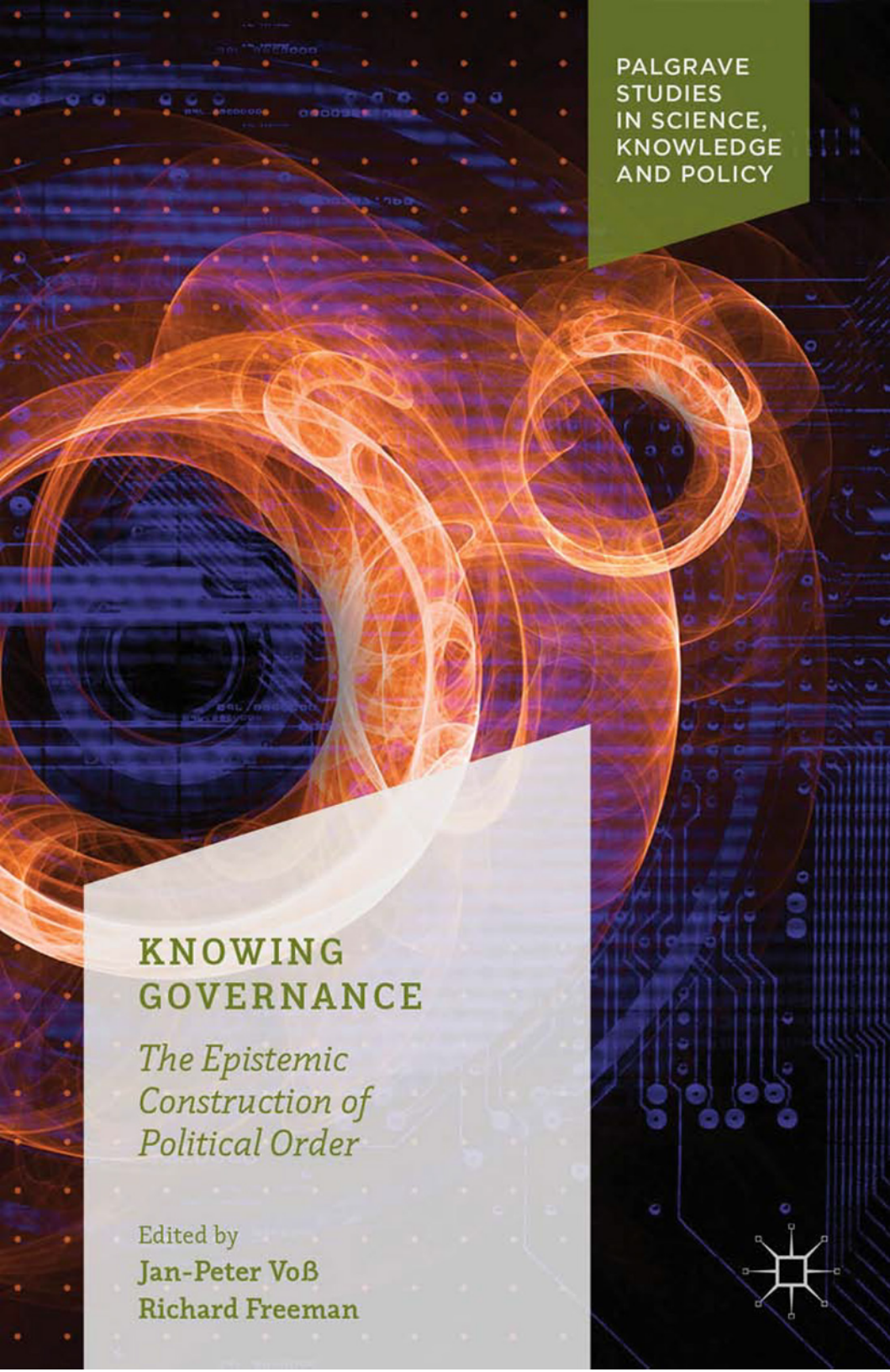
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The Epistemic
Construction of
Political Order
Edited by
Jan-Peter Voß
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Knowing Governance

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Softcover reprint of the hardcover 1st edition 2016 978-1-137-51449-3

First published 2016 by
PALGRAVE MACMILLAN

Palgrave Macmillan in the UK is an imprint of Macmillan Publishers Limited, registered in England, company number 785998, of Houndmills, Basingstoke, Hampshire RG21 6XS.

Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

Palgrave Macmillan is the global academic imprint of the above companies and has companies and representatives throughout the world.

ISBN 978-1-349-56476-7 ISBN 978-1-137-51450-9 (eBook)
DOI 10.1057/9781137514509

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

A catalog record for this book is available from the Library of Congress.

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Preface and Acknowledgements

What does it do to the world to know it? What does it do to governance and to politics to know them in one way or the other? Such questions are of concern for studies of politics and governance as much as for studies of science and knowledge.

For political science these questions are relevant not only because they affect its topic of research, but also because they affect the relation of political science with the object that it studies: the doing of governance and the practising of politics. These questions are commonly posed in epistemological terms: reality is assumed to be there as a given and the challenge is to accurately describe and explain it. But there are ongoing changes in governance as well as developments in the understanding of the practical dimensions of knowing which suggest more complex questions.

The scientisation of politics and the politicisation of science have, at least since the 1960s, been developed as topics that challenged accepted boundaries between knowing and governing. Knowledge has come to be studied as a constitutive dimension of collective order, and as a medium to engage with it and shape it. Interpretive political science and Foucauldian governmentality studies seek to uncover and comprehend the knowing inherent in governing. Likewise, the making of knowledge has been scrutinised for its social dynamics and the way it engages with the world in practical terms, that is, for how it *creates* order rather than merely discovering and mirroring it. That aspiration drives research in science and technology studies and a wider area of performativity studies.

But what does all this mean for the knowing of governance itself? How do these developments lead us to reconsider the relation of political science (along with other modes of producing knowledge about governance and politics) with the very reality of governing and existing political order? The issue here is that there may be an ontological dimension to knowing governance, not just an epistemological one. Epistemic practices that describe a certain order of governance may actually only bring it into existence, rather than mirroring an already given reality. Epistemic practices may thus be involved in the construction of political order.

If this might be so, knowing loses its innocence, so to speak. Epistemic practices, especially if geared towards the generation of authority and the establishment and institutionalisation of certain accounts of political order, become a form of politics, or of *infrapolitics*, we might say. Ways of knowing are revealed as ways of shaping collective realities, as infrastructures for the doing of *politics as we know it*. But do knowledge practices really serve to

construct political order? If so, how do they do it? In what circumstances and according to which dynamics?

The purpose of this book is to open up and explore these questions. It is a first foray into new territory, one which we hope will support and encourage others to engage in further studies of what we call 'knowing governance'.

In a similar way, the collection is itself the intermediate result of earlier collaborations and ongoing discussions. An important platform for gathering up and combining different approaches to a new constructionist take on knowledge and governance was provided by a series of conferences and seminars that were hosted by the Innovation in Governance Research Group at the Technische Universität, Berlin, between 2010 and 2014 (www.innovation-in-governance.org). We acknowledge generous funding for this project by the German Federal Ministry of Education and Research under its programme of social-ecological research (grant no. 01UU0906). The annual meetings of the Science and Democracy Network (http://www.hks.harvard.edu/sdn/) and the conference in Interpretive Policy Analysis (IPA) further facilitated our explorations of the topic.

Special thanks go to the many people who have been involved with the overall endeavour by contributing papers, presentations, commentaries and advice, even if they do not appear as authors in this volume: Arie Rip, Frank Fischer, Patrick LeGalès, Marie-Laure Djelic, Sigrid Quack, Stefan Kuhlmann, Werner Rammert, Anita Engels, Andrew Barry, Carsten Mann, Sebastian Ureta, Jochen Gläser, Sonja Palfner, Endre Danyi, David Kocman, Eleftheria Vasileiadou, Stefan Aykut, Hal Colebatch, Rob Hoppe, Charlotte Halpern, Friedbert Rüb, Thomas Conzelmann, Sheila Jasanoff, Ulrike Felt, Silke Beck, Jason Chilvers, Javier Lezaun, Michael Guggenheim, Kristin Asdal, Peter Stegmaier, Detlef Sack, Peter Wehling, Dieter Plehwe, Ross Beveridge, Tim May, Will Davies, Thomas Scheffer, Ingmar Lippert, Anna Henkel, Alexander Görsdorf, Cornelius Schubert, Arnold Windeler, Christina Besio, Martin Meister and Alejandro Esguerra. Thanks for vital support in the organisation of meetings and texts likewise go to Michael Wetzels, Klaus Liepmann, Thomas Crowe, Britta Morich, Silke Kirchhof, Luisa Grabner, Fabian Schroth, Jan Hussels and Dzifa Ametowobla.

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1
Introduction: Knowing Governance

Jan-Peter Voß and *Richard Freeman*

Knowing governance

This book is about the making of knowledge about governance and how it shapes political action. In a sense, doing politics has always turned on knowing governance, since political action builds on a certain understanding of what it is to act politically and how to do so effectively. Those seeking power have invariably wanted to know how collective order can be built and maintained: governing implies knowledge about the world to be governed and the resources available to do so, and about the interests and dispositions of the actors involved. What is more, while knowing governance has always been key to ruling effectively, it is at the same time a principal lever for those who seek to challenge authority. Shared knowledge is a precondition of collective action and of the imagined communities of modern politics, whether nations or social movements or issue-based constituencies.

But where does this knowledge come from? How do political actors come to know about governing? How do they learn about the dynamics of collective order and ways of shaping it? What they know of 'doing politics' may be learned in practice, derived from experience and direct observation, or from socialization and ongoing communications with peers. Often, however, this knowledge is provided and reinforced by expertise of some kind. For governance is a matter of authoritative knowing, not only in a general sense, but also in terms of very specific kinds of knowledge work and expertise. In this book, we set out to identify, explore, and explain the production and development of models, instruments, and techniques of governing based in scientific practices and oriented towards establishing an authoritative claim over social life.

Most of the time, the kinds of expertise that come to bear on politics are problem-oriented, concerned with issues such as ecology, public health, education, economic growth, or social inequality. As in the question of climate change, the close and complex relationship between scientific problems and political problems makes for a widely discussed 'scientization of

politics' – and a corollary 'politicization of science' (Jasanoff 1990; Weingart 1999; Miller 2004; Hoppe 2010; Lövbrand 2011). In this volume, by contrast, we set out to discover the ways in which knowledge of the patterns and processes of governing itself develops into what we might think of as an 'expertise of political practice and process'. We want to draw attention to patterns of scientization and technologization in matters of politics itself, that is, in the agency of governing. This involves not just academic research in political science and governance studies, but the distributed work of an array of think tanks and polling institutes, governance schools, public relations agencies, strategy advisors, campaign consultants, and international organizations (IOs). What work do they do in establishing certain representations of political reality? How do they build epistemic authority in matters of doing politics, by providing the categories, data, and tools by which political practices are configured? How do they contribute in this way to the construction of political order?

We are interested, then, in the formalization and development of ways of knowing how to do politics, or what we call 'knowing governance'; we are interested in the formulation and articulation of authoritative claims about the nature and process of governance. That includes classifications of actors and accounts of political agency, analyses of fields of interaction and political systems, understandings of specific interdependencies and power relations as well as models of political change. Knowing governance also comprises assessments of legitimacy and effectiveness, developmental trajectories and capacities for collective action, diagnoses of obstacles to and requirements for reform, functional concepts and analytic schemes, as well as mechanisms, metrics, indicators, templates, and standards of governing for use in campaigns and consultation strategies or in the design of institutional arrangements and electoral systems.

We are interested in the means by which experts on governance come to know what they do, the devices with which they work, the practices and processes by which they establish and expand particular representations of governance. We are interested in their workplaces, that is, in the sites at which this knowledge is made, and how they are connected with each other, whether academic departments, laboratories, think tanks, parties, ministries, consultancies, industrial organizations, non-governmental organizations (NGOs), IOs, or experiments in concrete political situations. Our title speaks to a dual concern: we want to know governance through the ways it is made known to those who govern. How do representations of the reality of governance become established in practice, that is, how do those engaged in it come to know what governance is? And, then, more reflexively, how far does establishing epistemic authority in this way itself constitute a form of governance, that is, how does governing occur through being made known?

Standard modern conceptions of knowledge and governance treat science and politics as separate spheres or logics of interaction, and are

concerned principally with exploring the relationship between them. Truth and power are treated as ready-made products and institutionally guaranteed merits of one or the other functional system (science or politics). This is the problematic expressed in Wildavsky's 'speaking truth to power' (Wildavsky 1979) as well is in more dialogic conceptions (Habermas 1968, 120–145; Hoppe 2005). An alternative position understands power and knowledge as essentially fused, as in Foucault's exploration of the ways in which governing is realized in specific modes of knowing (Foucault 1980 [1977], 1991 [1968]), or even earlier in Mannheim's discussion of the *Seinsgebundenheit* ('being-boundedness') of knowledge about politics (Mannheim 1995 [1929], 95–167). Our purpose here is both more reflexive and more immediate. We are concerned, we have said, with *the production and mobilization of ways of knowing about governance*: we focus on how representations of governance are produced in practice, by scientists and policymakers and by the publics with whom they engage. How does collective knowledge about governance become established in 'doing governing'? How does politics work through the production of epistemic authority, not just about social and political issues, but about the nature and practice of governing itself?

In exploring these questions, we will want to know how claims to knowing governance are produced, that is, how governance is rendered knowable and manageable by science-based and technical expertise.

A new technocracy?

Of course, we do not claim any of this is wholly new, but we think it is newly technocratic. Political practices and the process of governing have themselves become objects of scientific analysis and technological control. Sociologists of work and engineering have shown clearly and variously how production becomes a matter of special expertise through related processes of professionalization and scientization, whether that production has to do with farming or building, making or distributing, healing, teaching or caring. More recently, professionalization and scientization have also been discussed in areas of everyday life such as body care, life counselling, cooking and home furnishing, and even dating and sexuality. It is our contention here that a parallel story holds for political work, for the mobilization of collective identities and interests, for the negotiation of commitments to common values, goods, and norms, for projects of collective action, for the crafting of coalitions, for the design of institutions and specific rules. It marks and describes a shift from the distributed, situated, and often tacit or implicit understandings of what it means to act politically or to govern (and be governed) to a formalized and standardized, now explicit, and more abstract account of governance mediated by the analysts and advocates of specific models, instruments, and techniques.

But why should we notice this now? Why is it now, a decade or so into the twenty-first century, that we should want to explore and take account of these problems of knowing governance? In the first place, we should not be surprised by the 'scientization of politics', since it is but a further expression of the 'scientization of everything'. If the twentieth century really did witness the decline of alternative sources of social steering such as political ideology and religious faith, at least in Western capitalist countries, so we might expect science to become the essential framework and source of reference for both individual and societal development. Governing, it may be argued, turns increasingly on claims of instrumental functionality and technical necessity rather than on those of collective identity, value, and interest; it is worked out in competition for epistemic authority, rather than in the probings, conflicts, and corroborations of political mobilization and public debate (for an extended debate see Ellul 1964; Marcuse 1964; Price 1967; Habermas 1968; Ezrahi 1990; Rose 1991).

What is interesting is that this is initially experienced as loss. Politics seems somehow to have lost its hold on the public sphere, to have been displaced from executive and legislature and the party machines which controlled access to them. It has been displaced by expertise: politics as we knew it, as ongoing struggles over matters of concern, is supplanted by struggles over matters of fact (Latour 2004). These struggles work differently, taking place in different sites and by different means and devices. Governing now happens in expert networks and conferences, IOs, taskforces and fact-finding missions, issue-based summits and consultations. It has adopted the methods of technoscience, including model building, simulation studies, monitoring schemes, databases, experiments, and knowledge platforms. Standard ways of establishing collectively valid, authoritative knowledge have diffused from science into the realm of public policy, political power, and collective action: social ordering is now achieved by seeking to establish valid representations of reality and shared acceptance of the factual conditions of collective action, rather than political representations of a collective will. Entry into politics is marked not by the articulation of values and interests but by the acquisition of expertise.

Meanwhile, there are changes in the discourse and practice of politics which make it more likely that it will have recourse to newly sophisticated forms of establishing authoritative knowledge. For the scientization of politics is perhaps most immediately a function of the shift from government to governance, from the essentially centralized and hierarchical organization of political authority in the nation state to sets or networks of dispersed actors who negotiate projects of collective ordering without recourse to either the territorial monopoly of physical force or democratic legitimation through liberal–representative procedures. In the absence of any single source of physical force or political authority, how should conflicts be settled and interactions between autonomous actors be managed if not by the

production, management, and regulation of knowledge and information? (For a historical account, see the contending philosophies of Hobbes and Boyle in Shapin and Schaffer [1985]).

For this reason, we should expect the recourse to epistemic authority to be most advanced where single-source authority is least developed or in greatest recession, that is, in the transnational realm. It is in transnational governance beyond the state that shared ontologies, rationalities, models, and technical standards of governing develop momentum as an independent force of collective ordering that captures what remains of the agency of national governments (Rose/Miller 1992; Barry 2001; Djelic/Sahlin-Andersson 2006). It is in the transnational sphere that the use of monitoring mechanisms, benchmarks, guidelines, and new mechanisms of participation is especially notable. A seminal example of epistemically constructed political order – of knowing governance in the sense we develop it here – was the game theoretical modelling of Cold War diplomacy in the 1960s and 1970s (Edwards 1997). And one of the most heralded expressions of knowing governance, which has itself been turned into a model of 'experimentalist governance', is the 'open method of coordination' (OMC) in Europe (Sabel/Zeitlin 2010). Here, a collective political order is achieved by way of a specific kind of knowledge about governance: policy monitoring and reporting mechanisms work to establish shared models and metrics for representing and comparatively evaluating governing activities in different countries. In this way, each member of a set of countries is steered in relation to others by means of their mutual recognition in information-based exercises of comparison and benchmarking (Bruno et al. 2006).

Infragovernance and infrapolitics

In these continuing efforts to assert and articulate particular versions of what it means to govern, representations or accounts of governing mediated by experts are increasingly substituted for the immediate practical experience of political actors. The exchanges and interactions by which this knowledge is formed shape perceptions – and with them, practices – of what is rational and effective or unreasonable and futile for governments to do. In so doing, they shape equivalent possibilities for engagement or resistance on the part of all other actors, including firms and NGOs, IOs, social movements, and individual citizens. They comprise what we think of as *infragovernance*: they provide the basic framework of political reality, an ontology within which political action can be rationalized and performed.

The processes by which this intervening knowledge is made require specific attention. Controversies over what is real, necessary, and possible in terms of governing, and especially the settlement and closure of such controversies, appear as important arenas of *infrapolitics*: arenas in which a dimension of collective order is contested and negotiated, which provides a basic setting for

thinking and acting politically. By contributing not only to the shaping of any kind of conduct or social practice but to the shaping of *political* practices, infrapolitics gains extra leverage and significance. The working out of what governance means – of how it is to be represented, theorized, and measured – appears as a displaced form of politics, a form of knowledge politics that is carried on beyond public scrutiny and debate and outside the formal procedures of democratic decision-making.

This displacement is not a replacement of politics by science as something other than politics, but a transformation to a new form of politics 'by other means' (Latour 1983; Mol 1999; Callon et al. 2009, 68) – at least, if we refer to politics not as a specifically modelled and institutionalized version of it, but in its most generic form as a process of debating, deciding, and shaping collective order. A mode of politics conducted through public debate, in parliament, and in making public policy is substituted by a mode of expert discourse grounded in the laboratory and oriented towards technological innovation (Barry 2001).

One of our principal ambitions in this collection is to better understand the politics of knowing governance and to elaborate the specific forms in which it contributes to the transformation, establishment, and stabilization of collective order. In our initial exploration, we draw on three strands of social scientific thought and practice, namely, work on governmentality, in interpretive policy studies, and in science and technology studies (STS). These are outlined in the next section, and we use them to explain just how we might identify, problematize, and investigate knowing governance in the section which follows. In doing so, we point to the specific issues addressed by the case studies collected here. We conclude by pointing to some more general questions of reification and reflexivity raised by our work.

Approaches to knowledge and governance

So far, we have explicated knowing governance as a set of problems that is linked with the making of knowledge about governance, suggesting that its significance lies in constitutive linkages with the construction of political order. Now, looking for ways to understand and explicate this particular form of the relationship between knowledge and governance we find three strands of study and research. Each strand goes some way towards accounting for knowing governance, but each has a particular shortcoming that needs to be made up for by the work in another. Foucauldian governmentality studies provide us with a basic understanding of the intertwining of power and knowledge in orders of discourse, including the underlying rationalities of governing itself, but offer little on the practical work required to establish and maintain that discourse and those rationalities.

Interpretive political science and policy studies focus mainly on the construction of policy problems and issues; while recent work attends to knowledge in and of political practices, it pays much less attention to the origins and development of that knowledge. Meanwhile, STS provides us with the conceptual and methodical tools with which we might follow the process of making authoritative knowledge, but has had little to say so far specifically about scientific representations of governance or the expertise of political process.

Governmentality: orders of discourse as power/knowledge

Perhaps the most prominent approach to knowledge and governance, especially in attending specifically to knowledge about governance, is Foucauldian discourse analysis. Foucault introduced a genealogical approach to the study of certain historical orders of discourse and used it as an 'analytics of power' (Lemke 2005), to reveal how fundamental patterns in knowing, rationalizing, and articulating reality exert a force, discipline subjects, and so must themselves be understood as a subtle form of governance. From a Foucauldian perspective, power/knowledge is a compound notion (Gordon 1980): at the same time as orders of discourse allow for specific ways of knowing they work as a fundamental form of power, and indeed a dimension of governance broadly understood as the 'conduct of conduct' (Foucault 1982). In his 1977–1978 lectures at the College de France, Foucault applied the genealogical perspective specifically to discourses of government and some of the key notions of political science, including the state, the citizen, and government (Foucault 1991 [1978]). This led him to articulate the specific 'governmentality' of a neo-liberal discourse of government, which, while instituting individual freedom and doing away with the external regulation of social order, establishes a new and subtle form of power by determining just how that freedom should be used rationally (Rose 1999). In this way, responsibility for the 'conduct of conduct' is shifted onto the subject.

The development of the Foucauldian perspective in 'governmentality studies' is of paramount importance in problematizing knowledge as a particular dimension of governance, and the ordering of knowledge as a form of power (Burchell et al. 1991; Barry et al. 1996; Dean 1999; Lemke 2011 [1997]). It provides us with fine-grained analytical approaches to knowing governance by distinguishing rationalities, programmes, and technologies (Rose/Miller 1992) and by suggesting the new topologies and spaces of governance revealed by thinking in terms of knowledge orders rather than institutional orders (Barry 2006). Specific treatments include the state (Mitchell 1991), public opinion (Osborne/Rose 1999), citizen empowerment (Cruikshank 1999), development work (Li 2007), and policy benchmarking in systems like the OMC and elsewhere (Haahr 2004; Bruno 2009). However, while we learn much from governmentality studies about the deep

orders of knowledge about governance and their effects, we understand much less clearly *how* this knowledge is made, *how* specific practices of social science contribute to this process, and just *how* governmentalities become established and maintained.

Interpretive political science and policy studies: the social construction of political reality

In contrast to a prevailing rational–institutionalist paradigm of political action, which takes interests as given features of actors and treats knowledge as information, interpretive approaches emphasize the intersubjective construction of meaning and its constitutive effects on political action (Hall 1972; Stone 1988; Fischer/Forester 1993; Hajer 1996; Nullmeier 1997; Bevir et al. 2003; Fischer/Gottweis 2012). Work in this vein focuses on the construction and contestation of public policy. The contested construction of social problems and the use of 'deliberative policy analysis' as a way to constructively engage with such processes is of central importance here (Spector/Kitsuse 1973; Fischer 2003; Hajer/Wagenaar 2003; Hajer 2010), but the approach has also more recently been applied to the interpretive dynamics of national identity, political authority, the practice of public administration, and the very shift from government to governance (Bevir/Rhodes 2006; Bevir 2010; Bevir/Rhodes 2010). Especially when labelled as 'critical policy studies' or 'critical discourse analysis', there is a particular concern with the translation of prevailing social power relations into discursive constructions of political reality (Taylor 1997; Wodak 2009; Howarth 2010; Jessop 2010; Wodak 2011; Fairclough 2013 [1995]).

