge, Cambridge University Press.
- Stensland, B. (2006) ‘Cultural Categories and the American Welfare State: The Case of Guaranteed Income Policy’, *American Journal of Sociology*, **111**, 1273–1326.
- Stone, D. A. (1989) ‘Causal Stories and the Formation of Policy Agendas’, *Political Quarterly*, **104**, 281–300.

- Studenski, P. (1958) *The Income of Nations: Theory, Measurement, and Analysis, Past and Present: A Study in Applied Economics and Statistics*, New York, New York University Press.
- Teles, S. M. (2008) *The Rise of the Conservative Legal Movement: The Battle for Control of the Law*, Princeton, Princeton University Press.
- Thaler, R. H. and Sunstein, C. R. (2008) *Nudge: Improving Decisions About Health, Wealth, and Happiness*, New Haven, Yale University Press.
- Tily, G. (2009) 'John Maynard Keynes and the Development of National Accounts in Britain, 1895–1941', *Review of Income and Wealth*, **55**, 331–359.
- Valverde, M. (2003) *Law's Dream of a Common Knowledge*, Princeton, Princeton University Press.
- Vaughan, D. (1996) *The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA*, Chicago, University of Chicago Press.
- Viscusi, W. K. (2009) 'The Devaluation of Life', *Regulation & Governance*, **3**, 103–127.
- Waring, M. (1999) *Counting for Nothing: What Men Value and What Women Are Worth*, Toronto, University of Toronto Press.
- Weintraub, E. R. (2002) *How Economics Became a Mathematical Science*, Chapel Hill, Duke University Press.
- Weir, M. (1993) *Politics and Jobs: The Boundaries of Employment Policy in the United States*, Princeton, Princeton University Press.
- Weir, M. and Skocpol, T. (1985) 'State Structures and the Possibilities for "Keynesian" Responses to the Great Depression in Sweden, Britain, and the United States'. In Evans, P., Rueschemeyer, D. and Skocpol, T. (eds) *Bringing the State Back In*, Cambridge, Cambridge University Press, pp. 107–163.
- West, W. F. (2011) *Program Budgeting and the Performance Movement: The Elusive Quest for Efficiency in Government*, Washington, DC, Georgetown University Press.
- Yarrow, A. L. (2010) *Measuring America: How Economic Growth Came to Define American Greatness in the Late Twentieth Century*, Amherst, University of Massachusetts Press.
- Yonay, Y. (1998) *The Struggle Over the Soul of Economics: Institutional and Neoclassical Economists in America between the Wars*, Princeton, Princeton University Press.
- Zald, M. N. and Lounsbury, M. (2010) 'The Wizards of Oz: Towards an Institutional Approach to Elites, Expertise and Command Posts', *Organization Studies*, **31**, 963–996.