Increasing attention has been paid to the practices of politics in addition to studies of communication, argumentation, and negotiation in language and text. This brings bodily and material aspects of political reality into the picture and highlights tacit knowledge of governance, for example, in the practice of public administration (Colebatch/Degeling 1986; Wagenaar 2004; Freeman et al. 2011), in the making of political decisions (Pritzlaff/Nullmeier 2009), and in international relations more broadly (Adler/Pouliot 2011). Notable work in this vein includes Hal Colebatch's treatment of policy work (Colebatch 2006; Colebatch et al. 2011), Mark Bevir's accounts of governance (Bevir 2010; Bevir/Krupicka 2011), and Christian Bueger's investigations of international relations (Bueger/Gadinger 2007; Bueger 2012; Berling/Bueger 2013): each addresses the relationship between immediate, practice-based, and more formal ways of knowing governance.

From these studies, we learn much about the contested construction of public policy and what the 'work of governing' means in practice. But there is little specific attention here to the practices of knowledge-making, especially with regard to how certain models and representations of government, the state, public policy, democracy, and governance more broadly acquire authority, and how they become established and expand across different

domains of political practice. We still want to know how different kinds of knowledge are produced and how they gain traction in doing politics, and in this way how they shape what the reality of governance becomes.

STS: technoscience as ontological politics

In STS, the production of knowledge in such a way as to have it collectively accepted as 'true' is associated with scientific research, with experiments, and with laboratories. Ethnographic Empirical studies of laboratory work have further refined the historical and material conception of knowledge-making pioneered by Gaston Bachelard, Ludwik Fleck, and Thomas Kuhn (Kuhn 1970 [1962]; Bachelard 1984 [1934]; Fleck 1994 [1935]; for an overview see Rheinberger 2007). In their understanding, scientific work entails the reduction and simplification of some part of the macrocosmos to a laboratory model, the theoretical ordering of the phenomena under investigation, and the application of the new knowledge by expanding and extending this laboratory reality outwards (Rouse 1987; Callon et al. 2009). On the basis of detailed, close-up accounts of the interactive construction of facts and artefacts, in laboratories and beyond, research in STS has drawn attention to the techniques of translation used in articulating representations and making them hold (e.g. Latour/Woolgar 1979). It has delineated specific practices of selection in research processes (e.g. Knorr Cetina 1981); it has observed the inscription and circulation of knowledge objects (e.g. Latour 1987; Latour 1999; Akrich 2000); it has followed how scientific and technological controversies unfold and conclude (Collins 1992 [1985] Engelhardt Jr./Caplan 1987; Pinch/Bijker 1987; Nelkin 1992), and it has reconstructed the processes by which the scope of validity for certain kinds of knowledge claim is gradually expanded (Latour 1983; Shapin 1984; Rip/Schot 2002; Callon et al. 2009).

An overall understanding of how knowledge is made true is based in specific relations of 'representing and intervening' (Hacking 1983): in order to know the world, it has to be transformed. Producing new knowledge implies the 'co-production' of a world in which this knowledge can persist and hold (Jasanoff 2004). Scientific knowledge production is therefore 'performative' in the sense that it contributes to the creation of a reality that it describes (Pickering 1994; Callon 2007). In this way, STS research links trajectories of knowledge development, as they result from decisions and agreements within the research collective, directly to the shaping of a wider collective order. This is why STS scholars have come to refer to science and technology as 'politics by other means' (Latour 1983), as 'cosmopolitics' (Latour 2007), or as 'ontological politics' (Mol 1999). This does not mean simply that knowledge production is 'political' in the way we usually understand politics, but that it is another way of making collectively binding decisions and constituting a common world, and is thus a different form of politics. It is not a politics that works through the articulation and negotiation of public values or the 'common good', mediated by institutions such as democracy and the

nation state, but one that works through the construction of phenomena and functions, prototypes, and evidence, and is mediated by the institutions of science, its methods, and its laboratories.

That said, how might STS understand the making of 'political' rather than 'scientific' knowledge – what we term here knowing governance? By this we mean the political science not just of the academy, however, but also that of think tanks, consulting forms, public bodies, courts, regulatory agencies, and IOs: we might think of it as 'political science at large' (cf. 'economics at large' in Callon 2007). How is knowledge about governance made in these settings? And what is the specific form of politics – as a struggle over the establishment of collectively accepted rules and orders of knowing – that we find here?

So far, STS research has paid relatively little attention to the social and political sciences. Most of it focuses on knowledge-making in the 'hard sciences' and the engineering of 'hard technology'. There are exceptions, however (for an early but rather general treatment see Callon/Latour 1981; for a recent overview see Camic et al. 2011). Some stand out in regard to our interest in knowing governance: one is a fairly well-developed strand of research on geographical mapping, statistics, and accounting practices, which includes their connection with state building, imperialism, and globalization (Law 1986; Porter 1996; Desrosières 1998; Mitchell 2002; Carroll 2006; Passoth/Rowland 2010); another is a rapidly expanding body of work on economics and the engineering of financial markets (Callon 1998; Barry/Slater 2005; MacKenzie 2006; Callon et al. 2007; MacKenzie et al. 2007); a third is the problematization of sociology and methods of social research with regard to the realization of certain forms of social order (Law 2004; Law/Urry 2004; Law 2008, 2009c; Law/Ruppert 2013); a fourth includes approaches that draw on STS for tracing the scientific modelling and experimental configuration of particular modes and instruments of governance (Lascoumes 2003; Lascoumes/Le Galès 2007; Voß 2007; Voß 2014; Voß/Simons 2014; Lezaun/Calvillo 2013); a fifth is the partly reflexive engagement with methods of public participation in science and technology (Gomart/Hajer 2003; Irwin 2006; Lezaun/Soneryd 2007; Felt/Fochler 2010; Laurent 2011; Chilvers/Kearnes, forthcoming; Voß/Amelung, forthcoming); and a sixth, finally, comprises attempts to mobilize STS perspectives for studying politics more broadly, both in theoretical terms and with a view to working out the materiality of political life and the formation of publics (Barry 2001; Latour 2003; Marres 2005; Latour 2007; Disch 2008; Braun et al. 2010; Disch 2011; Marres/Lezaun 2011).

To summarize here, each of our three broader strands of research – on governmentality, in interpretive policy analysis, and in STS – takes knowledge as a constituent of political order and (more or less explicitly) studies processes of negotiating and contesting shared knowledges as a form of politics. They each point to the likely significance of studying the making of knowledge about governance empirically. For the most part, however, they do not

themselves study the making of knowledge about governance: either they do not study knowledge about governance specifically or they do not study its making. The work that actually does both, or comes close to it, is a valuable resource in our endeavour to understand knowing governance. Because it is STS which enables us to focus on the production and establishment of authoritative knowledge, each chapter which follows here sets out with a certain problematique and conceptual repertoire drawn from STS, while incorporating further insights from governmentality studies and interpretive political science in elaborating its empirical material.

Analysing the making of knowledge about governance

We have made the general point that the making of knowledge about governance is a relevant dimension of political ordering. We have argued that naturalized and authoritative representations of governance shift gradients of political discourse; they orient political action and feed ongoing negotiations of collective action. As such, they make reality and are immediately entangled with the doing of governance. We have also explained that this draws attention to the processes by which specific representations of political reality become established, how they are adopted, gain validity, and become enacted and expanded in wider arenas of governing. We suggested that by following the making and expansion of this knowledge about governance we can engage with its 'infrapolitics'. New modes of generating authoritative knowledge are being developed, for example, in the modelling of actors and the processes of governing, and in the design of their respective instruments and methods. It is an empirical understanding of these forms of political knowledge work that we seek to develop in this book.

But how might we analyse what we have identified here as political expertise or knowing governance? How might an approach to studying the making of knowledge about governance – based in STS but drawing on governmentality and interpretive policy studies – be operationalized? What does the STS perspective on fact-making draw attention to, and what does it suggest the entry points to knowing governance might be? We lead with two principal questions about knowing governance, and they have to do with substance and process. What is this knowing or knowledge *of*, exactly, and *how is it made?*

This section outlines some provisional directions for following up on these questions. It also serves to introduce the chapters in this collection as specific examples of different ways of approaching the study of knowing governance. We do not present a systematic theoretical framework or research agenda; nor do we suggest that what we identify here as a set of signposts and starting points are the only ways of investigating and exploring knowing governance. Our purpose is, rather, to make more concrete our general purpose in this book: to apply insights from STS to the making of knowledge about governance.

Knowing the body politic: collective agency

In adopting a knowing governance perspective we drop foundational assumptions about political actors: we do not assume collective subjects to be naturally given, but rather to result from social interaction, to be culturally produced. This makes political subjectivity and agency matters of knowing governance. Political actors – their identities and interests, their capacities and competences, and their power – are not just 'there', but come into being by being represented, and by the enactment of those specific representations. The different actors and agencies that make and do governance come into being by their being known. And knowing them always involves particular constructions, both cognitive and material.

In principle, any notion of political agency can be taken as a knowledge object to be followed or traced back through the process of its construction. We think immediately of states, which have long been regarded as the central and dominant actor of politics and governance, as, for example, in Max Weber (Weber 1972, 29). But the state has long been treated as the collective political subject of the nation or demos, as the materialisation of the public will. The activities of elected governments and of ministers, diplomats, and administrators are likewise known as 'public action'. More fine-grained approaches have disaggregated states into systems composed of actors with institutionally defined roles such as political parties, interest groups, and social movements (on the 'input' side), or ministries, public enterprises, and regulatory agencies (on the 'output' side). There is an extensive literature on each of these, and a great deal of research has been devoted to analysing their capacities and interdependencies.

In the shift from 'government' to 'governance' in accounting for the reality of societal regulation (which is in itself an important topic of study from a knowing governance perspective), the agency of governing has been considerably reconfigured (Colebatch 2009; Bevir 2010). What were formerly understood as political systems that provided for the aggregation of political interests and action, or orderly working political machines, so to say, have been eclipsed by various actors flexibly negotiating projects of collective ordering on the basis of their specific interests and capacities. From being representatives of the whole, state actors are downgraded to become one among many others in horizontally structured networks (e.g. Kooiman 1993).

This implies at once a reconceptualization of the state's capacity to govern and a revaluing of the scope and nature of other actors' agency. To the extent that they continue to focus on influencing the state, political parties and social movements lose out. At the same time, business corporations, interest groups, civil society associations, expert communities, and the like are considerably upgraded not only as relevant 'stakeholders' whom the 'cooperative state' has to win for its projects, but as autonomous initiators and alternative providers of collective order in terms of 'private interest government' or 'civil society initiatives'. Similarly, regulatory agencies

and international institutions, once problematized as getting 'out of control' or for being 'captured' by sectional interests, acquire a new autonomy and authority. Hobbes's great Leviathan collapses into several trans-regional and temporal Leviathans.

In the next chapter of this book, Jan-Hendrik Passoth and Nicholas J. Rowland focus on the background work necessary for constructing one of the basic units of modern understandings of politics: the state. Building on actor-network conceptions of reality-making as material-semiotic engineering, they give an account of the varied and contested construction of the state as a 'macro-actor'. But instead of trying to give another well-worked answer to the long-lasting question of 'what is the state?', they are interested in how and where the state is. Knowing governance, they argue, does not only imply finding out how the state is known in various ways, as in the Foucauldian perspective, but has to turn to the practical work of 'knowing'. Knowing the state, they contend, is first and foremost an issue of modelling and remodelling the state – in theory and in the wild.

In theory – namely, in the political science literature and the small but long-established field of state theory – the state is an effect of heterogeneous and dispersed activities as well as a unified entity capable of acting, but never both at once. In the state reform literature, however, it is both. Looking at how the state and its power are positioned and envisioned in three succeeding attempts at state reform, namely, 'New Public Management', 'New Public Governance', and the debate on the 'Hollow State', this chapter shows how what is impossible in theory becomes possible in practice. On leaving the ivory tower of academic debate, models of the state are made and implemented in various interconnected circumstances – one can see them moving, changing, interlocking, and being bridged provisionally in practice. After all, politicians and other state reformers know what they know about the state and state theory by what they choose to do with it outside of the walls of the academy, and in circles where scholars may not be invited.

Models of the state point to important shifts in our knowledge and understanding of the agencies of governance. Just as important, however, is the making of knowledge about other agents such as citizens, not only in terms of the explicit articulation of various concepts of citizenship, but also with regard to implicit representations of citizens and their agency as, for example, in polling statistics and analyses of voting behaviour (Osborne/Rose 1999), in public relations, spin doctoring, and media accounts of populist mobilization (Zifonun 2004), in methods of public involvement and consultation (Irwin 2001), or in the design of policies (Schneider/Ingram 1993; Pfister 2012). The distinction is between emphatic accounts of citizens as the ultimate source of political judgement and autonomous decision, as collectively sovereign and actively engaged in the construction and resolution of public issues, and a more subtly mechanical representation of citizenship in the statistical patterns of polling data and voter demographics.

Meanwhile, some of the most important constitutive effects of knowing governance can be traced in the making of knowledge about regional integration and global governance. While the agency of the nation state is dismantled in a broader shift from government to governance, the loosening and widening of concepts of governance and regulation also allows new political agents to be constructed in the theory and practice of transnational governance where global policy networks, transnational communities, and international actors are imagined and made real as cosmopolitan reincarnations of the national body politic (e.g. Djelic/Quack 2010; Beck et al. 2013).

In chapter 3, Thomas Pfister turns to the construction of a political entity beyond the state: the European Union (EU). He shows how the project of European integration is not only about creating a transnational governance architecture but also about establishing collective knowledge about governance: about shared representations of the workings of policy, and about political challenges, political capacities, and modes of adequate legitimation. Drawing on the STS notion of the 'co-production' of science and social order, Pfister delineates the interrelated development of a new science of European governance and a new European polity.

He illustrates his argument by focusing on the EU's role in the context of the widespread welfare reforms which have taken place in many European countries since the 1990s. The EU established itself as a central arena where the core problems for European welfare states were defined and adequate strategies and solutions were negotiated. This expansion of EU competence into the field of social policy and welfare modernization was only possible on the basis of a new soft-law governance regime and the widespread use of the open method of coordination (OMC) as its main instrument. In the process, as an outcome of European integration, EU studies are co-produced by researchers from different disciplines focusing on European integration as well as by the EU itself providing funds, formulating demands for expertise, or enrolling academic experts in specific governance processes (e.g. in expert networks). At the same time, as an agent of European integration, EU studies are co-producing the EU by contributing a conceptual vocabulary for it, an array of models and functional and normative justifications for them, thus providing coherence and visibility to this fragmented and emerging polity.

Christian Bueger takes us to the global arena in chapter 4, reflecting on a 'lessons learned' project run with an international governance forum which coordinates responses to piracy off the coast of Somalia. The chapter argues for understanding such sites of global governance as laboratories, and the conjoined knowledge production and reality-making within them as a form of experimenting. Starting out from historical insights on the experimental style of reasoning and studies of the laboratory, the chapter describes the workings of the UN Contact Group as a policy laboratory which was productive in forging a multilateral alliance and developing a collective strategy to fight piracy at sea. He explains how a space was set up which was protected

from the interference of too many different actors and concerns. The chapter then turns to a 'lessons learned project' which was to analyse and report on the workings of the Contact Group. Here is a process of knowledge production about governance in which the author himself was involved: he describes how he sought to engage its members and practitioners in a participatory process to develop an account or representation of the workings of the Group. Though the experimental configuration of a learning laboratory to reflect on this particular mechanism failed, the author's engagement in the collective production of knowledge about it allows him to reflect on the relevance of different degrees of closure and seclusion to the process of experimenting – and its politics. Bueger concludes that experimenting is a much more widespread form of epistemic practice in scholarly and policy analysis than often assumed.

Knowing instruments: modes of governing

Another way of thinking about governance is not as a set of actors and the challenge of constituting collective agency, but as a set of activities with different degrees of legitimacy and effectiveness. From early constitutional considerations by Plato and Aristotle onwards, through Machiavelli's advice to his Prince and then to modern policy studies, we find expert accounts of how governing is and should be done. The question is less Dahl's 'Who governs?'(Dahl 2005 [1961]) than 'How is governing done?'

In contemporary governance, answers to this latter question might embrace analyses of entire systems (as mobilized in constitutional reform processes) as well as particular modes and instruments that are used both on the 'input' and on the 'output' side of governing. On the input or legitimacy side of governance they entail models for the generation and representation of public and other collective interests, including theories of democracy, the design of electoral systems, and methods of public participation. On the output or effectiveness side of governance, knowledge-based governing instruments include certain functional models for regulating social interaction and creating commitment to specific courses of collective action.

In chapter 5, Holger Strassheim and Rebecca Korinek trace the translation of behavioural expertise into governing knowledge. Over the last decade, randomized controlled trials and experimental evidence have become the 'gold standard' of evidence-based policy. By comparing how behavioural expertise came to be institutionalized in government in Britain, the intertwining of epistemic agency, experimental practices, and 'libertarian paternalism' as a techno-political imaginary is described and explained.

The authors show how behavioural governance unfolds politico-epistemic authority both discursively and organizationally, thereby becoming the point of reference for both a transnational regime of expertise and a psychological mode of regulation. The empirical reconstruction of these authorization processes centres on different, though tightly intertwined narratives.

Narratives of validation demonstrate the superiority of experimental and inductive methods used to empirically identify 'real human behaviour', thereby dismantling neoclassical assumptions about homo economicus as a theoretically deductive model. Moreover, proponents of behavioural policies seek legitimacy by coupling behavioural expertise to the vision of a 'Big Society'. In this way, while serving as a key device of epistemic authority, narratives of validation are entangled with narratives of normative justification, suggesting the compliance of behavioural expertise with democratic norms of transparency and autonomy, as well as managerial practicability.

Focusing on the role of such discursive mechanisms in constructing politico-epistemic authority, the authors show how the vision of 'liberal paternalism' functions as both a redefinition of the state–science–citizen relationship and a self-description of behavioural economics as a mediator and guarantor of the evidence-based design of citizens' 'choice architectures'. Through the formalization of experimental procedures and methodologies within a web of administrative guidelines and meta-guidelines, behavioural expertise is translated into easily manageable 'rules of thumb' for the design of behavioural interventions.

Jan-Peter Voß, in chapter 6, shifts our attention to ways of governing which have gained purchase in a number of arenas. Against a background of debate about instruments in policy studies he introduces a perspective based on the concept of 'performativity' as developed in STS. This captures a recursive, dynamic relation between representations and the realities that they describe; it aims to decipher how the making of representative claims is constitutive of what it represents. In this perspective, specific functional models of governing are neither given in the nature of governance nor are they just ideological rhetorics. Instead, they must be understood as programmes for configuring reality or as ongoing innovation processes: models to be made true, including the practices that are successively aligned with such programmes. But it is not only epistemic representations of objective realities that are at work in 'realizing' an instrument and claims about its functionality, but also political representations of collective subjects and their interests in developing it. Based on a conceptual distinction between epistemic and political performativity, the author examines this form of knowing governance through the specific patterns in which these representations intertwine.

Analysing the development of environmental market instruments and public participation methods, Voß works out different relationships between epistemic and political performativity. He shows how epistemic and political work can be mutually constitutive, as in the experimental configuration of emissions trading as a new instrument of environmental policy, but also how they can interfere and undermine each other's effects, as when attempts to consolidate the articulation of public opinion in 'citizen panels' is met with the expression of collective interests in resisting the epistemic ordering

of democracy. The chapter concludes with a discussion of further implications of a performativity perspective on governance.

As Voß suggests, the instruments of governance are not discovered, but are nurtured as particular realities of governance, and as such they are made and remade in successive contexts over time and space. In chapter 7, Linda Soneryd and Nina Amelung take a perspective in which they follow the 'scenario workshop' and the 'citizen jury' as specific instruments of participatory governance in their diffusion among different organizational and issue-based contexts. Their key point is to show how situational politics leave an imprint on the generic model of the instrument as it develops. While the making of public participation methods as universal (decontextualized) models of governance effectively both describes and prescribes political practices, these methods are necessarily recontextualized as the further development of the model is 'inscribed' with the politics of the new site.

These authors build their discussion on the concept of 'translation' as developed in science studies. While the movements of these instruments across issues and jurisdictional boundaries contribute to a certain stabilization of knowledge about how participatory processes are to be managed and governed, the processes of translation they entail point to fragile constructions of equivalence across heterogeneous sites and practices. Rather than being tools for depoliticizing participatory processes, these instruments themselves become objects of political contestation and reinvention of what participatory governance is.

Material knowing: documents and bodies

It is a key insight of studies of science and technology that knowledge and knowledge-making have a material dimension. Conventional accounts of knowledge in politics and governance, by contrast, build on a cognitive, ideational, or sometimes linguistic, discursive understanding of knowledge. From this perspective, knowledge production, diffusion, and adoption is chiefly a matter of communication, argumentation, persuasion, or rhetoric, occasionally supported by observations of material phenomena as represented in information, data, and evidence. An STS-inspired approach, however, would understand knowing as inseparably connected to matter, as the practising or enactment of certain realities which entails the communication of meaning, but also the training of bodies and the construction of tools, buildings, and infrastructures: the construction and expansion of knowledge about governance is to be approached as a process of material-semiotic engineering (Law 2009a). This has important ontological and epistemological implications. Other than in some accounts of 'discursive constructivism', the construction of knowledge about governance, especially in empirical investigation and practical experimentation, cannot be reduced to text-making as a process of producing virtual or imaginary realities that exist independent of and decoupled from the material reality of political

practice (for discussion of this point in relation with similar accounts of economics see, for example, Callon 2005). Instead, the basic understanding is rather pragmatist, one of knowledge existing in practice and being probed and anchored in material arrangements. That said, the material nature of politics and governance is not given a priori, but is made in the process of discovering and knowing it. In this way, constructionist analyses of knowledge-making about governance include the work that goes into the configuration of experience in material and bodily form.

The STS perspective draws attention to the expansion and establishment of collective realities by 'contriving', through the development and use of materials, in addition to 'convincing' through argument. This happens in building material infrastructures such as communication systems, buildings, and transport networks, and in the circulation of material artefacts that afford particular ways of doing politics, such as megaphones, ballots, voting machines, reporting forms, and documents with data, indicators, and benchmarks. It is significant that these shared materials of governing do not necessarily require any shared understanding of their design and purpose – though they may generate it – nor any explicit communication of cognitive models of governing.

To the extent that policy and governance are based in language, in word and text, the printed document is clearly one of its most important materials. In chapter 8, Arno Simons returns to the construction of functional models that undergird so-called instruments of governance and asks how such models enter its 'toolbox'. His particular contribution is to focus on the mechanisms by which knowledge about governance instruments is materially inscribed and stabilized in cross-referencing documents. Mobilizing insights on the social roles of documents from media studies, STS, and organizational sociology, Simons explores the notion of document networks as key 'infrastructures' of the production of authoritative knowledge at the interface of science and policy. He argues that documents, especially in networked form, produce a strong sense of extra-local authority and thereby allow for the 'governing at a distance' which underlies policymaking through generic instruments. Conceptually, this means elaborating the material dimension of governance knowledge and its relevance for a 'society made durable' as part of an understanding of reality-making as a discursive process relying on documentary communication.

Simons's case study is of the discursive construction of emissions trading as a 'working' policy instrument with superior functionality, and how that works through the establishment of textual relations between economic theory and a range of situated policy experiments in a network of documents built up over several decades. Simons notes that emissions trading is the brainchild of economists and as such owes much of its credibility and legitimacy to its grounding in economic literature, the most recent of which can be employed as a discursive resource in policy documents. Building on findings from a relational discourse analysis of 180 academic

and policy documents published between 1920 and 2003, he shows that it was the interplay of different documentary utterances and genres – and the way these were connected to each other through citations and co-occurring statements – that over time stabilized certain authoritative knowledge claims about emissions trading.

In turn, to the extent that governing is based in skill and practice, the human body and how it is trained, including in subconscious ways, appears as a prime material of knowing governance. Sonja van der Arend and Jelle Behagel (chapter 9) note that the use of knowledge about governance by various types of organizational authorities, such as institutional designs and policy instruments, is well documented in the literature. The knowledge employed by individual governance actors, however (including civil servants, NGO representatives, and business managers), in negotiation or lobbying, for example, is less well treated, especially in the context of governance.

Their chapter focuses on a specific aspect of knowledge about governance (the Harvard Model of Negotiation) that has become inscribed in a method called the 'Mutual Gains Approach' (MGA). They trace its specific development and application in the fields of sustainability and climate change from its inception in the late 1980s and early 1990s to its consolidation in a network of 'MGA negotiators', at the centre of which is an annual training course called the 'International Program on the Management of Sustainability (IPMS)'. Using the concepts of 'community of expertise' and 'community of practice', a detailed account is offered of how a model of negotiation, as a specific type of knowledge, is transmitted through an intense week of training as a skill that is generated in participants. The chapter further emphasizes how over a series of courses with participants from different regions and institutional positions, a transnational community is established, which cultivates this skill and performs it as a reality of sustainability governance in other settings, too. Van der Arend and Behagel conclude by drawing a distinction between the knowledge used by managers of participation processes and the more tacit knowledge and skills acquired and employed by participants themselves.

Boundaries of knowing: science and politics

A further aspect of knowledge-making central to the STS perspective is 'boundary work' (Gieryn 1995) or 'practices of objectivity' (Jasanoff 2011). This refers to the work of separating fact from value and knowledge from power in order to have representations of political reality socially recognized as 'objective', that is, depersonalized and decoupled from personal judgement (Porter 1996). The basic constitution of modernity establishing nature and culture as separate spheres is a core theme in STS (Shapin/Schaffer 1985; Latour 1993, 2004) as is the continuous reproduction of this difference by 'purifying' issues as either technical or political and allocating the authority for addressing them to science or politics. When it comes to the construction

of knowledge about governance, this boundary work is particularly challenging, since the object of knowing is politics itself. The challenge for political expertise is to position representations of governance as objective and neutral (or 'scientific') in order to gain the requisite epistemic authority for them.

In chapter 10, Brice Laurent stays with public participation methods, focusing on the Organization for Economic Cooperation and Development (OECD) as a particular site of knowledge production about participatory governance, specifically in relation to nanotechnology. He gives a detailed account of the organizational and discursive work undertaken to separate the 'technical knowledge' of public engagement from the 'political issue' of nanotechnology regulation. This allowed the OECD to pursue a role as neutral aggregator of data and provider of expertise, and ground its legitimacy as an IO manufacturing and brokering expertise while leaving policy choices to sovereign states. The chapter shows that these boundaries between 'international expertise' and 'national policy choices', and between 'technical' and 'policy' expertise, are repeatedly mobilized throughout the initiatives undertaken at the OECD. Making public engagement a problem of designing activities targeting 'audiences' independent of the issues to which they are applied is a way of stabilizing these boundaries. By articulating a global objective of market development, national variations in ways of governing publics can be bypassed. Stabilizing these boundaries serves to eliminate alternative propositions about the role of publics or the definition of technical objects. In this way, the nanotechnology case shows the constitutional groundwork that is required for knowing governance authoritatively, in a universal epistemic as opposed to a partisan political way.

Objectification includes studies of struggle over the drawing of boundaries when the objectivity of science, the neutrality of its methods, and the necessity of technical intervention is contested, that is, when the 'black boxes' of facts and functions are torn open. For knowing governance, this refers to processes in which objectified accounts and methods of governing become politicized, where the boundary between politics and science is crossed or blurred and much work must be done to delineate it again. Nicolas Baya-Laffite, in chapter 11, studies the contestation of Environmental Impact Assessment (EIA) as an instrument of governance both in practice and in law. His analysis shows specifically how the widespread adoption of EIA to organize the appraisal of and inform decision-making about industrial development projects around the world points to the reconfiguration of policymaking around governance templates, and to the ways in which these can be challenged through 'opening up' their neutral instrumentality.

The contestation of governance instruments is discussed with reference to an understanding of 'black-boxing' as an elementary form of power and social ordering in STS. It shows instruments to have a certain affordance, framing and constraining political action without determining it. Baya-Laffite's chapter gives a brief account of how the EIA model was

produced and circulated, first in the US National Environmental Policy Act, then in its diffusion by the World Bank. It is further explored through a rich case study: the controversy about the licensing and funding of two large-scale pulp mills by Spanish and Finnish investors in Uruguay, on the banks of the River Uruguay, the natural border with Argentina. The story takes us through the process by which EIA shaped the trajectory of the conflict about the projected mills. EIA provides a structured space where developers, political decision-makers, NGOs, and affected populations engage in the production, exchange, and critique of information and ideas about the projects and their impact.

The case shows how EIA allows the decision-making process to be depoliticized (itself a governance move). But it also shows how this attempted depoliticization backfires when the instrument itself becomes an object of socio-technical struggle. Debates on the ground and in the courts question meaningful participation in EIA in the specific circumstances of the project. But as actors seeking to halt projects because of their potential harmful impact continue to follow the choreography of EIA, the authoritative governance script is in fact reinforced rather than undermined. There is a tragic aspect to this, in that in challenging the official appraisal as an improper application of the EIA script those wishing to block the project only make the instrument stronger. Baya-Lafitte points to a subtle depoliticization resulting from the evolution of instruments in use, and a need for opportunities for their repoliticization to reconsider inscribed political orders.

In concluding this summary, we let our book's chapters (except for the last one which we turn to below) rest as exemplary entry points for specific concepts from STS into the field of governance, and as discussions of how these might be made fruitful in tracing the making of the authoritative knowledge claims on which it is based. In doing so, we have wanted the case studies collected here to get at the practices of scienticized politics in the making of knowledge about governance where we find a new form of 'infrapolitics'. Of course, we can readily think of many more knowledge objects among the varied phenomena of governance that may serve as access points for studies which follow them 'in the making'. We can also think of many more analytical aspects of the process of knowledge production that are important to the establishment and effect of collective realities of governance. In pursuing the research agenda in knowing governance set out by this collection, we face a challenge not only of deepening, but also of widening its scope of application.

A knowledge turn in governance research

The starting point for this collection was an ambition to develop a better understanding of the making of knowledge about governance and its effect in and on governing itself. This is what we mean by 'knowing' governance, using the present participle to speak of an incomplete, continuing action.

We suggest that the making of knowledge about governance itself is a medium of governance. Making knowledge central to the study of politics and governance, we argue, means thinking of it as a constitutional dimension of collective order. Actors and interests, politics and governance are constituted by their being known, and how they come to be known is part of their infrastructure.

As a dimension of collective order, knowledge, arguably, is even less perceptible than institutions. What is accepted as reality is understood simply to be there, and is taken for granted. Knowing something does not pressure or constrain; if anything, it is perceived as enabling. Knowing governance defines the bottom line, the unquestionable factual conditions that are to be taken into account in acting rationally – in order to act rationally – in politics. Its effects are immediate: knowledge about governance shapes politics by describing, sorting, and explaining its basic elements, their interrelations, and causal connections. It provides its basic elements: actors, interests, institutions, circumstances and contingencies, patterns of interaction, mechanisms of steering, and so on. It defines what political actors come to accept as a matter of fact, what they try to handle cleverly and skilfully, what they make do with. Established representations of the reality of governance form the basis on which politics as we know it operates. They provide the ground and frame for pursuing specific tasks like voting, mobilizing, networking, struggling, agenda-setting, appraising, deciding, ruling, monitoring, or evaluating. Knowing about governance, like this, is at the same time also governance by knowing. It is a way of shaping political conduct.

Spaces of infragovernance

By following the making of knowledge about governance we explore a dimension of it beyond the everyday, taken-for-granted activities of which it is composed. Turning to infragovernance and infrapolitics opens new directions in seeking out the processes and influences that shape collective order, and it takes us beyond the conventionally perceived spaces of governance and power. Spaces of shared knowledge about governance do not necessarily match territories, national populations, party constituencies, political organizations, interest groups, or coalitions of actors with shared values and policy beliefs. The collectives that are ordered by acceptance and enactment of a certain model of reality, by their common reference to a data set or the use of a method, are likely to stretch across ordinary administrative and political spaces. Scientific models, data, and methods of governance are often granted validity across different jurisdictions and groups, and often whether or not they are in collaboration or conflict with each other Barry 2001; Voß/Simons 2014.

What we mean by thinking of knowing governance as infragovernance is not a level above or below particular arenas of politico-administrative decision-making. Neither is it a mechanism of coordination alongside market competition, hierarchal control, network negotiation, or solidarity.

It works in a different dimension of social regulation. It is a mode of ordering that cuts across the scales and metrics of political power as conventionally perceived. It is a mode of ordering that works more like a shared language, a religion, a commonly inhabited climatic zone, a metric system, or a shared software technology. For those who adopt it, it works in the background. But it is not just there; it requires work to be set up and maintained.

Andrew Barry has suggested the term 'technological zone' for those spaces of governance that are coordinated specifically by technical knowledge, metrics, and standards (Barry 2006). It remains to be explored just how technological or epistemic zones of governing are constituted, how far they extend, and what their dynamics are, that is, how different zones of knowing governance, and the spaces they constitute, relate with each other.

Knowing and reification

Taking into account the way knowing governance is intertwined with the doing of politics and the making of particular realities of governance makes for a particular kind of problem. We may assume that the characteristics and significance of infrapolitics are known not only to us, the social scientists who research them, but that those actors who are practically involved with the making of knowledge about governance are aware of them too. Recognizing the epistemics of governance for their power to define and shape the parameters of everyday politics is likely to have an impact on how knowledge-making is done, that is, on how political scientists, policy advisors, policymakers, and activists engage with processes of establishing representations of political reality.

Doing so may give rise to a struggle for authority to assert a particular definition of that reality, for example. In a competitive struggle for epistemic authority, however, the realities of governance tend to be represented as objectively given, necessary, and independent of subjective interpretation or evaluation (Ezrahi 1990; Porter 1996). If knowing is seen as a claim for a particular truth, made in order to compel certain kinds of political action, governance must be positioned in a positivist and essentialist manner, and knowledge of it must be performed as a neutral, detached, and objectively determined description of the only reality there is. The historical development of the social and political sciences, as well as the recent growth of research on smart and better regulation, new modes of governance, and evidence-based policymaking, offer examples in this regard.

The dynamics of this broadly positivist mode of knowing governance foster a tendency for governing, together with its constitutive politics, to be *reified* in coming to be known. In order that accounts of them might acquire epistemic authority, fluid, heterogeneous, contingent. and precarious patterns of ongoing political interaction are translated into objectively knowable orders and mechanisms. Political agency is modelled and experimentally controlled so as to be rendered calculable. Governance is turned into a

matter of fact. Political orders are naturalized. As such, they cannot reasonably be denied, reinvented, or politically disputed. Whoever goes against the nature of politics or the factual conditions of governing, as they come to be seen, qualifies as irrational or insane. Engaging with politics becomes a matter of expertise and technological control. As such, the reality of governance is taken out of the game of politics.

The effect of all this is that the diversity of subjective realities and aspirations that are at the outset of the formation of publics and, as such, are constitutive of their political dynamics (Dewey 2012 [1954]), is eventually eliminated. This is a particularly treacherous way in which knowing governance shapes what governance becomes. Knowing governance in a mechanical and functional way risks contributing to the elimination of politics and turning governance into technology (Barry 2001).

The reification of social life can be problematized more generally and in various ways. One may draw attention to its ontological fallacy, its incapacitation of human agents, or the dysfunctionality of petrified orders for societal development (Berger/Pullberg 1965). It becomes extremely problematic, however, when exercised for orders of governance and politics. For here is a sphere of social interaction which, in understandings of Western modernity, is explicitly concerned with ongoing critical reflection on social reality and with processing a diversity of experiences and subjective truths. In the classical understanding, politics is a continuous, interactive process of negotiating collective action to engage reflexively with societal dynamics as they evolve. As such, politics lives on the appreciation of difference, intersubjective disagreement and contestation and it dies with the epistemic fixation of universal objective conditions of governing. Political interaction, compared to other forms of social interaction, is thus particularly vulnerable to reifying modes of describing and accounting for it.

A core problematic of knowing governance scientifically, then, is that it entails the danger of eliminating the diversity, contestedness, and contingency of politics and government that make it productive (and different from administration and management). We may draw connections here with a variously articulated discontent with the ambition to uniformly measure, explain, and rationalize politics and governance as showing up in such diverse works as those by Carl Schmitt (Schmitt 1927), Karl Mannheim (Mannheim 1995 [1929]), Hannah Arendt (Arendt 1998 [1958]), Claude Lefort (Lefort 1986), or Jaques Ranciere (Rancière 2004 [1995]).

This leaves the academic discipline of political science in a difficult situation. In order to justify public funding it is under pressure to contribute to the continuing process of policymaking – not by providing just one more among many possible ways of collective ordering, but by providing scientifically warranted truths about how governance really works and how it must necessarily be done. For particular actors this can help to legitimize their policy proposals, while for the system as a whole it promises a peaceful convergence on shared conceptions of rationality and increased effectiveness.

But with the establishment of any such truth, and the objectification and naturalization of the political ideas and actions associated with it, it contributes to the gradual elimination of politics as its very object of study.

Reflexive knowing: doing knowledge politics

The chapters in this volume go some way to tracing how knowledge about governance is made. Building on concepts from STS, they show that there is a politics of the production of knowledge about politics. Knowing governance, no matter how, is never a neutral observation, but always a selective reduction of complexity, a simplified and partial version of political reality. To the extent that it becomes collectively established as knowledge, it shapes political reality and the possibilities of political action. Any claim to universal truth or objectivity in knowing governance, as in political science, must be deconstructed. How to know governance, then, is not simply an epistemological question, but an ethical and political one too. Knowing governance cannot claim political innocence, but it is itself a medium of politics (for this point made with regard to social science more generally see Law/Urry 2004).

So what now? Should the production of knowledge about governance be held responsible for its performative effects? Should it be assessed with regard to its anticipated consequences, like work in other areas of science and technology? This would require knowledge about how particular approaches to knowing governance will be taken up in practice and become constitutive for political orders. But can these performative effects ever be known in a neutral and innocent way – without again serving to create a particular reality of those effects? There is no way to evaluate them in a neutral way: what kind of political order is desirable, after all, is a political question.

Do we then need to democratize the making of knowledge about governance so that those who might be affected by it have a say in how it is done? This simply takes us back to the original and circuitous challenge of how to decide what democracy really is (for a discussion of similar issues, but with regard to the democratization of other sciences, not of political science itself, see Brown 2009; Brown 2015). Withdrawing from the making of knowledge about governance would just leave the task to others not so puzzled or troubled by the implications of their knowing. So, if there is no way out of knowing governance, we have to engage with it; and we have to engage with it as a form of politics, whether we like it or not.

What other ways of doing the politics involved with knowing governance might there be? How can we do the necessary knowing reflexively, in a way that takes account of its own partiality and performativity? What would constitute a reflexive methodology of political science, or of knowing governance more broadly?

Again, we cannot and should not expect a single or conclusive answer: how to engage with the epistemic construction of political order itself depends on how one understands the political world, on ontological assumptions

and the dynamics that are expected to result from the making and doing of particular representations of political reality. A major issue throughout the history of social science, for example, is the question of whether human agency and progressive change are encouraged and supported by revealing structures of domination (e.g. Marxism, critical theory) or by emphasizing the diversity, fluidity, and openness of social reality and its constitution in situated interaction (e.g. pragmatism, interactionism).

Some of the chapters in this book report on cases in which not only are political orders epistemically constructed (and contested), but in which the reification of politics through technoscientific modes of knowledge-making is also directly addressed and problematized. These are cases in which actors engage reflexively with attempts to establish epistemic authority in governance, rather than joining a 'technoscientific arms race' (Voß 2013) for dominance in matters of truth. Subversive engagement with projects of authoritatively knowing governance appear, for example, in chapters 6, 7 and 11, where attempts to establish procedural designs of public participation are undermined by a critical discourse, protest actions, alternative citizen-led designs, and constructive assessment exercises, which all expose the politics of knowing governance. Such initiatives seek to turn the design of political participation from a matter of fact and functionality back into a matter of concern.

In the concluding chapter of our book Andrew Stirling goes some way towards developing one possible orientation of reflexively knowing governance. Treating the making of knowledge about transformative governance for sustainable development, he takes issue with current modes of thinking about and doing it. Given that we accept that knowing and doing, truth and power are inextricably intertwined, that objective and universal knowledge about governance cannot exist, and that there is always politics in the production of knowledge about governance, how can we then do the knowing of governance? Stirling's chapter offers elements of a 'reflexive constitution' for 'heterodyne democracies'. Its purpose is to cultivate a diversity of 'knowing doings' in governance and enhance capacities for distributed, self-organized learning for sustainable development. In developing this vision, Stirling exemplifies a long-standing concern with 'reflexivity' in STS (for an overview see Lynch 2000).

There have been extended debates and experiments in STS as to how insights into the dynamics of knowledge production might be taken up in STS's own practices of knowing. More specifically, there are also deep discussions about the inevitable politics of knowing, and the different ways in which STS can deal with its own politics (for an overview see Law 2009b). Our last chapter takes up this issue and elaborates it specifically in respect of knowledge about governance. It sketches an uncommon vision, together with a set of strategic orientations, of how the knowing of governance can be done in a way that opens up and enhances a diversity of knowings and realities of governing, rather than closing down on any single, all-encompassing model with its concomitant concentration of power.

Against the background of the preceding discussion it must be clear that any conception of knowing governance itself, together with what it may yield for doing it reflexively, will only be one of several ways that are possible, no matter how sophisticated it may be. And each of them will contribute to bringing about a different reality of what knowing governance might be. Exploring different possible ways of reflexively knowing governance, or more concretely, discussing the various possibilities of a reflexive political science, is a next step. This is another area in which STS – as well as methodological reflections in other areas of the social sciences such as ethnography and grounded theory – might be made fruitful for studies of governance.

All of this speaks to an emerging research agenda. For now, the investigations into the epistemic construction of political order which follow here must serve to open up just some of our questions about knowing governance.

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Part I

Knowing the Body Politic: Collective Agency

2

Modeling the State: An Actor-Network Approach

Jan-Hendrik Passoth and *Nicholas J. Rowland*

Introduction

The modern state emerged as much more than an idea, although one might get that terrifically wrong impression from literature on the history of political thought dating back to Rousseau, Hobbes, and Machiavelli, and most introductory textbooks on political theory. It was also more than just a claim utilized by social and political movement activists of the 18th century, although this equally wrong impression is fueled by now-classic accounts of the historical emergence of the modern nation state during the Enlightenment.

What research in the "social studies of politics" suggests, a small and still marginal subfield of science and technology studies (STS) proper, is that the modern nation state has been from the beginning born from an infrastructure crafted by science and poured into technology. The logic is unmistakable. After all, what are we to make of Weber's (1978) foundational claim about the legitimate use of violence and the sharing of power in politics without the quintessentially bureaucratic regimes crafted in political economics, jurisprudence, and early management science? What does population tell us about a nation without the census and statistics, without techniques of defining and counting households and people? What are we to make of territorial and geopolitical borders without geology and geography, without their respective tools to represent, modify, and even create bounded land for nation states? For us, in this small nether region of STS, "knowing governance" is as old as the very infrastructure of performative national measurement that gave life to the modern nation state in the first place. This "knowing through measuring" and "knowing through modeling" are the mundane although foundational works undergird the political practices that make modern nation states possible. Thus, one way of knowing governance implies understanding those epistemic practices of measurement and modeling that shape and are shaped by states.

But immediately things get messy. For us, science and technology are not foremost outcomes; we do not discuss them in the abstract; we especially do not discuss their relationship to the state, as if they were, in fact, extractable from the state itself. We treat science and technology as practices. Once we study science and technology as practice, we cannot help but notice that wherever scientists are gathering around instruments, knowledge is not what is individually or collectively known, but what they practically do together to know.[1] Wherever engineers are collaboratively modeling a mechatronic system, knowledge is not what drives their modeling; it is the model itself and their tacit skills to grasp what their model is meant to capture.

If there was one finding that has been a real game changer in the third generation of STS,[2] it is that knowledge is a dynamic thing – especially in the ontological sense. The post-plural attitude known as actor-network theory (ANT) is the most austere in this regard. With such an attitude, epistemic knowledge production practices must be interpreted as always more than just epistemic. Still, decades of sociology, history, and philosophy of science have treated it as such. Knowledge is often characterized as inactive or as a direct reflection of the natural or social world. In contrast, knowing (i.e., the production of that knowledge) is depicted as active; it is a practical intervention into the world.[3] Thus, knowledge production, maintenance, and use are not only epistemic issues; they are simultaneously ontological endeavors. They are acts of making, rather than merely depicting, what is at stake, and, in this sense, they are performative to the core.

Modeling and forming

We enter through this epistemological and ontological imbroglio that earnest scientific questions seem always to produce. Applied to the apparatus of political theory, an "actor-network approach" to modern states and stateness cannot bemoan the unattended-to complexity of prominent although oversimplified models of the state; the approach has an obligation to treat these models as what they are, namely, "both a means and a source to knowledge" (Morrison/Morgan 1999, 35). Models are not theories to be applied; they are not abstractions of observations. Even "[a]pplied theory isn't simply theory applied, because it instantiates theoretical frameworks using a logic that stands outside those frameworks," according to Sismondo (1999, 255).

This bears significantly on the matter of method. Scholars writing in the ANT tradition have typically enjoyed a wide berth with regard to methods so long as they "followed the actors" as Latour (1987) so famously mandated. Because actor-network theorists insist on the agency of non-human actors (i.e., technological artifacts or scientific theories) Latour's mandate raises some awkward questions about what it might entail, for example, to "follow" a scientific model. Like models, "methods don't just describe social realities but are also involved in creating them" (Law 2004, i). Latour and Woolgar (1986, 30) were faced with this uneasy reality when they, as (social)

scientists, went to study (laboratory) scientists; in that context, they used reflexivity "to refer to the realization that observers of scientific activity are engaged in methods which are essentially similar to those of the practitioners which they study." As Latour and Woolgar (1986, 275–276) put it, revising our

> epistemological preconceptions about science raises awkward questions about the nature of its social analysis. Can we [as social scientists] go on being instrumentally realist in our own research practices while proclaiming the need to demystify this tendency among natural scientists?

The same concerns, in principle, haunt an edited volume devoted to knowing governance: research on knowing automatically and unavoidably raises awkward questions about how knowing the knowing works. It is, we contend, only through tracing ontological relationalities (i.e., associations) among objects – in our case, scientific models – that we begin to practice an "ontological sociology" or "empirical philosophy" useful for knowing governance (Hekman 1986, 158; Mol 2002). Thus, with the reflexive actor-network attitude toward the performative potential of scientific models and methods as "both a means and a source to knowledge" (Morrison/Morgan1999, 35) that "don't just describe social realities but are also involved in creating them" (Law 2004, i), our aim is to map out some of the most basic ontological consequences of knowing governance found in models of the state and state power.

The most pressing question regarding the character of modern nation states is without doubt "what is the state?" As an epistemological question, it is the short version of "do we know what the state is?" Answers in this line of thinking always seem to implicate knowledge about power. To form such an answer, the epistemologist must reformulate or translate the question into some variant of Weber's much-repeated concern, "can we determine what the state can legitimately do?" As we shall see, it is also an important – possibly the most important – ontological question in the history of state theory. In fact, "what is the state?" is the simplest form that an ontological question can take. If the scholarly activity of state theory has been, in the past, treated primarily as an issue of epistemology, it is exactly this epistemologically oriented approach to "what is the state and what can it legitimately do?" that we can treat as an *intervention* into the *being* of the state and state power and, therefore, as an ontological question too.

Remodeling and reforming

Close readers will no doubt already realize that from our ontological vantage point the state is (defined by) what it can (legitimately) do. But that is only one way of forming an intervention into the being of the state and state power. The state, as it is modeled in political science literature and the small but old and multidisciplinary field of state theory, is posed either as an effect

of heterogeneous and dispersed activities or as a unified entity capable of acting on the global stage. The state, as it is modeled in the practice of state reform – "out in the wild," so to say, but with Sismodo's critique of "applied theory" firmly in mind – is posed as both an effect and an actor, at once, and without the slightest bit of chaffing or awkwardness when juxtaposed. As we shall see, what is incompatible in state theory corresponds in state reform.

Knowing governance, thus, is not only about unscrewing the Leviathan to look inside and observe how governance is known by a multitude of actors; knowing governance can be observed through the most basic method for knowing modern politics, namely, knowing the state. Knowing governance this way implies sensitivity toward the twin issues of "modeling" and "remodeling" it – or, put another way, state forming and state reforming.

Scholarly discussion, in this particular context, is unusually useful, even though, we realize, many deem the very term "academic," especially in political circles, to be synonymous with "irrelevant" or "aloof" compared to the hard daily politics necessary to keep the state running. The models we review help to translate how political practices are forming and reforming the state, while, at the very same time, contributing to the forming and reforming that they supposedly only describe. This seems to be the odd formula for what might be called "political performativity."[4]

This also presents us with an unavoidable paradox. By asking where and how state power is known, we also tentatively answer the question "do we know what the state is and what it can do?" – and this is true even if the answer we provide is an attempt to treat the multiplicity of other practical answers as part of our answer. By writing about models of the state in theory and in the wild, we also contribute to the practice of preforming and reforming the state in theory. This paradox and reflexive reality are irresolvable. We cannot just say "while they want to know, we ask how they know." We, as scholars, are counted among them; we can never fully extract ourselves; we can never really be the sort of participant observers that in yesteryears seemed possible and portray a sense of objective distance from the academic discussions we study but also contribute to. Thus, in the end, we find ourselves irreducibly intermeshed. We cannot avoid the game of epistemology completely no matter how earnestly we pursue ontology.

Reformed models and models of reform

After reviewing state theory proper, we review three succeeding attempts at state reform, namely, New Public Management (NPM), New Public Governance (NPG), and the heated debate over the Hollow State. Once models are implemented, reformed, and then implemented again, we observe models of the state being moved, changed, interlocked, and, in effect, bridged, if only provisionally, in the practice of political reform. So, do we know what the state is and what it can do?

Model 1: the power of the actor-state (in state theory)

In the realm of state theory, modeling state power is at least as old as Hobbes' original formulation of the king-like Leviathan. Since then, it seems that Weber's definitions of the "state" and "politics" have dominated conceptual discussions about the political sphere in political science, social theory, and international relations during the 20th century (Bartelson 2001). According to this modeling legacy, the state is an entity made of a "human community that claims the monopoly of the legitimate use of physical force within a given territory" and politics constitutes "striving to share power or striving to influence the distribution of power, either among states or among groups within a state" (Walker 1993; Weber 1946, 78). Thus, the politics of the state implicate state power. By seeing political power as concentrated in a human-like unitary actor called the state, a valuable tool for conceptualizing how states compete, cooperate, and collaborate with one another on a global stage is gained, and, as Bartelson (2001) shows, seeing states as actors has endured by consistently fending off many dissenting camps. The assumption of state entitivity, that is, seeing states as freestanding or unitary actors, has become a stable and robust model in social, economic, and political theory. The conceptual move enabled a corpus of research to be built around how institutions like states "think" (Douglas 1986) and how states relate to other states through contractual obligations and occasional skirmishes (Skocpol 1979). Additionally, as actors, we could observe how states relate to their civil societies and other organizational entities in the same field of modern political life (Lecours 2005; Powell/DiMaggio 1991).

However, while most commonly associated with the neostatist turn (Evans et al. 1985), the biography of this model has deeper bipartite roots. State entitivity started in classical liberalism as a way to conceptualize how states can intervene and mediate the sometimes conflicting interests of citizens (Bartelson 2001) – a Hobbesian Leviathan recently remodeled. State entitivity can also be traced back to Marx; in the 19th and early 20th centuries, states were increasingly conceptualized as unified actors in instrumental terms, in particular, that states were necessary to sustain social order and modes of production (Jessop 1977, 1990; Miliband 1969; Offe 1972). Sociologists largely abandoned early underpinnings in liberalism during the second half of the 20th century and, driven by scholars like Parsons, Easton, and Dahl, oriented themselves toward a different analysis of political systems, at which point Marxism emerged as an asylum for modeling "the state."

Remodeling a Weberian version of state power came much later. While Marxist thinking recovered a modicum of conceptual autonomy for states, by the 1980s, scholars called for full state entitivity (Evans et al. 1985). Neostatists justified the potential for autonomy in Weber's (1978, 54) definition of the state. However, seeing the state as an autonomous actor was ultimately corrupted. What started as a clear analytical concept became a ready-made, taken-for-granted theoretical presumption (Abrams 1988;

Carroll 2006; Mahon 1991; Mitchell 1991). So reified was this idea that in the 1980s and 1990s one could get the feeling that an individual might be able to snap a picture of the state.

By arguing for enhanced state autonomy, those same scholars appear to have generated a similar but academic form of autonomy for themselves; the intellectual move contributed a sense of urgency to their research. After all, such a move opens up a direct line into conceptions of power relations. Indeed, "autonomy" can be considered its own form of state power, especially if autonomy allows enhanced freedom and greater latitude to "intervene in a given set of events so as in some way to alter them" (Giddens 1985, 7; Parsons/Smelser 1955, 181). From this perspective, states could be relatively weaker or relatively stronger (i.e., respectively, more or less autonomous) actors in political and international relations (Mann 1984, 1985). Modeled as actors in a "world-historic context," state power was influenced and structured by sets of institutional structures embedded within international and domestic conditions (Skocpol 1979, 290). Comparative historical research, therefore, was where power received the most analytical attention. For example, assuming state autonomy lead to questions about how institutional infrastructure enabled state managers to wield the power of states with more or less civil or international resistance (e.g., Nordlinger 1981). The shifted and remodeled state also helped scholars to examine the ways in which state formation and war-making shape the broader institutional infrastructure that states (and other non-state actors) are embedded in (Mann et al. 1987; Porter 1996; Tilly 1973).

Model 2: power networks of stateness (in state theory)

Critical of the autonomy assumption, Mitchell (1991, 78) offered a second remodeling: at specific historical junctures a state empowered by autonomy emerges, but rather than assume this a priori, scholars should attend to uncovering how the "powerful distinction between state and society is produced." This was a bold move; however, for scholars like Carroll (2006, 19), this modest remodeling was far too conciliatory, and this is because

> [w]hen social scientists uncritically adopt the idiom the actor-state, they do not so much describe a political reality as become agents in the construction and institutionalization of the Hobbesian state-idea, the idea that when the head of state acts, the state itself acts.

By remodeling a state actor in theory, sociologists – if unwittingly – contributed to remodeling the state outside of theory.

This alternative model of power in politics is largely built on Foucault's (1978, 2007) post-structural and Latour's (2005) post-pluralist approaches and it uncovers "political power beyond the state," processes that the state no longer has any "essential necessity or functionality" in (Rose/Miller 1992, 176).

According to this model, "power is not a property or possession of 'rulers' [and] . . . no longer resides at headquarters"; thus, Hobbes' king-like Leviathan, even the newly remodeled one, "has lost his head" (Curtis 1995, 576). By seeing political power in the much networked and distributed masses, we learn that power can "never [be] monopolized by anyone" or anything, which makes conceptualizing states as any sort of freestanding actor or as a form of monopoly difficult to accept by any scholar of this ilk (Curtis 1995, 577). Scholars who reject the view that states are autonomous actors capable of expressing their power by shifting the events of history in broad strokes promote an alternative approach, namely, that states are the constitutive effect of a much-distributed network of flexible self-governing subjects.

For Foucault, what we mistake for a freestanding state is really the complex process of *étatisation* (stateness) (Deleuze 1986, 577). Power, therefore, cannot be the capacity of the state as an actor or a proxy for its relative autonomy; power, he claimed, was exercised between self-regulating subjects in their daily goings-on as they micro-police what can be said, done, and seen (Faubion 2005; Foucault 1977). This model is today positioned as a second dominant model in state theory, in particular, in anthropological studies of the state where state power figures prominently in research on post-colonialism (Sharma/Gupta 2006). The organizing and "organized power of armies, schools, and factories, and other distinctive institutions of the modern state" monitor and discipline citizens, which in turn promote self-monitoring and self-disciplining in the broader population (Mitchell 1991, 93). The state is neither the cause of those mechanisms nor the source of their methods; the state is their effect (Mitchell 2002). And Foucault used the term *gouvernementalité* (governmentality) to capture precisely this; however, his insistence that monitoring and disciplining techniques were also woven together into different patchworks or network formations at different points in history constitutes a model of the state but was never developed into a full-fledged theory of the state. On point, Foucault (1991, 103) writes that governmentality is, in principle, both "internal and external to the state" such that while he happened to observe the "governmentalization of the state" during the modern period, governmentalization was neither the inevitable consequence of progress nor an ideal form of governing. Instead of advancing Foucault's model of networked modern statehood, scholars since have developed a particular interpretation of governmentality. According to Lemke (2000a, 2000b), scholars have reified governmentality to now mean the "mentality" of modern "government," or the mentality of those citizens being (self-)governed (see also Barry 2001; Miller et al. 1991).

In theory, these two formed and reformed models of the state and state power are cleanly separated, clearly distinguishable, and positioned in strict opposition to each other. In fact, that Foucault claimed that his model of power, and the resulting ideas about the state, were to be understood as an alternative to business-as-usual in sociology (i.e., assuming state actorhood

and relative autonomy for this actor on the world stage), little more needed to be said about the relationship – or lack thereof – shared by these two models. Let us anticipate an important and legitimate objection to our argument thus far: Model 1 and model 2 are, of course, not the *only models* that the world of state theory offers. Far from it; the world of state theory overflows with model builders. Pick an issue, select your policy field, choose your favorite existing models, and pair them with or against each other. The practice of model building and remodeling is like a game in that it features rule-like formula for producing vast arrays of menus of states (Rowland/Passoth 2015). Pick your favorite. A far from exhaustive review reveals "The Ambiguous State," "The Aseptic State," "The Autonomous State," "The Calibrating State," "The Capitalist State," "The Class State," "The Client State," "The Coercive State," "The Commodity State," "The Constitutive State," "The Container State," "The Contaminated State," "The Core State," "The Cyborg State," "The Data State," "The Disembodied State," "The Distributive State," "The Embodied State," "The Engineering State," "The Enviro-State," "The Failed State," "The Fiscal–Military State," "The Fragile State," "The Glass State," "The Global State," "The Hydraulic State," "The Imagined State," "The Imperial State," "The Infrastructure State," "The Leaky State," "The Magic State," "The Mineral State," "The Mining State," "The Patriot State," "The Patron State," "The Periphery State," "The Petro State," "The Pariah State," "The Police State," "The Politicized State," "The Predatory State," "The Pristine State," "The Rentier State," "The Scientific State," "The Social Services State," "The Spectacular State," "The Surveillance State," "The Sustainable State," "The Technoscientific State," "The Virtual State," "The Weak State" – but we stop there, to name just a few neatly in alphabetical order. On balance, however, names are not models; naming a model does not make the model outright. But most of these are, in fact, models of the state. Similar to the two models we tried to depict earlier, these models often have countermodels, that is, models that are developed explicitly as counterpoints to a preexisting model. They are positioned as opposites – in part, internally defined by external differences with an outside countermodel and vice versa. But what if we widen the view? After all, states do not only live in theory. What if we look outside the small world of state theory and into the exigencies of state reform efforts captured in public administration, the practical wing of political science?

Model 3: the regulatory and disaggregated state (in state reform)

At least since the 1970s, states have had to transform domestically in response to real and perceived global pressures, especially in market-driven economies such as Australia, New Zealand, the United Kingdom, most European nations, and the United States. Hood's (1991) and Boston et al.'s (1996) works on the topic of state reform provide a loose description of *and* a list of prescriptions for these changes. By 2000, there was ample literature on

NPM, and, in the standard account, NPM was about adopting a business-like management paradigm for the domestic reformation of public organizations in light of international pressures related to globalization; hence, the major conceptual shift was to start managing state and public bureaucracies like for-profit firms rather than administer them like non-profit organizations (Andrisani et al. 2002; Barzelay/Armajani 1992; Bissessar 2002; Christensen/Lægreid 2001, 2007a; Ferlie et al. 1996; Goldfinch/Wallis 2009; Lynn 2006). The emerging global economy and numerous national economic crises impelled states, so the story goes, to become more efficient and agile. State reform, in this instance, implied "transferring authority from the central politico-administrative level to regulatory agencies" (Christensen/Lægreid 2007b, 12). More specifically in this reform, public service organizations were encouraged to adopt entrepreneurial leadership agendas emphasizing accountability and evaluation, thus disaggregating the provision of public services, incentivizing the identification of efficiencies, and supporting competitive contracts for resource allocation. However, consensus over precisely what constitutes NPM – as a driver of changes or reflective of said changes – has never solidified (Goldfinch 2009). Still, these depictions of change and mandates for action appear to have been a wellspring for reform and research about reform.

On a conceptual level, NPM has been widely recounted as a reaction to previous forms of public administration characterized by inflexible insularity, which resulted in the fragmentation of public services and ultimately undermined policy by decoupling its creation and administration (Gregory 2006). According to Barzelay (2001, 1–2), the "culture, size, cost, and operation of . . . civil services [became] a policy issue" as "public perceptions of bureaucracy became more negative" (see also Kingdon 1984). Scholars and political consultants claimed that public organizations, generally, and government agencies, in particular, were organized according to numerous "silos" or "pillars," which created the predictable problems of data redundancy between departments and policies which undercut one another, which further fragmented services for citizens (Pollit 2003a, 2003b).

Inspiration for NPM reforms partly came from the popular, but short-lived "re-engineering" trend, the radical reinvention of how operations were conducted in for-profit firms and how clients could be harnessed to contribute to business processes through various forms of self-services (Hammer 1990; Hammer/Champy 1993; Hammer/Stanton 1995). However, although NPM reforms appeared to enact and reflect a widespread departure from old ways of conducting work, it now seems, in retrospect, to have possibly been an extension of previous priorities. Gregory (2007, 222), for example, claimed that NPM was "the latest and most significant manifestation of what Weber called the process of 'rationalization.'" Because NPM reforms were about instituting calculable and explicit rules and procedures for the purpose of

managing human affairs – in short, rationalizing public administration – emphasis on managerial improvement by disaggregation and devolution were sought rather than improving democratic processes and policy-making; NPM, according to Gregory (2007, 223), was not so much about abolishing bureaucracy as an organizational form of government as it was a "means of refining" or reforming the master trend of history. Still, on balance, others claimed that bureaucracy – in the pejorative sense – was what NPM reforms were specifically designed to banish, reinvent, or abandon. This produces an interesting conundrum for promoters and researchers of NPM, who are often one and the same. As governmental agencies were reformed by state-level initiatives, it became increasingly unclear whether the reforms constitute an extension of previous prerogatives or merely reflect the wholesale institutionalization of distinctly new governmental practices, which is a debate that remains unsettled (Osborne/Gaebler 1992; Osborne/Plastrik 1997).

In connection to academic theory, NPM initiatives were justified by practical interpretations of new institutional and neoclassical economic theory, in this case, especially ideas relevant to the state and state bureaucracies (Boston et al. 1996; Osborne 2010a; Self 2000). Unsurprisingly, interest in the management of public sector organizations – and their departments, agencies, bureaus, offices, and so on – was largely based on the widespread appeal of neoliberal economic models of management (Caiden 1991, 1999). And, while state theory is only occasionally addressed directly, we observe the state in two forms. First, we see the state as the "regulatory state" (Carroll 2007; Jessop/Sum 2005; Vickers/Yarrow 1988). By regulatory state, institutional and evolutionary economists are typically referring to how the state regularizes or normalizes the capitalist economy and capital accumulation. From this perspective, an entity, the state, interacts with the broader economy, guiding the economy toward stabilization and crisis avoidance. Second, we also see the state as the "disaggregated state" (Slaughter 2004). By disaggregated state, scholars in international relations and political science are typically referring to how states no longer resemble robust unitary actors in light of advancing global relations; inter- and multinational organizations have proliferated and absorbed, thus transforming many previously monopolized capacities of the state; government officials increasingly attend to international matters through transnational networks; and domestic matters of government oversight, for example, related to human rights, increasingly become international issues no longer under the explicit control of government officials or the state. From this perspective, the state is being divided into constituent parts, some of which are being absorbed by supra-state actors or subsumed under comprehensive global initiatives. In the end, we observe both an actor-like state in the regulatory state and a network-like model of the state in the disaggregated state, side by side, coexisting in NPM reforms. However, whatever political capital NPM initiatives once had among scholars and government elites, NPM reforms seem to be losing ground to a new trend about the governance of public affairs.

Model 4: the plural and fragmented state (in state reform)

Inspired, in part, by Kuhn's (1962) work on scientific revolutions, Gow and Dufour (2000, 573) persuasively show that only modest evidence exists that NPM reforms ever constituted a Kuhnian paradigmatic shift in public administration. More boldly, Dunleavy et al. (2005, 467) proclaim that NPM is "dead," by which the authors mean that NPM initiatives have either "largely stalled" or, in "leading-edge" countries, "been reversed" in interim years. While numerous challenges are leveled against NPM reforms (Hughes 2003; Osborne 2010a; Rhodes 1996), some attempts to salvage the trend include "second wave" or post-NPM reforms and reforms research, which promises an updated version of NPM that is simultaneously critical of the trend (e.g., Christensen/Lægreid 2007a).

As an alternative to NPM, Osborne (2006, 378; 2010a, 3; 2010b), in an editorial article followed by an edited book *New Public Governance*?, raises the possibility of new reforms away from public administration or public management toward public governance. In this account, the weakness of public administration theory and practice "paved the way for the rise of NPM," which Osborne (2010b) now finds equally outdated. Also labeled "citizen-centered governance" (Barnes et al. 2008) or "networked governance" (Crawford 2006), public governance is an umbrella term for theoretical perspectives that capture how public policies are crafted, why some are selected over a menu of others, and how the select few get implemented later on, *and* how social services are proposed, why some are delivered as proposed while others are not, and how they transform over time.

NPG's theoretical underpinnings come from various strands of institutional theory from sociology, political science, and organizational analysis (Kooiman 1999; Osborne 2006). The hallmark of institutional argumentation is to show how operations inside organizations are regulated by stable second-order practices – often referred to as "institutions" – that subtly set standards for legitimate behavior in the broader economic sector or organizational environment (Powell/DiMaggio 1991). In principle, the influence of institutions on behavior inside organizations is most easily observed in the public sector, for example, in government agencies and public service providers (Scott/Meyer 1991). Organizational behavior is expected to be influenced by institutions in that

> the organization's leadership is highly sensitive to the expectations and standards of its industry; that the organization of work within the bureaucracy depends on broader ideologies and cultural scripts found in modern societies; that managers are likely to copy the practices of other organizations, especially high-status organizations; that professional groups are the arbiters of organizational legitimacy; that rational organizational myths and rules structure work practices; and that the ultimate performance of an organization's set of tasks does not depend much on tools like assembly lines, computers, and the like. (Rowland/Rojas 2006, 86)

As Kooiman (1999, 67) frames it, the institutional perspective provides an important lens to understand reform in public administration because it draws our analytical attention to "second-order governance," or "the institutional conditions and meta-governance which deals with the principles which 'govern' governance itself."

From this perspective, public governance is expected to be responsive to the broader external environment, which has implied, in recent years, the development of dynamic collaborative efforts with public service providers in the private sector and shared governance with the general public. For example, research on governmental contracting provides insight into the uneasy balance between government officials and private sector service providers; the latter have little control over the broader structure of service provision that the former are tasked with steering (Kettl 1993). Conceivably, a similar dynamic exists in situations where government officials abandon previously supported social programming and the public is left to absorb the loss or take up the provision of services themselves. An alternative to both, the notion of coproducing public services, has become a core element of NPG reforms (Pestoff 2011; Pestoff et al. 2011). Coproduction rethinks the relationship between providers and consumers of public services. In traditional public administration, public services were government provided and consumers were conceptualized as essentially passive agents in the process. Under NPM reforms, public service provision was outsourced and consumers were expected to play a more active role through various forms of self-service. Alternatively, the coproduction of public services implies, according to Bovaird (2007, 847), that

> the provision of services [be accomplished] through regular, long-term relationships between professionalized service providers (in any sector) and service users or other members of the community, where all parties make substantial resource contributions.

Coproduction is a pointed challenge to a basic tenet of NPM, the practice of clients playing a participatory role in the design and provision of government services is the mark of coproduction, while service design and provision were routinely divorced under the mass outsourcing efforts symbolic of NPM reforms. To illustrate, consider comparative research on the role of shared governance between parents and daycare providers; Pestoff (2011) convincingly shows how parents are not limitless in their influence over the provision of care and that daycare providers are not open to all forms of parental involvement. While this might seem like commonsense, Pestoff (2011, 22) digs deeper, and, underscoring the limits of such collaborative relationships, concludes that "public services . . . demonstrate the existence of a 'glass ceiling' for the participation of citizens as clients of enduring welfare services," or, as Bovaird (2007, 856) reflects, "coproduction is not a

panacea" for the reformation of service provision. From this vantage point, we see the state only in traces and in a much-distributed formation.

In comparison to NPM reforms, models from state theory play a more central role in NPG. In broad strokes, Osborne (2006, 377; 2010b, 1–2) categorized early research in public administration as "statist," referring to research from "the late nineteenth century through to the late 1970s/early 1980s," and NPM reform was conceptualized as merely a precursor to a new form of bureaucratic tradition replete with "a plural . . . and a pluralist" conceptualization of the state. Rooted in institutional theory (e.g., Lecours 2005; Powell/DiMaggio 1991) and network theory, NPG "posits a plural state, where multiple interdependent actors contribute to the delivery of public services, and a pluralist state, where multiple processes inform the policy-making system" (Osborne 2006, 384, 2010b, 9). In light of this coproduction, we begin to see what the state might look like in the broader vision of NPG reforms; it is at once fragmented while simultaneously an integrating force between many a diverse actor. Thus, while services in the public sector are fragmented (Rhodes 1997; Skelcher et al. 2005), the much-distributed practice of "coproduction by users and communities has provided an important integrating mechanism," states Bovaird (2007, 857–858), "bringing together a wide variety of stakeholders in the public domain" who are partly responsible for the provision of services they want and need.

Model 5: the hollow and enabling state (in state theory and state reform)

Readers of policy studies and public administration research are no doubt familiar with discussion of the "hollow state" founded upon NPM reforms associated with "Managing the Hollow State" (Howlett 2000; Milward/Provan 2003; Peters 2000) and NPG reforms associated with "Governing the Hollow State" (Milward/Provan 2000). Literature on the hollow state provides significant insight into the dynamics of state power and the consequences of how states are remodeled.

State models have always been a calamitous cocktail of prescriptive accounts of what states should be and descriptive accounts of what states are, and literature on the hollow state reflects these two faces of state forming and reforming, sitting at the intersection of prescription and description. Prescriptively, political figures like Margaret Thatcher and Ronald Reagan supported initiatives to actively and publicly reduce the role, size, and capacity of the state (i.e., to hollow out the state) (Williams 1990, 100–104) – arguing that less government (to a point) was better government, and acted from this vantage point. Scholars such as Milward and Provan (2000, 2003, 3) see the hollow state as descriptive: as a "political theory of devolution of the mantle of government authority to nonprofit organizations and private firms" (see also Milward 1996). However, both accounts – whether prescriptive or descriptive – capture the same set of reform processes: increased levels of

separation between centralized government funding and local service provision, the joint or coproduction of public services, and the expansion of collaborative interorganizational network relations. The hollow state is marked by governing arrangements that permit non-state actors to amass the capacity to "resist government steering, develop their own policies and mold their environments" (Rhodes 1997, 52); immediately, the most basic ontological question about the state, regarding what it is and what it has the power to legitimately do, are foregrounded.

Power has long been seen in sociology – and sociologists are not particularly novel in this regard – as the "capacity to intervene in a given set of events so as in some way to alter them" (Giddens 1985, 7). Giddens's definition is akin to Parsons and Smelser's (1955, 181) traditional formulation of power as the "generalized capacity to get things done." In this way, governing arrangements that grow increasingly autonomous from the state are referred to as "governing without government" and constitute a loss of state control and state power. In the hollow state literature, these processes beset the state from above and below (Hysing 2009, 312; Pierre/Peters 2005; Rhodes 1997). From above, in the international system, state power is being usurped by the sweeping forces of economic globalization and the rise of powerful intergovernmental institutions such as trade organizations, world banks, and credit rating agencies (Baumann 1998; Newman 2001). To illustrate, consider forest certification in Sweden: "there has been a hollowing out of the state, that is, a transfer of functions upward to the European Union" (Hysing 2009, 314). Still, as Hysing (2009, 324) persuasively shows, "governing 'without' government" is [something of] a misnomer, and instead prefers the similar sensitizing phrase "governing 'with' government." This is because Swedish forest policy reform developed during the 1990s contained "fewer detailed regulations" but "stronger environmental ambitions," which afforded forestry "increased freedom" in operations, but with the expectation of "voluntary responsibility for the environment" (319). Thus, emerging forms of global governance such as forest certification are not without some form of government intervention given that their power and

> authority are [typically] state based and increasingly multilateral in form, in the sense of being embodied in institutions built by a number of states co-operating to achieve joint gains that recognize a set of reciprocal rules and obligations. (Bernstein/Cashore 2004, 40)

It is, therefore, not entirely accurate to describe these institutions as non-state; they are "established by states . . . for states" even if they appear to undermine or route state power (35). Such dynamics are now being captured by the notion of "enabling state," both conceptually and as a practical matter of innovative policy (Gilbert 2002, 2005). By enabling state, scholars usually mean that government agencies outsource their duties, thus enabling private firms and public organizations to act on behalf of the state while

pursuing their own organizational ends, and this robust concept applies to the global level of analysis as well as operations in the domestic sphere. In light of the enabling but hollow state, suddenly power looks a little different.

When state entitivity is assumed in actor models of the state, power necessarily becomes a capacity of the acting body of the government, and when states make concessions to manage external forces they are incapable of controlling, in this case global governance bodies, then state power appears to be in decline. This concern echoes a major hypothesis in writing on the future of the state, that the state has becomes a supporting actor of globalization and thereby its own decline. From below, in the domestic system, states are hollowing out by outsourcing their many tasks to private and public sector service providers, which shifts control from the central to local level. Writing on British policy reform during the 1980s and 1990s, in Rhodes' (1994, 138) "jaundiced view of [such] trends in public sector reform," the state is being hollowed out, meaning "the British state is being eroded or eaten away." This has clear implications for power; according to Milward and Provan (2003, 2):

> [t]he hollow state . . . metaphor . . . describe[s] the nature of the devolution of power and decentralization of services from central government to subnational government . . . who increasingly manage programs in the name of the state.

Service delivery mechanisms such as contracting out or market testing are 2 of 36 service delivery options set forth in Osborne and Gaebler's (1992) *Reinventing Government*, many of which, Rhodes (1994, 140) reported, have long been in use in the British state. Likewise, in the United States, Salamon (1989, 8–9), in *Beyond Privatization*, argued that government was "operating by remote control, relying on other entities to deliver services that government has authorized." Heinrich et al. (2009) have encapsulated third-party, indirect, or quasi forms of government into the conceptual phrase "a state of agents" to capture the obvious notion that contemporary states have distributed their many tasks so much so that the state itself seems only faintly present, composed only of diffuse agents acting on its behalf. But they do so critically, because they suggest that while government oversight on such agents is limited, governments have established organizational structures and processes through which agents are funneled and by which their services are controlled for quality and effectiveness without any overt government intervention, especially in the form of voluntary self-regulation. From this vantage point, Heinrich et al. (2009) see "a state of agents" as an overstatement and prefer "agents of the state" to describe contemporary reform arrangements.

When describing "the loss of functions by the British government to European Union institutions" and "the loss of functions by central and local government departments to alternative service delivery systems

(such as agencies)," respectively, Rhodes (1994, 138–139) captures the obvious duality in contemporary state power in such reforms; toward hollowing the state from above, in the international system, and the hollowing of states from below, in the domestic system. Theory, again, aids in fully appreciating such dynamic duality. If we observe actor-like states operating on the global level, states are bleeding power upward, to supra-state actors like global banks and credit rating agencies; on the domestic level, states are also bleeding power, but downward, outsourcing it to substate actors such as professional groups and local agencies as well as to citizens.

The crux: as states participate in international non-state matters and domestic decentralization, they cease to resemble unitary actors; instead, states resemble elaborate, pluralist networks. When this happens, models of state power look entirely different. In the Foucauldian rendering, contemporary states no longer appear to be a function of their authority and power; instead, states are their composite effect. Against this new Foucauldian backdrop, states appear to be *gaining* power as they outsource their many tasks and agendas; far from hollow states, they seem all the more robust in this new context. This is because, as research on coproduction intimates, states are not necessarily powerless to guide the processes they outsource to their populations in the domestic sphere. Encouraging greater public responsibility for the oversight and provision of public sector services, which were once the explicit duty of government agencies, is a banner case of the *expansion* not reduction of power. Provided we assume that power operates in a much-distributed form wherein the voluntary self-regulation of a population is seen as the height of government control, state power is seemingly expressed in the bodies and actions of flexibly self-guiding citizens without the necessity – or effort necessary – to invoke power or the state's right to enforce it. This phenomenon has been referred to as the "governmentalization" of both citizens and the state. The implemented and adopted model of states is one of "stateness" (Deleuze 1986) wherein the state is not so much a thing, object, or actor, and instead resembles an elaborate ensemble of distributed and self-directed subjects.

In all, whether or not states are losing or gaining power seems to be mainly a matter of what model of the state is used: either as unitary actors on the international stage or as elaborate networks on the domestic stage, respectively. What seems impossible or illogical in theory apparently operates quite smoothly in the literature on reform and the practice of reform. Perhaps the utility of modeling the state in just such a way that one is able to decry the loss of power through the processes of enhancing it (domestically) is simply too vast. Or, perhaps, reformers do not read Foucault.

The state and state power in models and reform

In summary, the actor model (Model 1) and network model (Model 2) of the state, as depicted in theory, were defined, at least in part, by their mutual

opposition to one another. Thus, Model 1 and Model 2 are thought incompatible. As we shifted to academic literature in public administration on reform, some of which described reform and some of which drove or called for the reform they supposedly only described, a new relationship between Model 1 and Model 2 seemed possible. In the context of NPM reforms (Model 3) we observe a connection between the regulatory (actor-like) state and the disaggregated (network-like) state, but the bridge, in all fairness, was faint. In the context of NPG reforms (Model 4) we observe a connection between a state actor enough to pluralize (i.e., "the pluralist state") and the sort of fragmentation common to network models of stateness (i.e., "the fragmented state"); this bridge was clearer and more explicitly theorized by scholars in NPG reform literature. In the demonstration of our final reform(ed) model (Model 5) the relationship between "the hollow state" and "the enabling state" was even more dynamic and obviously bridged. After all, the hollow state seemed actor enough to be hollowed out in the first place. However, the more hollowed the state got, the more network-like it appeared. Likewise, the enabling state was by definition network-like; the point of reform was precisely to shift responsibility for service provision away from the state and toward the persons and citizens they serve; however, the enabling state seemed actor enough to direct and, to wit, enable the shift of responsibility for service provision in this newly reformed way. What was faint in Model 3, clearer in Model 4, and obvious in Model 5 is the apparent bridge between Models 1 and 2 in practice. In our analysis, knowing the state through state modeling resulted in a richer understanding of what state power is, and, because what the state can legitimately do (i.e., state power) is always implicated in discussions about what the state is, we have stumbled upon some new ontological space for answering the oldest question in state theory, namely, "what is the state?"

Reflexivity

But we will not answer the ontological question "what is the state?" straightaway. We still have some unresolved epistemological details to grapple with. In a possibly too bold move we turned from knowledge of state power to a specific set of practices – modeling and remodeling – that are part of the ecology of ways of knowing the state and state power. In this chapter we tried to get an empirical grasp on these ways of knowing (governance) and we did this by a implementing a technique that is quite common to STS as a field: a strategy of symmetry on a very low level; not so elaborate as the one Bloor (1976) proposed for successful and failed truth claims; not so basic as the one Latour and Callon proposed for dealing with the contribution of human and non-human actors. We implemented a symmetry of models. Ergo, we gave an otherwise classic STS paper, but with a wrinkle. Instead of dealing with models in theory and then dividing them from models in practice, we tried to rhetorically "push down" state theory a little while "lifting up" state reform models. Models are a unique unit of analysis in this regard.

Given their oscillatory life between theory and data, between the pure conceptual and the messy empirical, they help us not to step into a "theory" and "practice" trap – as if models of the state were crafted in academia and just implemented and instrumentally used in reform. By doing this we treated modeling in theory and reform as practices of shifting, testing, and modifying the complex and multiple reality of what the state is and what it can or cannot do, and whatever differences remained reflected empirical differences rather than some a priori divide based on their different *denominación de origen*.

However, we were not completely honest. Why is our report less than innocent? It turns out that it is impossible to write about models of the state without modeling the state ourselves (reflexively). Any attempt at knowing governance is also a contribution to what we know about the state and state power. To say otherwise is folly; there is no epistemological escape hatch for objectivity in the social studies of politics. To be insolubly honest, our work is unavoidably incomplete. No work on the ontology of the state can avoid completely contributing to the epistemology of the state.

Forming an actor-network state model from discourse on state reform

In the end, what kind of model of state power did we form? We observed and in so doing developed an actor-network approach to state theory. Our emphasis on ontology and symmetry meant we could neither reject the post-structuralist model of the network state nor trivialize the intuitiveness of the traditional model of the actor-state (Passoth/Rowland 2010). While ANT is most commonly used in STS, we made use of it here as a general "attitude" (Gad/Jensen 2010), as it was constructed to be by its original architects (Callon/Latour 1981). With a few exceptions, namely, Carroll's (2006) *Science, Culture, and Modern State Formation* and Latour's (2004) *Politics of Nature*, an actor-network approach to states has not been routinely utilized in studies of public administration, international relations, or political sociology. And yet, the core concept of ANT, mainly the relational "actor-network," seems germane to fields tackling two distinct models of the state (i.e., as a unitary actor and as a distributed network) and divided understandings of their shifting power relations (i.e., states losing or abdicating power upward into the international system and states power expanding or sharing power downward into the domestic system).

The relational core of ANT is the actor-network, which implies that every actor is composed of network ties lashed together and that all networks are composed of actors variously arranged (Law 1991a). Actor-networks are lashed together on a completely flat plane of lateral relations such that even hierarchy and scale are conceptualized as highly localized micro-network accomplishments (Deleuze/Guattari 1987). This is why we suggest elsewhere that "[i]n a fitting actor-network twist: it is only because states are networks

that they can appear to be actors" (Passoth/Rowland 2010, 826). This allows us to *blend* the neostatist assumptions with Foucauldian insights. We expect that during certain periods of history a vast geopolitical network might appear (or may be made to appear) lashed together enough to resemble an autonomous actor, while at other periods in the "world historic context" the same nation might not appear to be so autonomous (Skocpol 1979). During other periods of history, per Foucault's insight that governmentality is "internal and external to the state," we would also expect states to resemble vast networks of distributed power, especially during periods of increased "governmentalization of the state" (Foucault 1991, 103), and the inverse also ought to be accurate although it is virtually untested. But the models are bridged, not integrated. In treating these assumptions not as part of the conceptual or theoretical framework – a move that would turn them again into incompatible and even opposing claims – we treat them as what can be empirically combined and separated in attempts of state modeling.

How does power figure in the actor-network state? To be sure, although prominent ANT scholars refer to power, even in the titles of their articles (Latour 1986; Law 1986, 1991b), they are openly skeptical of using "power" in their thick descriptions of empirical cases, unless, of course, power is turned into a practical empirical issue, but this is rare. For actor-network theorists, using power as an explanation is an analytical shortcut for doing the hard work to understand how what appear to be "power relations" form and transform over time. In *Aramis*, Latour (1996, 265) suggested banishing power from the ANT vocabulary, but did not, claiming that power was vastly "useful as a stop gap solution to cover our ignorance" especially "to explain (away) hierarchy, obedience or hegemony [;] . . . it is . . . hard to see how to do without . . . [so] pliable and empty [a] term" as power. We found it pliable too. However, one solution, Latour claims, is to turn the explanadum into the explanans. Power is not an explanation, but what must be explained, suited more for an introduction than for concluding remarks. The seeming macropower of the state, which neostatists emphasize in the state-as-actor concept, and the vast effect of micropower processes associated with stateness, which post-Foucauldians emphasize in the state-as-a-network concept, must be described symmetrically as the outcome of microactions and connected locales that when enacted set the state apart from its constitutive multitudes. "If power is not something you can hoard and possess," Latour (1986, 274) explains, then "it is something that has to be made"; the conceptual upshot and methodological challenge is in asking "[w]ho will make [power]?" and, from the relational-material perspective, there can be only one answer: "[o]thers, by definition." Latour's insight is confirmed in each model of reform we studied. Rules and hierarchy do not produce order because power makes them function like a mathematical formula; they produce order because elaborate networks built around them create the effect, the impression of that effect, and, in some cases, the ascription of someone

in power to enforce them. Additionally, when states appear to be given entities operating in the international arena, this type of network accomplishment also involves concealing a host of other actors whose duty it is to create the semblance of scale and cover up the processes that create it, thus making the state appear given or natural. In the case of power, in general, and state power, in particular, this immense work of obscuring is rarely the same work necessary to establish stronger network ties.

To finally answer the ontological question "what is the state?" we reply: that is an empirical question, and one that must remain open. We have learned that the best answer we can provide may be situational, contextual, and unstable, but it must always be empirical – this is how knowing governance will remain the dynamic and enduring endeavor that it is posed as in this edited volume. The solution is neither intensified abstraction nor is it to be found in stabilizing some concepts while upending others. Knowing governance is a matter of mapping the ways that governance is practically known, whether it be in modeling, measuring, or reforming, and even the most ontological pursuit of this knowledge will irrefutably put you on the path back toward the epistemology of governance.

Notes

1 See, for example, Latour and Woolgar (1986) or Lynch (1985).
2 To borrow Collins and Evans' (2002) terminology, but not their diagnosis.
3 The mode of reproduction and the mode of reference are two of multiple ways in which our world is passed along – to cite Bruno Latour's (2013, 69) attempt to put forward a series of registers that escapes the epistemic trap of treating knowledge as one side of a representational dualism that distinguishes between the knower and the known.
4 Political performativity is not the same as economic performativity, a recently popular topic in the social studies of finance; see MacKenzie (2006) for a primer on economic performativity.

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3

Co-producing European Integration: Research, Policy, and Welfare Activation

Thomas Pfister

Introduction

In addition to law, markets, and political institutions, European integration has also brought about a body of research, primarily in the social sciences, law, and humanities aiming for deeper understanding of the origins, characteristics, meanings, and implications of this historical process. European studies have debated issues of 'Europeanness' long before the founding of the European Communities in the 1950s. However, the study of the EU (or the EC before 1993) is increasingly dominating academic debates on Europe and its integration. Hence, departing from the basic assumption that scientific knowledge always circulates beyond the confines of the communities of specialists involved in its production, this chapter is interested in the role of European integration research within the political process of European integration. So far, European integration research itself has remained rather silent in this regard. Paying particular attention to the relationship between European integration research and EU politics, this discussion suggests that the conceptual language of co-production provides the most comprehensive perspective on the mutual entanglements of the science and the politics of European integration.

This perspective is developed in three stages. The next section describes the EU's research policy as an attempt to mobilise the academia for the larger integration project. In particular, the socio-economic sciences and humanities – or SSH in EU jargon – are regularly asked to produce specific knowledge on political questions. However, given the specific dynamics and characteristics of science, its relationships and interaction with the political sphere cannot be exhaustively investigated by analysing the policy field of research policy. Other perspectives on the particular political and public roles of science and scientists are necessary to gain a firmer theoretical grounding. Therefore, the two subsequent sections investigate two different perspectives that should be capable of providing such deeper theoretical comprehension. The third section discusses the concept of epistemic

communities, probably the best-known approach about (mainly scientific) expert involvement in politics. Aiming for a more comprehensive perspective, the fourth section introduces Science and Technology Studies (STS) and especially Sheila Jasanoff's concept of the co-production of knowledge and order. It highlights the role of knowledge itself and suggests investigating how it is emerging and being used in this context. In addition to a combined perspective on the governance of scientific knowledge production on the political engagement of scientific experts and the political relevance of science and technology, the idiom of co-production also provides a broader view on European integration and its manifestations. This allows to investigate how EU studies contribute not only to specific policies but also to the overall political imagination or, in other words, to constructing the normative and ontological foundations of the integrated Europe of the EU. At the same time, European integration research draws in large parts on resources and infrastructures provided by the object of its research.

These theoretical considerations are illustrated with examples from the field of EU social policy. Social policy has been a central site for citizens' struggles for social rights and subsequently a major source of legitimacy for national welfare states, which have installed wide-ranging labour market institutions and social security systems as a result of those struggles. Given this close historical link between welfare and political integration, calls for a stronger social dimension of European integration are a regular element of its history. However, European welfares states strongly resisted those calls although they have been under different structural pressures for some time. Therefore, social policy at the European level is fragmented and mainly constituted by measures concerning the common labour market, especially with regard to health and safety and anti-discrimination. Developments were mainly driven by the European Court of Justice (ECJ) opening up national welfare and labour market institutions but not creating European equivalents (Leibfried/Pierson 1995).[1] Provisions on social policy have entered the treaties in small steps beginning with an unbinding Social Protocol attached to the Maastricht Treaty in 1992 and a specific chapter on employment added by the Treaty of Amsterdam in 1999. Since the Lisbon Treaty of 2009, specific areas of social policy (such as working conditions and non-discrimination) are designated as areas of shared competence. Most important from the viewpoint of this chapter, the introduction of the employment chapter in 1999 also formalised a specific governance regime standing alongside binding legislation. In this part, the treaty commits the member states to coordinate their national economic and employment policies rather than aiming for EU-level legislation. The Lisbon European Council in 2000 labelled this procedural pattern as 'open method of coordination' (OMC) and extended it to further areas such as social protection, pensions, or healthcare. While legal provisions on social policy remain fragmented at the EU level and while no European welfare systems exist, this coordination

process created a transnational space where European states have negotiated the conceptual and normative building blocks of contemporary social policy guiding welfare reforms in many countries (Pfister 2011; Serrano Pascual/ Magnusson2007). The main focus of this chapter is exactly on this particular space. Its emergence offered various windows for academics investigating the EU to get involved in contributing to this emerging framework, for example, as expert advisers or academic commentators, thereby also reimagining an integrated Europe and the relationship to its members. These new opportunities to make the EU knowable and governable were related to the emergence of new substantive accounts of what counts as 'modern' social policy as well as to the proliferation of new modes of governance, most notably the OMC. Finally, this focus on European conceptual debates about social policy also provides excellent insights into how imaginations of the EU as well as about the field of European integration research are co-produced and stabilised as epistemic and political orders.

EU research policy and funding: steering knowledge production for European purposes?

The science and politics of European integration are most obviously linked through the institutions, practices, and agents of EU research policy. Departing from this policy field provides important contextual information about the dynamic relationships between EU policy and research as well as a first step into the more detailed investigation of the subsequent sections.

On the one hand, EU research policy has to work under the condition that science is widely seen as a separate sphere that is most productive if left to its own (e.g., Polanyi 1962). At the same time, science has always relied on funds, infrastructures, constitutional, and regulatory frameworks provided by public institutions. Therefore, governmental prioritisation of research agendas and the distribution of limited funds as central operations of science policy are 'both difficult and inescapable' (Toulmin1964, 343). States have always aimed at mobilising science for goals beyond the pure advancement of scientific knowledge (Cozzens/Woodhouse 1995; Mukerji 1989; Sarewitz/ Pielke 2007) although the public benefits of science mostly remain vague and general such as economic growth or scientific advances for the sake of later applications (Bozeman/Sarewitz 2011).

The EU has entered a similar 'contract' with science. Yet, as a transnational institution, it has to demonstrate that its research policy serves not only science and ensures scientific advances to create public value but also that it does not undermine research policies of its member states. Regarding substantive justifications of EU research policy always involved struggles about its fundamental objectives (de Elera 2006; Gornitzka 2009). For example, the earliest proposal by Altiero Spinelli, Commissioner for Industry and Research in the early 1970s, subordinated research policy to industrial

policy. However, with the installation of an own Directorate General for Research and Education under Ralf Dahrendorf as commissioner in 1973, science was not subordinated to industry but framed as a goal in its own right. More recently, for example, in the context of the Europe 2020 strategy and its 'innovation union', research is framed as the central element for overcoming a Europe-wide 'innovation emergency'[2] and for developing the EU into a knowledge-based economy.

Another political tension characterising EU research policy arises from its transnational character. The vast majority of public research is still based on national funds and the member states have long resisted a fully fledged EU-level research policy (Banchoff 2002). Yet, EU research funding has increased constantly and acquired much more solid institutional forms with the first multi-annual framework programme (FP) in 1984. Since then, the FPs have become the central element of EU research policy continuously growing in terms of scope, funds, and activities. It became an area of shared competence with the Lisbon Treaty only in 2009. On the basis of these institutions and instruments, EU research policy essentially coordinates (rather than regulates) national policies and distributes additional funds.[3] The current eighth FP named 'Horizon 2020' started in 2014 and ends in 2020.

In order to direct and legitimate the distribution of funds, FPs are required to produce *European added value*. This norm shall ensure that EU support complements rather than competes with national research policy (i.e., the principle of subsidiarity) and allows for a distinction of 'work that should clearly be done at the European level from activity that should be sponsored solely within Member States' (European Commission 1997, 10). It might be less difficult to define Union added value in terms of scale and mobility. However, it is more difficult to determine which contents meet this requirement. For this purpose, Horizon 2020 is framed as a financial instrument to implement the Europe 2020 strategy and in particular its flagship initiative Innovation Union since this policy process already contains shared definitions of policy challenges that require concerted European action.[4] These background conditions are important to understand how the EU formulates specific demand for concrete expertise.

The role of the SSH in Horizon 2020 is particularly complex. So far, all FPs contained a specific space (i.e., work programmes, budgets, calls, projects) that was exclusively meant for these perspectives. In Horizon 2020, however, the SSH are defined as 'cross-cutting issues' that should be integrated across all parts of the programme. Yet, after intense debates following the first Commission proposal (see, e.g., Mayer et al. 2013), the EU defined a prioritised societal challenge 'Europe in a changing world – Inclusive, innovative and reflective societies' in a way that the calls published there under mainly address the SSH. Concerns about how these conditions are put into practice and, in particular, about possible negative effects on the budgetary share of the SSH persist, though.

In addition to substantive conceptualisations of the SSH and the demand for specific knowledge, the FPs involve procedural prescriptions on how funded research is to be organised. Regarding the forms of EU-funded research, cross-border mobility, transnational collaboration in joint projects are the most important characteristics. For example, FP6 introduced so-called *Networks of Excellence* as one particular funding and project format. Their main objective was to build transnational ties among first-rate researchers and projects around specific themes rather than funding research as such. With regard to SSH research on 'knowing governance' two networks can be named as examples that have helped to shift research on European integration to a new scale involving researchers from PhD students to senior professors and institutions from various countries within and outside the EU: CONNEX ('Connecting Excellence on European Governance', 42 partner institutions from 23 states) und NewGov ('New Modes of Governance Project', 59 partner institutions from 19 states) were both funded between 2004 and 2008 within the FP6. These massive networks provided not only financial resources but also new degrees of mobility, spaces for academic exchange, and visibility in numerous workshops and conferences. For example, in the context of CONNEX alone, nearly 100 conferences, workshops, and panels at major academic conferences were held and over 100 publications assembling over 400 individual pieces of academic writing (monographs, journal articles, book chapters) were produced (CONNEX 2008). In particular, both networks devoted significant resources and attention investigating the emerging European governance structure in the field of social policy.

In FP7, the general instruments for research and research funding were kept relatively stable. Instead of larger 'networks of excellence' and smaller joint 'specific targeted research projects' it funded so-called 'large-scale integrating projects' alongside 'small or medium-scale focused research projects'. Even Horizon 2020, which is more strongly structured around thematic priorities rather than funding formats, continues the templates of transnational research consortia. Several large-scale projects with a focus on social policy were funded under FP7. Building on the collective academic and policy imaginations caught by CONNEX and NewGov, they received significant funds and assembled a significant number of researchers and institutions – also around the particular themes of EU social policy. At the time of writing this chapter, it is not yet possible to fully assess the developments of Horizon 2020. What can be said though is that the FPs have become a central place where knowledge about governance in the field of EU social policy is created.

Scholarly accounts of EU research policy mainly concentrate on the emergence, stability, and change of the institutions in this dimension and demonstrate how science has become firmly integrated into the institutional setup of the EU. However, so far very little attention was paid to the production and the contents of this knowledge. However, this negligence is not a unique for EU studies. Cozzens and Woodhouse (1995) generally criticise

mainstream studies of knowledge politics in general that science was mostly and unquestionably treated as producer of objective truths while science policy was seen as just another 'ordinary' policy field. However, substance should be a key concern for both academic analysis and political practice of research policy matter in this context. For example, Sarewitz and Pielke (2007) argue that the relationship between supply of scientific knowledge and public demand for expertise receives too little attention. Similarly, Bozeman and Sarewitz (2011) claim that neither research policy nor academic accounts thereof have adequate instruments to evaluate the contribution of a particular research agenda or project to the realisation of public values. In contrast, the still prevailing dominance of the linear model and imaginations of science as independent republic would further the grave lack of attention to public values in research policy (Bozeman/Sarewitz 2011). Instead, these authors argue that innovations and public values more generally are more likely to be promoted if scientists, policy-makers, and publics engage in a close dialogue about the capacities of science and the expectations of the public (Sarewitz/Pielke 2007). From a theoretical perspective on the relationships between science, policy, and society these claims would require to disaggregate these poles and to open up the view on the much more dynamic values, political and academic institutions, actors, practices, and languages negotiating the politics of knowledge.

Moreover, in the EU this policy field is fragmented and essentially *in flux* – as is the social and political order of the EU as a whole. Its research policy formulates concrete demand for scientific knowledge from the social sciences and humanities, aims at engaging them in researching European integration but is also confronted with constituents enjoying significant autonomy. Therefore, a governance perspective on research policy is unable to provide the whole image of EU studies, their relationship with EU politics, and its role in the context of European integration. Therefore, the next section turns to a theoretical perspective theorising the roles and potential influences of scientific experts in policy.

Expertise as mode of political influence

European integration research knows very little about its own part within the multiple, complex, and open-ended processes of European integration.[5] Regarding the wider social science literature, epistemic community accounts are among the most prominent perspectives coupling politics and scientific expertise. Peter Haas (1992) defined epistemic communities as groups of experts bound together by common causal and principled assumptions, a common knowledge base about how to evaluate new knowledge claims, as well as common political objectives. Moreover, according to Haas, most members of a specific epistemic community would gain access to a specific policy field because they are already recognised as experts by policy-makers.

They could potentially influence policy by highlighting causal mechanisms, the consequences and costs of a particular strategy, or by explaining systemic complexities such as unintended consequences. Interestingly, this perspective is widely mentioned across disciplinary boundaries but very few authors have substantially engaged with it to develop it further or to test it (Dunlop 2000).[6] Nor did it provoke many direct criticisms (one exception is Jasanoff 1996).

Looking for epistemic communities in the EU, one finds that various academics regularly participate in the production of political outcomes in the context of social and or employment policy. They might be members of ad hoc high-level expert groups installed by the presidency of the European Council (e.g., Employment Taskforce 2003; Esping-Andersen et al. 2001; Ferrera et al. 2000; High Level Group 2004) or the Directorate General for Employment, Social Affairs and Inclusion (Sciarra 2004; Supiot 2001) as well as in a plethora of committees, expert networks, and advisory bodies involved in formulating, implementing, and evaluating policies. A good example of this latter group in the field of employment and social policy is the European Commission's Expert Group on Gender and Employment (EGGE), an official advisory body of the Commission's Directorate General for Employment, Social Affairs, and Inclusion. It consists of one academic from each EU member state as well as Iceland, Liechtenstein, Norway, and the candidate countries with expertise on gender and equal opportunities in this particular policy field. Its work is based on a competitive call for tender, which is awarded to a whole network (not individual experts) on the basis of its assembled expertise for a fixed period. The network evaluates the member states' 'National Reform Programmes for Employment' from a gender perspective. Moreover, each year its members jointly produce two comparative reports on specific issues, for example, childcare or labour market segregation. At the same time, the reports emphasise that they do not represent the Commission's position but only communicate the views of their expert authors. In fact, many network members have pursued a (feminist) political agenda sometimes often critical of national and EU policies (e.g., Fagan et al. 2006; Rubery et al. 2004). A perspective on epistemic communities would certainly provide the intellectual means to further investigate, for example, how the network members interact with Commission officials in order to raise issues of inequality such as unequal pay or indirect discrimination.

However, some important aspects are beyond the focus of an epistemic community's account, which will be briefly explained for the example of gender equality experts. First, this theoretical approach concentrates on actors whose expertise is already recognised as policy-relevant and whose community is already firmly integrated by substantive consensus, common practices, and a common political project. In this sense, a perspective on epistemic communities would allow help to study potential influences of these experts, who are already present in the field and already bound by a common feminist outlook on social and employment issues, on the Commission.

In contrast, other experts on gender and social policy, for example, feminist basic research not aiming for direct political impact would be omitted.

Second, the substance of scientific knowledge is largely ignored in perspectives on epistemic communities and only becomes problematic when fed into the mill of competing political interests. Haas assumed that consensus is the main resource of an epistemic community. However, this omits immensely important questions, for example, how the expert network came together, how it reached its common knowledge base, how diversity among members is deliberated, which perspectives were excluded to achieve consensus, or about power relationships within the community.

Finally, studies on epistemic communities mainly investigate possible influences of scientists on politics but neglect how their involvement in politics might affect their capacities, social order within science, and the contents of scientific knowledge. For example, how does the focus on politically identified targets and challenges affect more radical feminist thought on social policy such as more fundamental feminist critiques of capitalism or of the neoliberal, market-oriented trajectory of European integration? How do these experts deal with political compromises, for example, with regard to employment recommendations to single member states or in the overall prioritisation of challenges and strategies that have gendered effects? Looking beyond this expert network, the EU has the fundamental goal to foster science and to enrol it in its political project, which is inscribed in its constitutional settlement and particularly translated into research policy. Therefore, the next section takes a broader view capable of integrating the two previous perspectives on research policy and the political influence of epistemic communities.

European integration research as co-producer of an integrated social Europe

Given the difficulties to fully grasp the complex relationship between EU politics and EU studies discussed in the previous two sections, this section turns towards STS, which offers deeper theoretical understanding in two respects: first, it is capable to integrate a perspective on political attempts to steer scientific knowledge production of the social sciences and humanities in the EU (section 2) with a perspective on researchers' involvement in politics (section 3). Second, based on this integrated view it should become possible to gain more general insights about the characteristics of a polity where science and politics interact in specifically patterned ways.

For the purpose of this discussion, the theoretical repertoire of co-production as outlined by Sheila Jasanoff is particularly helpful.[7] She has demonstrated in various ways how science and technology are essentially interwoven with social order and how social order also essentially rests on knowledge, artefacts, and material infrastructures created by science and technology.

The framework of co-production addresses this essential role of technoscience in modern societies. In particular, it responds to the challenge that the association of science, technology, culture, and power always creates hybrid phenomena that are immensely diverse although they can combine similar elements. Co-production is concerned with the emergence of those hybrid phenomena as well as with the processes making them visible, understandable, measurable, governable, and so on. Neither side is dominant or causally prior. Instead, they are co-produced in continuous and contingent processes.

The following presentation mainly draws on the first systematic outline of this perspective, which still remains among the most substantive and visible resources. There, she distinguishes between two main strands of STS literature addressing two main aspects of co-production: first, *constitutive* work exploring how new phenomena come into being and get stabilised. The main issues from this view are ontological and can refer to scientific or natural facts (Latour 1987; Pickering 1995) as well as to political and social entities such as imagined national communities (Anderson 1991) or particular state projects based on modernist visions (Scott 1999). The general distinction between natural and human orders (Latour 1993) is described as the most fundamental question of this kind. Second, Jasanoff identifies an *interactionist* strand within the STS literature contributing to the idiom of co-production. This view addresses conflicts and transformations around knowledge within contexts where political and epistemic orders are already established but where their boundaries and characteristics are reimagined and renegotiated. Co-production of this latter kind can be explored in situations where controversies are 'resolved' (in the sense of closure rather than consensus), where technoscientific objects and frames are transferred and modified across different contexts, and where scientific practice has to adapt to changing conditions.

Against this background, Jasanoff identifies four major pathways of co-production: the making of discourses, identities, institutions, and representations. They are not analytically separate phenomena but rather ideal typical categories accentuating particular aspects of hybrid orders. All can be seen as elements that contribute to sustaining order morally, ontologically, politically, and symbolically (Jasanoff 2004). These pathways are developed in more detail below with regard to the EU, its social policy dimension, and its relationship to a particular cluster of researchers.

Further studies in the co-productionist idiom, for example, address the international politics of air pollution (Lidskog/Sundqvist 2011), the interplay between science and courts in multi-level regulatory regimes (Winickoff 2014), genetic diversity (Reardon 2001), genetic medical technologies (Parthasarathy 2012), regulatory science with regard to nanotechnology (Morris 2012), and science and democracy more generally (Hilgartner et al. 2014).

European integration offers various opportunities to study co-production. From the constitutive perspective, European integration is about the emergence

and (political and epistemic) stabilisation of a new phenomenon: the EU, which is, for example, described as a system of multi-level governance (Marks 1993; Marks et al. 1996; on the role of the social sciences in this context, see Pfister 2015). Regarding the interactionist variety of co-production, European integration can be seen as the collective and contested reordering and reimagination of institutions, actors, and normative frameworks, of boundaries and relationships. Most interesting, in the context of this chapter, European integration also entails the reordering of the relationship between science and politics as will be illustrated below with examples from social policy. Moreover, such reimaginations are not limited to a single policy field but can resonate on a much wider scale, for example, when they are framed as new modes of governance and when the latter are described as symptomatic for a more fundamental transformation of EU governance.

On this basis, our understanding can be expanded from EU institutions in a particular policy field and political advocacy by scientists to the conceptual, intellectual, and symbolic building blocks of an integrated Europe and its political community. Section 2 showed that research policy is already a part of the constitutional settlement of the EU. Moreover, European integration research can play a crucial role in providing concepts, frames, discourses contributing to the political imagination of this emerging transnational order as well as to the emerging social contract between it and science. The remainder of this section elaborates this perspective using the example of EU social policy. It is organised along Jasanoff's distinction of four main pathways of co-production.

Making discourses: the European activation agenda

Discourse, in this context, refers to the emergence and creation of languages, concepts, and systems of meaning. The most important feature of EU social policy is debates about modernising European welfare states, which arose in the mid-1990s and focus on the central concept of the activation of labour market institutions, social security, and citizens (e.g., Jenson/Saint-Martin 2006; Van Berkel/Møller 2002; VanBerkel/Valkenburg 2007). The substantial core of this activation discourse is captured by the assumption that a high employment rate (rather than low unemployment) would constitute the sine qua non for a sustainable welfare state as well as for protecting individual citizens against social and economic risks in all European societies – regardless of their diverse histories and institutions of welfare. In addition, the main challenge for the activating welfare state is now defined as enabling its citizens to get along on their own responsibility in a continuously changing world and a flexible economy. Labour market participation of all citizens is promoted through education, training, the lifting of barriers (e.g., for parents or chronically ill people). In addition, in times of ongoing fiscal crisis, activation often takes the more ambivalent form of disciplining by social services, benefit cuts, and conditional social rights. In addition, the activation

discourse is putting less weight on protecting jobs but rather on individual skills to succeed in a flexible knowledge economy pursuing various and more diverse economic activities. Many member states undertook significant welfare reforms guided by this discourse. State 'investment' in citizens' social capital[8] to ensure their individual employability and welfare might seem incongruous from the member states hardest hit by the financial crisis and large-scale (especially youth) unemployment. Nevertheless, activation is still the dominant conceptual framework for welfare modernisation and is also described as the route out of the crisis.

Politics and the social sciences have been closely interlinked from the beginning of the activation discourse. It emerged in parallel in the writings of academics such as Anthony Giddens (1998) and Gøsta Esping-Andersen (2002), in national administrations (mostly dominated by social democratic modernisers), the OECD, as well as the EU. The close cooperation between Anthony Giddens and New Labour formulating the so-called third way in the UK is a striking example for this mutual involvement (e.g., Blair 1998; Giddens 1998).

The EU has meanwhile managed to become the most important arena where this orientation is discussed and conceptually elaborated (Serrano Pascual 2007). The Commission but also some member state governments took leading roles in this discourse pushing the debate through policy papers and reports. Thereby it also enrolled experts from different disciplines who not only participate in the debate but also formulate a 'European' perspective on the challenges and ways of welfare modernisation (Dutheillet de Lamothe et al. 2004; Esping-Andersen et al. 2001; Ferrera et al. 2000). The 2003 report of the so-called Employment Task Force is particularly interesting as it helped to firmly install the notion of investment in social capital at the centre of the EU activation debate. The expert group was chaired by the former Dutch Prime Minister Wim Kok and consisted mostly of academic experts in the field of labour market and social security (plus two representatives of the social partners). It had the task to provide guidance for reforming the European Employment Strategy after a critical mid-term review (European Commission 2002). The Kok report particularly recommended two things: (a) to refocus EU employment policy much more strongly on growth and competitiveness; (b) to focus on social capital investment as a core concept for the modernisation of European welfare states. Both suggestions were immediately taken up and supported by the European Commission and various member state governments. For example, addressing the European Parliament in 2005 Tony Blair made it clear that there was no alternative to substantial welfare modernisation along those lines:

> The purpose of our social model should be to enhance our ability to compete, to help our people cope with globalization, to let them embrace its opportunities and avoid its dangers [. . .]. The Kok report in 2004 shows

> the way. [. . .] This is modern social policy, not regulation and job protection that may save some jobs for a time at the expense of many jobs in the future. (FCO 2005, 41)

Shortly afterwards, Wim Kok was asked to chair another high-level expert group to review the Lisbon Strategy as a whole which should lead to a major reorganisation of this governance regime in 2005(see European Commission 2005).

Making institutions: hybrid arenas for knowledge politics

In order to understand the power of the EU activation agenda, it is important to look beyond its contents to infrastructures carrying this discourse. Building on the European Employment Strategy (launched 1997), the EU created a voluminous governance regime at the Lisbon European Council in 2000. The so-called Lisbon Strategy for Growth and Jobs promoted the modernisation of economic and social policy. It was fundamentally revised in 2005. The scope of its successor, Europe 2020, goes far beyond social and employment policy and puts the main emphasis on economic governance. The extension to and increasing emphasis of this governance regime on economic policy has significantly lowered the visibility of employment and social policy in this context. However, the main organisational and substantive tenets in the initial realm have been kept intact. In the process, the activation agenda became inscribed in the institutions of EU social policy and, thereby became a part of the political everyday life in the member states.

This regime has opened up a specifically structured space where the debate about the features and tasks of the activating welfare state is unfolding. Moreover, the space and infrastructure for the debate is based on the specific policy pattern of the OMC. This instrument was defined by the Lisbon European Council in 2000. It is non-binding and operates through the cyclical formulation of common objectives and the mutual monitoring of member states' policies including potential recommendations for those in danger to miss the targets. Those practices should foster voluntary self-regulation, policy learning, and peer pressure among member states. The continuity between the Lisbon Strategy for Growth and Jobs and Europe 2020 is due to the stability of guidelines and targets but also to the fact that Europe 2020 integrates several formally separate processes – notably, the broad economic policy guidelines, the European employment strategy, and the OMC for social protection – into one monitoring cycle called the 'European Semester'. In the context of these policy processes, conceptual frameworks, quantitative targets and benchmarks informed by the activation agenda are defined and specified. They are combined with a monitoring regime creating a continuous series of reports, indicator systems, and data to compare member states performance in this context. They are developed, elaborated, and evaluated, in Council debates about guidelines and country-specific recommendations,

quantitative benchmarks, the Commission's monitoring and assessment work, in the discussions within the Employment Committee, and its indicators and ad hoc policy subgroups, the Social Protection Committee, expert networks, in national ministries, employment services and statistical offices as well as in numerous peer review workshops, thematic seminars, and stakeholder conferences. In short, this governance regime does not have regulatory or budgetary power but works as a powerful instrument of knowledge production shaping the dominant notion of 'modern' social policy (Jacobsson 2004; Pfister 2011; Serrano Pascual/Crespo Suarez 2007a, 2007b). In fact, the non-binding coordination and multilateral surveillance in this governance regime is a prime example for the transformation of politics outlined in the introduction to this volume. Political struggles are to a lesser extent fought over leadership positions, decision-making and regulatory power, or the distribution of (scarce) funds. Instead, the political becomes manifest in epistemic practices. As mentioned above, the governance regime for economic and welfare reform has acquired a much stronger focus on economic policy since the beginning of the financial crisis and especially with the launch of Europe 2020. Nevertheless, the institutional building blocks remain based on knowledge-intensive governance within the OMC.

Scholars of European integration are regularly and directly involved in this governance regime on all levels. In addition to the Commission's expert network for gender equality, there is the new European Social Policy Network (ESPN), which is based on a tender issued by the DG Employment, Social Affairs, and Inclusion and was launched in 2014. It integrates several expert networks that had been established elements of EU social policy for years: (a) the Network of Independent Experts on Social Inclusion, which was first installed with the OMC for social inclusion; (b) the EU Network responsible for the Analytical Support on the Socio-Economic Impact of Social Protection Reforms (ASISP), which primarily focuses on monitoring and comparatively analysing policies with regard to pensions, healthcare, and long-term care; (c) the network secretariat which also manages the Mutual Information Systems on Social Protection (MISSOC), which was established in 1990 to produce up-to-date information on social protection legislation, benefits, and policies. Despite this restructuring there is significant continuity with regard to the institutions involved. For example, the Luxembourg Centre for Population, Poverty and Public Policy Studies (CEPS/INSTEAD) managed the Network of Independent Experts on Social Inclusion between 2005 and 2013 and is also one of the three successful bidders for the new integrated network. The others are the Belgium-based European Social Observatory – another regular at the science/policy nexus in EU social policy – and the independent research company Applica.[9]

While these expert networks say a lot about the characteristics of knowledge-intensive governance of EU social policy, it is possible to draw an even broader picture. Researchers have not only been involved as experts

and policy advisers. Alongside the creation of a new governance regime, the EU has continuously formulated demand for academic expertise relevant for social policy and welfare modernisation. In fact, the activation agenda is also inscribed in the annual work programmes of the recent and previous FPs. These documents are particularly important since they frame which knowledge would provide union added value, and direct funds towards applications meeting those requirements. Among the annual work programmes for joint research projects in the SSH, FP7 especially contained a set of calls formulating demand for expertise on 'Growth, employment and competitiveness in a knowledge society – the European case'. In line with the development of the governance regime for economic and welfare reform, social policy questions receive less attention in Horizon 2020 due to the emphasis on economic governance in the Europe 2020 strategy. Nevertheless, the first annual work programme for Horizon 2020 also contains an activity 'European societies after the crisis' (EURO-3-2014), calling for knowledge about 'innovative social investment approaches for the modernisation of social policies and services' (European Commission 2014, 13).

Taken together, the activation agenda is translated and inscribed in various institutions where EU studies and EU governance regularly meet. However, especially accounts of this institutional setup not only concentrate on welfare challenges and possible solutions informed by the conceptual idiom of activation but also reflect on the characteristics of this particular governance structure. In the process, reflections on knowledge-intensive governance in EU employment and social policy have also created accounts of the EU and its characteristics as a polity.

Making representations: social policy, the production and dissemination of stable and movable knowledge objects?

Based on these discourses and institutions, knowledge politics in the field of EU social policy also produces representations of 'modern' social policies, the challenges they have to meet, and the solutions that would be appropriate. In addition and even more interesting in the context of the present discussion, these hybrid discourses and institutions overlapping policy and academia also produce representations of the united Europe of the EU as such.

Making representations, in this context, refers to practices that create objects or 'things' to be governed, states to be achieved or representing that larger thing 'Europe'. These representations need to be created and stabilised, especially through widespread dissemination and adoption across the social contexts they help to delineate and shape. The representations, in this context, are epistemic objects or complex, conceptual things rather than mere symbols (see also Knorr Cetina 2001; Rheinberger 1997). The making of representations is not strictly separate from the making of discourses and institutions. The difference is rather in terms of degree since representations are particularly condensed elements emerging from and being stabilised by

discourses and institutions that can travel across communities and contexts. Some of these representations, for example, the activating welfare state, also work in other contexts where activation is the dominant welfare paradigm. In addition, however, certain representations created in the context of EU governance of social and employment policy are symbolical representations of the particular polity and social order of the EU. While the making and dissemination of representations seems to be a crucial aspect of European integration it needs much more attention in the future – not only with regard to the role of science in this context. For the beginning, two examples shall be addressed in the following.

The first is the so-called 'European social model' (ESM). Students of social policy had primarily analysed national welfare systems in comparison to each other, for example, classifying them into different welfare regimes (e.g., Esping-Andersen 1990). The conceptual innovation of an ESM helped this community to integrate a European perspective and to enter the interdisciplinary field of EU studies. In this context, it was described as

> a valuable analytical tool for the academic world as well as being a term capable of mobilising political decision makers, especially when it comes to envisaging, constructing, and implementing a common social and employment agenda at the European level, or when some of the very foundations of the ESM come under threat or are in need of reform. (Goetschy 2006, 47)

In the process, also, political attempts to strengthen the social dimension and relevance of the EU gained a conceptual resource since they required a common notion of welfare applying across diverse welfare systems. This common frame is important for legitimating and promoting European responses to large-scale challenges such as economic globalisation or demographic change. Similarly, policy processes such as the Lisbon Strategy and the Europe 2020 Strategy, which promote policy convergence around common objectives, targets, and indicators, can only be legitimated if all member states agree that they are relevant for their national welfare. At the same time, especially voices from the left and trade unions have referred to the ESM to criticise the objectives, reforms, and processes promoted by Europe 2020 (e.g., Beres 2010; Lindner 2014).

The second representation is not limited to the realm of EU social policy but is a representation of the EU as such. It builds on the specific knowledge-intensive characteristic of the governance regime outlined further above in this section and widespread claims that the OMC-style policies would foster policy learning and experimentalism (e.g., Heidenreich/Zeitlin 2009; Radaelli/Dunlop 2013; Sabel/Zeitlin 2010). This representation is part of the more general view on EU governance as non-hierarchical and participatory as well as effective and intelligent. And similar to the previous

examples in this section, academics as well as politicians refer to this image, analyse it, legitimate policies on this basis, or use it as reference to criticise other policies (because they do not correspond to it). In short, 'EU governance' has become symbolic shorthand for the political nature of the EU and its processes.

Taken together, these representations are stable enough to travel across different contexts but also open enough that different actors from different academic fields as well as from different political arenas and camps can adjust them to their specific context and define them in ways that suit them while still sharing them. From a view on co-production, order can thereby be stabilised when certain concepts, symbols, and material objects have become symbolic representations for particular aspects and visions of European integration and when they are distributed and adopted widely enough. Importantly, once they have developed from language into such more condensed symbolic representations of Europe and its characteristics more generally, they are more difficult to counter, for example, by empirical evidence. Making representation is about making and disseminating anchors of stability.

Making identities: collectivities and communities of knowing and doing EU social policy

Similar to the pathways of co-production mentioned so far, also the final one – making identities – is not analytically separate but closely connected and partially overlapping with discourses, institutions, and representations. However, it highlights another particular aspect: the social ties among people that emerge in processes of co-production. On the one hand, it is an established core element of most political and social theory that order requires some sort of collective identity – even in highly diverse societies. On the other hand, already ancestors of STS like Ludwik Fleck (1935/1980) and Thomas Kuhn (1962) demonstrated how scientific knowledge consists of social constructs that need to be carried by social networks or communities.

In the realm of social policy, these communities contain researchers who self-identify and are being identified as experts of EU social policy who publish, for example, in the *Journal of European Social Policy* or the *Journal of European Public Policy*, who meet at conferences of the Network for European Social Policy Analysis (ESPANet) or academic associations with a stronger EU focus such as the European Union Studies Association (EUSA), the University Association for Contemporary European Studies, and the Council for European Studies (CES). Moreover, belonging to this particular academic community could be articulated by submitting applications for EU-funded research projects on social policy issues or by contributing to EU governance as advisers or members of expert networks. The fact that students of social policy and (comparative) welfare state research had long devoted so little attention to supranational processes but have meanwhile firmly included

European perspectives accounts for a change in this particular segment of the social sciences.

At the same time, emerging collectivities in the field of social policy contain policy officials from the Commission or the member states, experts from statistical offices and public employment services, representatives of think tanks, social partners, industry, and civil society who are not only involved in substantive questions of social security, labour market institutions, health, or pensions but who can also become 'instrument constituencies' (Voss/Simons 2014, 735) in the context of particular modes of governance such as the OMC and the social flagship initiatives of Europe 2020. In particular, soft modes of governance require specific networks of actors who adopt expert knowledge about their aims, goals, and functioning and who modify their everyday practices to participate in and to reproduce these regimes.

While there are many attempts to 'make identities' by mobilising and connecting agents to EU social policy, for example, through research policy, the question about how much this becomes part of these actors' subjectivities and feelings of identity is an issue for future research. Also, it goes beyond the focus of this chapter to elucidate how the making of identity in these rather confined spaces affects collective imaginations and practices of identity with regard to the whole 'body politic' of the EU. The latter are also inscribed, for example, in descriptions of the OMC as a smart and participatory mode of governance or of the ESM as a level of commonality among the diverse welfare regimes of the member states. In this sense, it would be an interesting empirical question, how people and social collectives respond to projections of shared identities among diverse actors emanating from EU social policy. It would be equally interesting to investigate in more detail and from a micro-perspective, the social ties and self-images developed by the different experts or instrument constituents involved in the laboratory politics of Europe 2020 or Horizon 2020. Moreover, it would be worthwhile to further explore the scholarly communities specialising in EU social policy and open coordination with regard to the sociality characterising them internally and relating them to other groups.

Conclusion

The previous discussion showed that the politics and the science of European integration are deeply intertwined. Agents are in close contact; discourses reflect each other and overlap. Together, they are engaged in producing conceptual languages, hybrid institutions, stable and mobile representations, as well as social collectives within a particular policy field that also affects how the characteristics, order, and identity of the EU as a whole are imagined and taken up in practice. The various expert groups and reports to the European Council, the regular involvement of researchers in specific policy processes, as well as the firmly established funding opportunities for SSH

research in this context clearly suggest that the relationship between science and politics is also increasingly institutionalised in this specific dimension of European integration. This dense cobweb of relationships between science and politics requires a broader perspective going beyond (at least traditional) accounts of research policy and epistemic community approaches to explore not only how specific policies and research agendas are shaped but also how the social order of an integrated Europe at large is co-produced.

The approach developed in this chapter allows for understanding how politicians formulate demand for specific expertise (as part of governance processes) or more basic research (through research policy and research funding) as well as for how scientific experts get access and political weight (e.g., as members of an epistemic community). Moreover, when taking a co-productionist perspective, it becomes possible to expand the analysis to questions of how problems, objectives, or, more generally, knowledge are constructed in interactions between science and politics as well as to understand how these negotiations contribute to the emergence and stabilisation of order. Thanks to this broader focus on underlying epistemic and normative elements of social order, this co-productionist perspective should be of particular value for investigating how exactly legitimacy is negotiated and produced. Rather than looking at isolated attempts of epistemic communities to influence politics or at single legitimacy claims of politicians and bureaucrats referring to scientific evidence and expertise, it is now possible to take into account the underlying conceptualisations, theories, and normative frameworks that equally structure these actions as they are produced by them.

The institutionalised relationship between science and the state can also be understood as a social contract that determines the position, the status, and the infrastructure, organisation, and autonomy of science within a particular society (Dennis 2004; Jasanoff 2005). As outlined in the second section, such a contract definitely exists in Europe although it so far does not constitute a 'European science' but has to coordinate and to complement national research policies to foster European added value. The nature of this social contract between the EU and European science is emerging and fragmented. Nevertheless, an order that identifies who might be a trustworthy expert on questions of European integration and gain access to EU policy circles is in place.

A view on the co-production of knowledge and order along different main pathways can open up valuable new insights about the invisible epistemic and normative contexts in which legitimacy claims are made and evaluated, in which social order is produced and sustained. As the illustrations in the previous section demonstrated, scholars of European integration speak with the authority of science on what kind of polity the EU is, how it functions, and what its capacities and weaknesses are (in normative and performance terms). Therefore, the relatively recent academic interest in social policy at the EU level has crucially contributed to making this multiplicity of governance

processes visible and meaningful as a coherent (social) dimension of the integrated Europe of the EU.

Furthermore, intertwined relationship between EU politics and European integration research also has implications for the academic side of this relationship. Regarding the organisation of knowledge production on European integration within the academic sphere, a co-productionist view organised by the concepts of a social contract between science and polity provides new avenues for understanding how research communities and their agendas develop in dialogue with large-scale political processes. The collective making of discourses, institutions, representations, and identities in EU social policy has not only stabilised this policy field but also established spaces for European integration research. In addition to political attempts to influence the research agendas of European integration research, this chapter has pointed to specific practices of knowledge production, especially extensive transnational research networks funded by the EU.

Finally, a co-productionist perspective has the particular strength of being capable to investigate how these interactions might contribute to producing and sustaining the political order of the EU as a whole. In this broader sense, the perspective on co-production is a source of crucial intellectual tools guiding further analysis as well as providing deeper understanding of the epistemic foundations of the integrated Europe of the EU and their production.

Notes

1 For example, in *Case C-85/96 Martinez Sala* the court ruled that a Spanish national living in Germany was entitled to German welfare benefits.
2 http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=why[4.12.2014]
3 On the difficulties to harmonise research policy within a European Research Area, see Chou (2012) and Gornitzka (2009).
4 Official Journal L 347, 20.12.2013, p. 113.
5 There are many state-of-the-art synopses but very few reflexive contributions investigating the practices of European integration research: Calhoun (2003), Jupille (2005) and Rosamond (2007). Yet, they hardly investigate the role of European integration studies in the broader context of European integration.
6 For a significant application, see Litfin (1994).
7 The presentation in the following two paragraphs is based on Jasanoff (2004).
8 The meaning of social capital in this context is closer to the one suggested by Giddens and Esping-Andersen rather than the ones by Putnam or Bourdieu.
9 The expertise, services, and contracts of this company are, perhaps, an even more significant manifestation of large-scale transformations in the political realm. However, it would be a very different project to investigate the providers of services that are relevant in the context of knowledge politics.

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4

Experimenting with Global Governance: Learning Lessons in the Contact Group on Piracy

Christian Bueger

Introduction[1]

We tend to think of pirates as an ancient menace or the characters of romantic Hollywood dramas. But today, piracy is a serious scourge for mariners around the world. The most pressing problem for many years has been piracy off the coast of Somalia. Pirates hijacked hundreds of vessels and turned the Gulf of Aden into one of the most dangerous waterways in the world. By 2015 the problem had been more or less under control thanks to the substantial efforts of international actors. Naval missions, arrest, surveillance and capacity-building programmes in the Eastern African region have all contributed to a decline of piracy (Bueger 2015a). When Somali piracy escalated from 2008 the problem gave birth to an expanding field of international counter-piracy governance coordinating these activities (Bueger 2013). This field of international governance has become an interesting site of experimentation. International actors have tried out various means which are rather unconventional in a world political context. Examples include coordination through new types of informal fora, the innovative use of communication technology for coordination, or the harmonization of arrest, transfer and prosecution policies through legal tool kits (Tardy 2014). These innovations led to a fairly unique and harmonized international response to Somali piracy at the heart of which is an informal global governance mechanism, the Contact Group on Piracy off the Coast of Somalia (CGPCS). In responding to piracy, actors that usually understand each other as rivals or adversaries cooperate hand in hand in military operations. Russia, China, Japan, Iran, and NATO, to mention just some of the state actors, cooperate closely on a day-to-day basis.

Participants in the field of counter-piracy are highly aware that there is something very unique about this response. In consequence, there has been a growing concern about documenting and recording how counter-piracy is organized, how it works, and whether it can become a role model for addressing other international problems. In quite a unique fashion, the

CGPCS initiated a Lessons Learned Project (LLP) in 2013. The goal of the project was to bring the self-reflexive knowledge of different counter-piracy actors together and conduct studies on how and why the counter-piracy response actually worked.

In September 2013, I open my email inbox to find an email sent from the US Department of State. The email came from the counter-piracy coordinator of the US who was at that time also acting as the chairperson of the CGPCS. This was the email I received:

> Dear Dr. Bueger,
>
> A colleague at the United Nations sent me the link to your very interesting blog. I am curious about your site being a repository for academic research on piracy, which of course would be very useful to me on occasion. As the 2013 Chair of the Contact Group on Piracy off the Coast of Somalia, I have undertaken with other colleagues (copied here) to capture our 'lessons learned' over the nearly 5 years we have been in operation, and I wonder whether you might be interested in collaborating in this effort. In particular, we need a standing digital repository for papers that Contact Group participants might contribute to this effort. Might your academic institution be interested in assisting in this regard?
>
> (2013 Chair, Contact Group on Piracy off the Coast of Somalia. Coordinator, Counter Piracy and Maritime Security, Bureau of Political Military Affairs, US Department of State)

In short, I was invited to become a participant in the field that I had been observing and writing about extensively for some years. I was invited to collaborate in the effort of 'capturing lessons learned'. At that time I had little clue what this would involve, and soon found out that also the main protagonists didn't have a clear vision of what lessons learned would imply or how it should be done.

In this chapter I tell the story of the collaboration that started with this email. It is a story about learning lessons with the CGPCS. It is also a story about how knowledge about governance is produced in practice and how the co-production of knowledge between scholars and policy practitioners unfolds. In telling this story my argument is firstly empirical. My claim is that if we are interested in how knowledge about governance is produced then we have to proceed empirically. As John Law (2012, 157) has argued:

> If we are to do philosophy, metaphysics, politics, or explore the character of knowledge, we cannot do this in the abstract. We cannot work 'in general', because there is no 'in general'. All there is are: Specific sites and their practices, and then the specificities of those practices. So philosophy becomes empirical. Abstraction is always done in some practice or other.

My following discussion is then primarily an empirical one, a story of the practices of learning lessons at a specific site, the CGPCS. Much of my story is less concerned with objectifying how learning lessons at the CGPCS works in practice, since I was a participant in the practice. My account hence takes observations, conversations, and documents as well my own activities as the main empirical material. At the stage of writing, the LLP is not complete. While first results were presented in autumn 2014, the project is ongoing. In consequences, also my narrative is not final, but open-ended.

Since empirical discussions require a range of sensitizing concepts, I here develop two: the concept of 'laboratory' and of 'experimenting'. Both concepts do not only play a role in the way I structure and tell the narrative, but they have also been core epistemic devices in the LLP. Taking my starting point in the history of science and contemporary work on laboratories, I shall argue that the CGPCS is a laboratory in which experiments are conducted. One of these experiments is the LLP which has the objective to produce knowledge about the governance practices of the CGPCS. Yet, the LLP is not only a policy experiment of the CGPCS, it is also an academic experiment (my field experiment!). With the experiment I intended to study how global governance works and how knowledge about governance is produced. My second argument is hence about how scholars and policy practitioners might cooperate in producing knowledge about governance by experimenting together.

Laboratory and experimenting

Following the 16th CGPCS plenary meeting in May 2014 in New York, Macieji Popowski from the European External Action Service (EEAS), who had assumed the chairpersonship in January of that year, gave a press conference. In the statement to the press he said:

> The Contact Group on piracy is unique. It is a laboratory for innovative multilateral governance to address complex international issues. (EEAS 2014)

To some degree, there is nothing unusual about the chairman's description of the group. The metaphor of a laboratory has become widespread across societies to refer to an innovative policy process or to actors trying out new methods and techniques. Also, in academia the metaphor is used widely. For instance, we sometimes refer to Europe as a laboratory.[2] While this certainly explains why the metaphor had appeal to the chairperson's team, there was something unusual about this reference. The press declaration was written by the head of the support team of the chairpersonship. Two days before the press conference I had dinner with him in New York. Over sushi and beer we discussed the progress of the LLP and I explained what my baseline narrative of the LLP would be. Drawing on my earlier work on policy laboratories

(Bueger 2011), I suggested to interpret the CGPCS as a laboratory that conducts policy experiments.[3] When the chairmen used the metaphor of laboratory his reference was hence more than colloquial use. His statement was the outcome of a conversation between a scholar and a policy practitioner, or, phrased more abstractly, the product of a process of co-interpretation; the scholar and the practitioner having sushi and beer, interpreted together what the CGPCS is and developed a new vocabulary of how to describe it.

Why is the laboratory such a useful and revealing metaphor? Peering to the history of science is illuminating. The laboratory is a core site and concept in what Chunglin Kwa (2011) has identified as one of the six styles of knowing, the experimental style. Kwa argues that throughout history six types of epistemic practices have been developed: (1) the deductive, (2) the experimental, (3) the hypothetical, (4) the taxonomic, (5) the statistical and (6) the evolutionary style. Following Kwa, the experimental epistemic practice has its roots in Renaissance science and its birth was linked to the work of Galileo, Bacon, and Mersenne. The style was developed in reaction to the then dominant deductive style and represented a move from the *vita contemplativa* (contemplative life) to the *vita activa* (active life). Rather than contemplating in the university, the new scholars, whom Kwa calls the *virtuoso*, were actively involved in society and public service, and worked as diplomats, administrators, or engineers (Kwa 2011, 50). The new epistemic practice was developed through a strong link to engineering, the common denominator being to interfere 'with the natural course of things, making phenomena bend your will' (Kwa 2011, 47). This marked a crucial shift from the insistence of the deductive style that science should not interfere. According to Kwa (2011, 49) the 'experimental sciences gravitated to a new type of institution: the academy. The defining feature of early academies [. . .], was that they fell directly under the patronage of the sovereign.' Early experimenters such as Marin Mersenne rejected the possibility to learn the true nature of things and instead embraced experimentation and technology as the only road to truth (Kwa 2011, 87–88). Indeed, they outlined an understanding of the episteme that we know today as pragmatism (Kwa 2011, 88).

With the growing dominance of the experimental style and increasing use of (expensive) technology, the relationship of science to political power and the public became more and more questioned. In England this culminated in the controversy between Thomas Hobbes, opposing experimental science as exclusionary and out of the control of a broader public, and Robert Boyle, one of the leading scientists of his age (Shapin/Schaffer 1989). The outcome was an agreement between King Charles the II and the Royal Society. Under the agreement the king gave the Royal Society the autonomy and power to work together and in return it was declared that science would focus on 'nature' and not interfere in questions of metaphysics, morals, or politics (Kwa 2011, 91). This Boylean understanding heavily influenced the development of the sciences, yet from the onset it was not uncontested.

Francis Bacon, for instance, insisted that experiments have to be at the service of the state and its results made available to the broader public.

The 17th century, however, also saw the rise of another form of experimentation, the work of the alchemists. Primarily based in metallurgy, the alchemists were less concerned about the manifest qualities of the forces of nature, but primarily interested in the occult, that is, those phenomena which can only be studied through its effects (Kwa 2011, 107). Attention shifted to rare and unusual phenomena. Since 'it required a degree of practice to see and appreciate rare and wondrous things' (Kwa 2011, 106), 'experience' became a core category. As Kwa (2011, 106) phrases it, 'making observations thus became a job for experts'. There was a strong move towards collecting phenomena. This in turn became the foundations for Baconianism, which emphasized the importance of collecting as many facts as possible and arranging them to a coherent system following the idea of common law (Kwa 2011, 110–115). Together with the rise of Protestant religion and their emphasis on the everyday, the focus of the experimenters increasingly turned back to collecting facts about the ordinary.

In the 18th century the virtuoso and alchemist styles increasingly merged. Yet, research continued to be mainly conducted outside the university, in academies, in museums, or in private homes (Kwa 2011, 128). This began to change mainly due to the new German reform universities and later American universities, which started to combine education and research. Placing themselves at the service of the state, these new universities, which worked in the experimental style, started to set up university laboratories and argued for an increasing professionalization of science by linking experimentation and education.

When the post-Kuhnian sociologists of science started out their project of re-inventing the studies of science on empirical rather than philosophical grounds, the state-sponsored university laboratory became a core site of investigation. What later became known as laboratory studies were ethnomethodological investigations of the work of scientists in actual laboratories.[4] The quest of these researchers was to describe empirically how scientists go about producing facts and creating new objects in laboratories. Starting to theorize up what they had found in these empirical studies, it soon became clear that what they had been describing could be translated into more generic models. The laboratory became a general model for how the sciences work, how they produce facts, and how the knowledge and the objects produced by scientists travel and are no longer confined to the concrete sites in which the scientists work, but could become universal and global. What these studies achieved was highlighting sociality, experience, and politics in the laboratory. They returned the aspects of laboratory life the Boleyans had stolen.

Joseph Rouse and Bruno Latour were among the theorists who made crucial steps to develop the laboratory into a useful concept to interpret practices

at other sites than actual laboratories. Philosopher of science Rouse (1987) linked laboratory studies to Michel Foucault's work and argued that laboratories are a more generic model for power. For Rouse, laboratories develop distinctions for what is important and what not; they isolate microworlds, manipulate these microworlds by intervening in them, and track and record how elements react. Latour (1987) developed a relationalist understanding of laboratories. For him laboratories were sites that connect various elements, establish relations between them, and act as sites that control the flow of information. Laboratories exercise commands and there is a flow of reporting back to them. Following the work of Rouse and Latour the metaphor of laboratory has become widely used to study different forms of knowledge production sites.[5]

Drawing on Latour and Rouse, we can identify laboratories by asking a set of questions, such as what are the sites in which all information passes through, that connect heterogeneous actors, and that act as a command and control centre? Where are microworlds manufactured, and where does intervention and tracking take place? If we draw on these questions and return to piracy, are there laboratories in the field of counter-piracy? The answer is obvious. Popowski was quite right when he described the CGPCS as a laboratory.[6] Before we take a closer look at the experimental activities within the CGPCS and the LLP, the laboratory features of the organization require elaboration.

The CGPCS was created in 2008 following a discussion among states that a forum would be needed in which those active in counter-piracy could meet and coordinate their activities. The rationale was that no other forum exists in which the broad range of actors relevant for piracy could meet. The initial core of the group included the countries represented in the UN Security Council, as well as major shipping nations, such as Denmark, Norway, and South Korea. At the inaugural meeting in New York in 2009 the group decided to work in what they called an informal way. This implied that delegations were supposed to speak openly rather than read from a script provided by the headquarter; follow-up meetings were decided on an ad hoc basis; participation was open to all states and organizations that were active in counter-piracy – hence, the number of participants rose quickly to over 80 delegations; the chairmanship was rotating; the majority of procedural questions were left open for discussion or at the discretion of the chair; decision were made on the basis of (silent) consensus and were legally non-binding. The group was organized in a number of specialized working groups, supposed to be more technical in character (e.g. a working group on legal questions), and a plenary which would bring all perspectives and the results of the working groups together. The main visible outcomes of the meetings are so-called communiqués. The communiqués are negotiated in a lengthy process and follow diplomatic routines of text production. The CGPCS soon created a logo which was used to signify its work and brand the documents and other

artefacts it produced. A website was added later which provided a space to store internal documents as well as showcase the work and results of the group. The work of the group was complemented by a voluntary trust fund, which provided limited financial resources for counter-piracy work.

Laboratories are dense social spaces. The CGPCS provided a closed space in which counter-piracy experts from different national and professional backgrounds, including professional diplomats, legal professionals, military specialists, capacity-building specialists, or law enforcement experts, could meet on a regular basis. As one of my interlocutors instrumental in the creation of the group put it: 'I wanted the CGPCS to be a space where all those that care about piracy meet and exchange views, develop ideas and identify areas of complementarity.'

Laboratories are sites that connect various elements, establish relations between them, and act as the centre of the flow of information. The CGPCS meetings bring together those organizations which are active in counter-piracy. This includes various states with a role in shipping such as the major flag states (e.g. Panama, Singapore, or Cyprus), ship owning and operating states (e.g. Denmark, Greece), states contributing to counter-piracy financially or with troops and equipment (e.g. EU, NATO, Australia, China, Korea, Japan, or Russia), littoral states (e.g. Egypt, Djibouti, Kenya, or the Seychelles), UN agencies active in the implementation of projects (e.g. UN Office of Drugs and Crime), regional organizations (e.g. the Intergovernmental Authority for Development), representatives from the shipping industry (e.g. the International Chamber of Shipping), as well as a handful of NGOs (e.g. the Seamen's Church) and think tanks (e.g. Oceans Beyond Piracy [OBP]). The CGPCS brings all of these actors together in a single space. Due to the format of the CGPCS, these actors do not only participate passively (or exchange views informally), but they also have the opportunity to or are requested to present updates of their activities. Everyone is in a position to raise questions during discussions. The CGPCS channels this information and turns it into a core output, that is, the communiqué. The communiqué in turn becomes a core strategic document used at other sites, such as capitals, operational headquarters, or organizational sites such as the European Council or the UN Security Council.

Laboratories develop distinctions for what is important and what not. They isolate microworlds. They are instrumental in defining what belongs to a problem and what not. The CGPCS was instrumental in defining the problem of piracy and what are adequate responses to it. Part of the negotiations was from the onset what counter-piracy is and is not. One of the crucial moves was to argue that the problem of piracy originating from Somalia had to be isolated from the larger context of the political and societal problems in the country and the region.[7] This was reflected firstly in the choice of participants. These are marine and naval specialists or specialists in law enforcement, and often diplomats who had piracy as a distinct

portfolio (e.g. special representatives for piracy). It was not specialists in East African or development affairs. This participant structure was safeguarded in that organizations that did not conduct counter-piracy work but were otherwise active in Somali would not be encouraged to attend. Secondly, isolating piracy from other problems entailed to constantly police the agenda of discussion. This is perhaps best visible in the negotiations of the Trust Fund, which rejected a substantial number of proposals on the basis that the suggested projects did not constitute counter-piracy work (e.g. a project on the vocational training of coastal populations). If the CGPCS defines what the problem of piracy is, acknowledging this dimension, however, also points us to the limits of the laboratory metaphor. The microworld that the CGPCS aims at isolating and manipulating is a vast ocean space in which pirates act, and not necessarily an environment which could be fully controlled.

Laboratories intend to manipulate the microworlds and keep track and record how the elements of this world react. The CGPCS does so via its communiqué and the reports that participants provide to their sending organization. The communiqués, on the one side, provide strategic directions and entail proposals of what should be done differently. On the other side, they also record how the main object of intervention (pirate organizations) have reacted to the strategy and how the approach taken by the CGPCS has worked or not (e.g. if compliance with CGPCS decisions has been reached).

Understanding the CGPCS as a laboratory provides us with useful analytical lenses on what happens in the forum and why it has effects. The CGPCS is on those terms not unique. A range of scholars have pointed out that there is an emerging trend to organize global governance in laboratory terms.[8] Nance and Cottrell (2013), for instance, point to the Financial Action Task Force on Money Laundering as an example in global security governance. Adopting laboratory lenses is, however, not primarily an institutionalist argument. Rather, the intent is to better describe what is happening at these sites of governance. Laboratories are primarily spaces of experimenting, of tinkering. Work in them has an open-ended and explorative character (Kwa 2011, 132). They are sites of experimentalist practice.

In the CGPCS we find several of such experiments and processes of tinkering. The LLP is one of these; there are several others. It is worth to discuss one of them to gather an understanding of what activities the experiments in the CGPCS laboratory involve. When the CGPCS started out, one of the core questions was how counter-piracy capacity could be transferred from the international community to the regional states. By the end of 2009, the then chairmen of the Working group 1 of the CGPCS led a fact finding mission to the regional states neighbouring Somalia. This 'needs assessment and prioritization' mission was supposed to identify gaps and needs in the capacity of the visited states. The findings were recorded by entering them into 'a so-called "Needs Assessment Matrix", a spreadsheet detailing each country's maritime capacity-building needs and the current status of their

existing maritime and judicial capacities' (Houben 2014, 31). This reflects the first step of an experiment, that is, to compile facts and information. The matrix became the basis for discussions in the CGPCS and the development of new proposals for more attention to capacity building. This is the second step of an experiment. Capacity-building activities significantly increased in consequence. This is the third step, that is, to design practical tools to put ideas into practice. The fourth step is then to test the tools, and then to reflect on their outcome (step 5) and then revise and redesign tools on this basis taking into account new facts and information. The outcome of this process was the recognition that the needs assessment and the matrix had led to more capacity-building initiatives in the region, but this proliferation required better coordination mechanism. Actors wanted to avoid overlap, address existing gaps, and align projects better to concrete needs. The outcome was the establishment of a new subgroup, the Capacity Building Coordination Group, as well as the creation of an electronic coordination platform which would turn the original matrix into a live map of ongoing activities. Hence, new tools were designed in this process, which are currently being tested (Bueger 2014a; Houben 2014).

What we can observe here is what we might want to describe as a 'policy experiment'. Thinking about the work in the CGPCS in such terms allows us not only to describe the CGPCS as a distinct type of laboratory, but also to understand the work conducted in it as a practice of experimenting.

A field experiment: the Lessons Learned Project

So far I have established to read the CGPCS as a laboratory and its practices as experimenting. In what way do the policy experiments in the CGPCS produce knowledge about governance? The example of the capacity-building experiment, discussed above, documents that any policy experiment is productive of governance knowledge in so far as the experimenters reflect on whether the tools they have developed work or whether they require to be redesigned. Policy experiments, hence, produce by virtue knowledge on governance, because of the reflexive procedures they entail. Yet, this knowledge is geared at improving the response to a distinct issue, such as capacity building. Knowledge about governance is then rather a by-product of the experiment. This was fundamentally different in the experiment I was involved in myself, the LLP. When I started to work on the LLP, on the one side, I was invited to become one of the experimenters in the CGPCS policy laboratory. On the other side, as the project went along, I aimed at gradually turning the CGPCS into my academic laboratory.

In September 2013 the experiment started. I was invited to a first meeting held at the Brussels Headquarters of the EEAS. The meeting was chaired by the then chairperson of the CGPCS, who had also send me the email invitation. The incoming chairperson team from the EEAS was present as well, as

were the chairmen of the working groups. In addition to me, three other research-oriented organizations (OBP, the International Peace Institute [IPI], and the EU Institute for Security Studies [EUISS]) were present, and each of us were invited to pitch our ideas for the project. The pitch I had prepared was based on the assumption that 'learning' would imply to make the tacit experiences of the CGPCS participants explicit and hence take a participatory approach, that is, all members of the CGPCS should contribute to the project. The goal would hence be to 'capture' and 'record' the experience in whatever way possible and then use this as data for further analysis. To gather broad perspectives, my idea was to assemble an international team of analysts who could together analyse this data. My proposal was warmly welcomed especially by the chair, since her ideas were roughly similar, in that she wanted to create what she called a 'repository of lessons'. Although the chair of the meeting highlighted that the meeting is not a competition, the atmosphere during the four pitches clearly was competitive. The meeting ended with the decision to form a lessons learned consortium (LLC) in which all four organizations would be members and to have this decision formally endorsed at the next plenary meeting. I was invited to attend the next plenary meeting, and it was highlighted that this was an exceptional invitation since academics usually would not be allowed to join CGPCS meetings. Chatting to one of the meeting participants, it was made clear what role I should assume at the meeting. As he suggested, 'You will become our fly on the wall.' A couple of weeks later we held a Skype meeting between the four organizations. The goal was to coordinate activities and agree on a mission statement for the LLC. At the conversation it became clear that for the EUISS the main stake in the project was to deliver a report, while it was less clear what the other two organizations intended to do, and indeed IPI later dropped out of the project. The other organizations suggested that my participatory idea would be doomed to fail, and in consequence they found little sense in the idea of creating a dedicated website. Was I on a road to failure? As I discuss below, my participatory approach indeed did not work, but in October 2013 I was confident that it had to be tried out. It was an experiment.

I started my preparation for attending the CGPCS plenary in my role as the fly on the wall. The plenary was held in Djibouti, which was an attempt of the chairperson to bring the CGPCS closer to the region. When I arrived at the meeting's venue, the Kempinski Palace Djibouti Hotel, unsurprisingly the experience was overwhelming. Not only did I land in an exceptionally hot as well as a foreign country, but all of the sudden I was surrounded by my 'empirical material'. What I had studied from a distance in reading documents became alive and human. I learned quickly what rules participants follow. The first challenge was to actually enter the designated conference area, since no one had informed me about the registration procedures. The laboratory had strict entry procedures and only with the help of the

chair was I granted permission to enter. For what I had described prior as an 'informal' governance arrangement, there was quite a lot of formality around. The first insight was that standard diplomatic procedures structure the work of the group. Diplomatic protocol provides the main script for the laboratory. This implied, as I quickly recognized in my first conversations with the participants, that I was a misfit. Since diplomacy is an art of representation, I could not answer the questions I continued to hear frequently in my time with the CGPCS: Which delegation are you from? Where are you from? Someone not speaking on behalf of another entity, whether a state, an organization, or at least 'the industry', did not fit into the game. Back then, hardly anyone had heard about the LLP or Cardiff University, nor did they see a reason why an independent university scholar should attend the group's meeting. My objectives for the meeting were two: first, to soak up, observe, and write down as many insights as possible, second, to speak to the major delegations and convince them to participate in the LLP. If I was successful for the first, I was less for the second. Not only was I a one-man show, I lacked the skills to communicate this efficiently. At the end of the meeting, I had a handful of business cards, but was left with doubts if anyone was actually convinced to engage in a reflexive lessons learned exercise. This was clearly not part of what the participants usually do in their job. Yet, a brief chat with the chairperson gave me at least some confidence that my participatory approach could work. Moreover, she promised that the US Department of State could offer some funding for setting up the website and organizing the team I intended to assemble. At the end of the weeklong meeting, the group concluded their work with adopting their communiqué – a process fascinating in its own right (Bueger 2015c). The communiqué included a paragraph on the LLP; the project was now official. What I had witnessed was how the CGPCS laboratory turned an idea into an actual experiment, and it was time to start with it.

Back at my desk, I started to track what happens in the laboratory. I wrote up what I called an 'analytical primer' on the basis of my observations, but also including the literature on transnational governance, and the few academic texts on contact groups I could identify. I also started a systematic re-reading of the CGPCS communiqués. I shared the draft with some of my interlocutors I met at in Djibouti. Judging by their reactions, the most interesting insight I could provide was to make them aware that the CGPCS is actually part of a larger trend towards informal governance and that there were several contact groups out there with which the CGPCS could be compared. As one of my interlocutors put it in an email, 'Sometimes we are so busy and miss out the forest for the trees.' My next task was to put together a funding proposal for the US Department of State outlining how I would implement the project and to write what I dubbed a 'call for contributions'. The call for contributions urged all participants to submit short comments to be published on the website and was send out to the email list of the CGPCS. In spring 2014

it was clear that the US Department of State would provide me with some funding, which would allow me to set up the website and hire a short-term research assistant. Bureaucratic procedures were negotiated and the website was set up. The response to my call for contributions, however, was meagre. Yet, two contributions gave me some hope that more would follow. However, it seemed that the actors within my academic laboratory had little intention to comply with my experimental script.

In spring 2014 the new CGPCS chairmanship, the EEAS, organized a strategic meeting in Paris. The meeting was meant to agree on the future of the CGPCS and reform it to make it leaner, given that piracy attack rates were down since 2013, and that the operational coordination worked well. If in Djibouti I was a fly on the wall, in Paris I became a fly with a name tag saying 'Lessons Learned'. I was given a role in the game, and became almost my own delegation. I assumed a dual role as a policy and as an academic experimenter. In Paris I continued my agenda, convincing people to contribute to the LLP. I started to recognize, however, that there was quite some hesitation and that I needed to change direction. I started to learn why my approach was destined to fail. This insight was confirmed by many more conversations I had throughout 2014, meeting CGPCS participants not only at the meetings of the group, but also at other piracy events. Individuals attending the CGPCS do so in their role as spokesperson for another entity. Leaving aside that all of them are busy people, asking them to reflect on their experience puts them into an identity and bureaucratic conflict. States don't have experience; individuals do. Yet, when they attend the CGPCS their identity is not that of an individual but one of representing a state or an organization. In consequence, they could not provide their personal reflections on the CGPCS. But, moreover, states and the majority of organizations do not have bureaucratic procedures for reflection and contributing to an experiment such as the LLP. My participatory learning lessons approach, hence, did not survive the practical test in an international governance environment. My attempt to set up the CGPCS as an academic laboratory was failing. My response was to invent a new format, and fall back to something more conventional, that is, to do recorded and transcribed interviews with CGPCS participants. This, however, took some time to organize and quite some logistics. In the meantime, I also assembled a team of authors who, I knew, would have something to say on the CGPCS. While all of them wrote interesting and challenging analyses of the CGPCS, the lack of raw data in the form of voluntary contributions of the participants implied that all of them had to fall back on document analysis or collect their own data.

Following the Paris meeting, the next major event was the plenary meeting in New York, that is, the meeting with which I started my narrative and after which the chairmen publicly interpreted the CGPCS as a laboratory. This was the first formal meeting that the EEAS organized as chair of the CGPCS. I attended the meeting, again with a name tag and a formal role.

The CGPCS had established a tradition that the formal plenary meeting would be combined with a so-called off-side meeting a day after the formal plenary. The EEAS decided to run this with lessons learned as the core theme. I was invited to give a first presentation on the project and was joined on my panel by a representative of the EUISS and the acting commander of the EU's counter-piracy operation Atalanta. In the presentation, I told the baseline narrative of the CGPCS being a laboratory running policy experiments, but also stressed that the CGPCS could become a role model for how to organize governance in other fields of governance, such as peacebuilding. Something crucial happened at the New York meeting. The LLP was no longer only or primarily an intellectual exercise geared at producing knowledge about how the CGPCS worked. In New York the EEAS declared formally what it wanted to achieve during its chairmanship. One of their three items was the LLP. The project became what diplomats refer to as a 'deliverable' – an item on the agenda of a diplomatic actor that had to be 'delivered'. This implied that by the next official plenary of the CGPCS, which was scheduled for November in Dubai, the LLP should have a real outcome. The lines between the policy laboratory and my academic laboratory started to become exceptionally blurry.

Since I had not entirely given up on my participatory account, a further call for contributions was published in the CGPCS newsletter, a new communication format the EEAS had introduced. Over the summer I started to populate the website mainly with the public documents of the CGPCS, and the first analytical papers by several researchers started to come in. Also, the EUISS report started to take shape. The EUISS report took the format of contributions by former chairpersons of the working groups of the CGPCS (Tardy 2014). The contributions were commissioned by the EUISS and went through a process of formal approval within the ministries and organizations of the respective authors. I was invited to contribute the conclusion mainly addressing the question on whether the CGPCS could become a role model in other areas (Bueger 2014b). The introduction was provided by a researcher from the EUISS who was also editing the volume.

In September I was invited to visit the EEAS for a meeting on the LLP. The EUISS researcher was also invited and together we met the team of the chairmen. The actual purpose of the meeting was rather unclear to both of us. It quickly transpired during the meeting that the chairman first of all wanted to check whether his deliverable is on its way. We discussed the progress, and the chairman offered me a presentation slot during the plenary. Secondly, it turned out that some of the CGPCS member states insisted on reviewing the EUISS report prior to its publication. The EUISS report was perceived as an official document, and hence some protagonists in the CGPCS were concerned what lessons it would outline. By contrast, no one was particularly concerned about what my work would produce or what lessons it would outline. The main concern was that it was delivered. My work was understood as

falling under academic freedom, while the EUISS apparently was not. In consequence, the EUISS report was circulated as a consultation draft to all CGPCS participants. This delayed its publication significantly and it could hence not be ready for the Dubai plenary. Since the EUISS had no resources to participate in the Dubai meeting, to ensure 'delivery', my scheduled presentation became more important. Thinking about how to stage the Dubai presentation, we came up with the idea of printing a short brochure which would introduce the content of the website. The brochure was handed out to participants, and in the plenary meeting I had the opportunity to summarize the project results in a slot of 11 minutes. In the presentation, I focused on the core functions that the CGPCS performs and how these lead to practical coordination. My intention was to draw on as many metaphors as possible, avoid technical jargon, and use accessible language. The reactions I received were mixed. Some of my later interlocutors had not even recognized that I gave a presentation at all. For them this was just background noise for the negotiations that actually mattered. Others found the categories or functions I introduced very useful and inquired about receiving the presentation in print. Another one of my listeners suggested that he could clearly see a 'professor at work', implying that the presentation was much more academic in style and tone than I recognized myself. The event in Dubai was a highlight of the experiment, yet the work continues.

The LLP gives us an example for a CGPCS experiment, but also an experiment of how knowledge about governance can be produced in practice. It is clear that this project required tinkering and continuous adjusting. No one engaged in the project could draw on a standardized procedure or anything similar. Some of the elements of the experiment, such as the participatory approach, failed. The experiment also shows how there is always a thin line between the agenda of political actors and knowledge production that follows academic principles. In other words, turning a policy laboratory into an academic laboratory is inherently difficult and the lines between them are blurry and difficult to maintain. As I have shown, even if the attempt to experiment *in* the laboratory failed, in the sense of being able to exercise or script the site, experimenting *with* the laboratory still produces fascinating insights into how global governance works.

Alchemists and virtuosos: knowledge for governance and experiments

As Kwa points out, 'the virtuoso and the alchemists have persisted as distinct archetypes, and to some extent they are still with us today' (Kwa 2011, 132). Indeed, political science has rediscovered experiments as a method. A growing number of political science researchers draw on experiments. The American Political Science Association has a section on Experimental Research; 2014

saw the first issue of a dedicated journal, the *Journal of Experimental Political Science* (*JEPS*). The majority of researchers, however, fall into the Boylean trap and follow a natural science ideal, without taking into account the full scope of experimentalist reasoning. The mission statement of *JEPS* is quite insightful in this regard:

> The *Journal of Experimental Political Science* (*JEPS*) features research – be it theoretical, empirical, methodological, or some combination thereof – that utilizes experimental methods or experimental reasoning based on naturally occurring data. We define experimental methods broadly: research featuring random (or quasi-random) assignment of subjects to different treatments in an effort to isolate causal relationships between variables of interest. (JEPS 2014)

What we find expressed here are ideas that data would be naturally occurring and would not involve manipulation, that subjects could be selected at random free from societal or political concerns, or that the experimental method should be reduced to the objective of isolating causal relations rather than involve exploration and tinkering. They are expressions of Boyleanism in so far as that they assume that science could be split from society and that the environment in which the experiment takes place could be controlled through procedures such as randomization.

The style of experimenting I have discussed in this chapter isn't quite the same. As I have argued, to understand the experimental style of reasoning we have to peer back in history, and appreciate the work of the virtuosos, that is, the masterful players and engineers in society and politics, but also the alchemists, that is, the curiosity-driven, creative minds concerned about tinkering and trying things out. We have to acknowledge that experimenting is not confined to the scientist, but most often carried out by wider groups of societal and political actors, such as my fellow experimenters at the CGPCS. Nor should we neglect the rich history of experimental reasoning stretching from Bacon to contemporary pragmatists, which stress that experimenting is less about control but about intervening at the service of societal problem solution. Experimenting is not about devising absolute truths. It is about finding out what works in relation to situations and certain circumstances. Indeed, the experimenters at the CGPCS have done a great job in devising means of coping with the piracy problem through innovative governance solutions, and indeed through the attempts of producing knowledge about governing in the CGPCS via the LLP.

Experiments 'often encounter resistance [. . .], and in many cases, this makes the development of [. . .] research more improvisatory than outsiders might think', Kwa (2011, 132) suggests. Through the experience of my own experiment with the CGPCS, I cannot but fully agree with him. The LLP was

(and is) a project of tinkering and of trying out how knowledge could be produced together with the CGPCS participants. If anything my work was that of an alchemist, fiddling around with my interlocutors, trying to identify ways by which they would share their experience and allow it to become recorded. I faced considerable resistance, much of it had to do with the lack of institutional procedure for participating in the LLP. Diplomats speak in the name of states, not in their personal capacity. Yet, by which protocol would a state share experience in the CGPCS? And what institutional category of document would a contribution to the repository fall under?

Like the alchemists often were, I am left with nagging doubts of whether my experiment has actually found something out. My intention was neither to test any hypothesis, nor was it a search for causal relations. The results are all but a handful of insights of how governance plays out in practice and what actors actually do in a forum such as the CGPCS. In summer 2015, the project is ongoing, the experiment is not over, much of the results, the 'data', still remain to be interpreted. What I can conclude is that at least the experiment has had some effects on the actual governance process. It, firstly, led to a recognizable sense among the participants that the CGPCS did provide something that could be replicated and would be useful in other contexts. Indeed, also in other contexts discussions have started about whether the CGPCS governance model could be adopted (see Bueger 2015b). Secondly, and as visible in the debate on the reform of the group, participants were more aware about the broad range of functions that the CGPCS actually served, such as information sharing or establishing a community of counter-piracy practitioners.

Where does this leave us in terms of the role of experimenting in political science, and the production of knowledge about governance? One of the conclusions, I assume, that can be drawn is that in political science we engage in an experimental mode of knowledge production more often than we are aware of or explicit about. I think Schwarz (2014) is right, when she points out that experimentation is actually quite widespread among the social sciences, although we tend not to present our work in such terms. One does not have to allude to the technocratic age, to identify examples. Contemporary work on deliberation and citizen panels in science and technology studies and policy studies, political ethnography that starts out by hanging out with your objects of study, or more explicit action research with social movements, NGOs, or parliaments might all be understood as forms of experimentation. Moreover, I would put forward the argument that any type of knowledge production about governance involves elements of the experimentalist style. Even if the technocratic era has left us with a range of science-policy institutions or the evidence-based policy agenda and encounters between science and politics appear frequent, knowledge production about governance is not routine. It involves tinkering.

Notes

1 Acknowledgements: Research for this chapter has benefitted from the support by the Economic and Social Research Council [ES/K008358/1] and the US Department of State. I am grateful to my collaborators and interlocutors at the CGPCS and to Richard Freeman, Jan-Peter Voß, and Jan Stockbruegger who have provided detailed comments on the chapter.
2 See, for example, Bockmann and Eyal (2002).
3 An interpretation which was published later as part of the first lessons learned report (see Bueger 2014b).
4 See Knorr Cetina (1995) for a summary of laboratory studies.
5 Reacting to the criticism that the laboratory metaphor suffers from overstretching (well summarized in Guggenheim 2012), Latour proposed a number of related alternative metaphors, most recently the concept 'oligopticon' (Latour 2005). Developing this concept was largely to preserve (or protect) the value of studies of actual scientific laboratories. I here stick to the concept of laboratory, but mean it in the wider sense.
6 There are several other laboratories in the field, yet the CGPCS is arguably the most central (see Bueger 2013a).
7 Although it was widely recognized that these problems are the 'root causes' of piracy.
8 See De Búrca et al. (2014) as well as Nance and Cottrell (2013).

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Part II

Knowing Instruments: Modes of Governing

5

Cultivating 'Nudge': Behavioural Governance in the UK

Holger Strassheim and Rebecca-Lea Korinek

Experiments on social order

Nine people of different age gather around a table. They witness the very moment when the experimenter closes a valve connected to a glass vessel. In a few seconds, the air will be withdrawn. The resulting vacuum is evidenced by a white cockatoo fighting for its life. The boy in the background, however, already opens a cage, thereby giving us a hint on the further course of the experiment: The experimenter will open the valve again, bringing the expensive bird back to life (Figure 5.1).

Joseph Wright of Derby painted *An Experiment on a Bird in the Air Pump* in 1768. Its monumental format (183 cm × 244 cm) and unconventional setting must have been an unusual experience for his contemporaries. Combining features from different genres such as religious history paintings, still life, and everyday scenes, it is in fact one of the rare depictions of British history of science. By that time, the presentation of natural experiments to small audiences such as the one depicted by Wright of Derby was already quite common. Roughly one hundred years before, in his studies on pneumatics, Robert Boyle, founder of the Royal Society, had succeeded in arguing against the Aristotelian dictum that 'nature abhors a vacuum'. More importantly, he had defeated Thomas Hobbes and his anti-experimentalism, convincing the public that experimental practices were the only way to produce reliable and valid knowledge.

In their famous study on 'Leviathan and the Air-Pump', Shapin and Schaffer (1985) reconstruct the social technologies by which Boyle transformed a formerly unknown and highly controversial mode of knowledge production into a widely accepted one. The experiment became a convention of knowledge production prefiguring science–society relations in Britain for hundreds of years to come: 'The objectivity of the experimental matter of fact was an artefact of certain forms of discourse and certain modes of social solidarity. Boyle's social technology constituted an objectifying resource by making the production of knowledge visible as a collective enterprise'

Figure 5.1 Valentine Green, 1768, mezzotint after Joseph Wright of Derby's *An Experiment on a Bird in the Air Pump*, Rijksmuseum, the Netherlands

(Shapin/Schaffer 1985, 78). In Wright of Derby's painting the experimenter orchestrates this collective enterprise. Placed in a position that in religious paintings would have been reserved for god, he educates his audience to enhance their understanding of science, leading them on the righteous path to a more enlightened approach towards nature and society itself.[1] As Jasanoff has convincingly shown, the British understanding of political expertise is deeply rooted in what she calls a 'communitarian civic epistemology', that is a knowledge-way committed to experimentalism, empiricism, and collective enlightenment (Jasanoff 2005a, 2011a). On a more general level, the concept of 'civic epistemologies' refers 'to the institutionalized practices by which members of a given society test and deploy knowledge claims used a basis for making collective choices' (Jasanoff 2005, 255). 'Just as a pianist knows without thinking how to dramatize a crescendo or modulate a diminuendo, so habits of reasoning are inculcated into policy actors until they become almost automatic, built into their forms of life or, in Bourdieu's term, their habitus' (Jasanoff 2011b, 312). Wright of Derby, it might seem, has forever captured in his picture British 'civic epistemology' as it orchestrates the collective ways of knowing governance in Britain until today.

In this chapter, we investigate the emergence of a new way of knowing governance that is successfully cultivated within the context of Britain's 'communitarian civic epistemology': The increasing relevance of behavioural

approaches and their application to public policy-making and regulation. While the origins of behavioural approaches lie in the US, behavioural governance, most prominently known as 'nudging', has become most influential in the British context. It is a crucial case, shedding some light on the specific conditions that may lead to changes in collective habits of reasoning. Just as a pianist improvises from time to time, gradually transforming his style, so policy actors may adopt new modes of ordering and knowing the world when they appear collectively authoritative and legitimate. By focusing on the rise of behavioural governance, we hope to get a better understanding of *how* certain modes of governance suddenly appear publicly acceptable and even desirable. We argue that if we are to understand such processes of cultivating new knowledge-ways of governance, we have to look at how the attribution of politico-epistemic authority to certain experts is actively combined with a legitimizing imaginary of state–science–society relations.

The rise of behavioural governance as empirical puzzle

The rise of the behavioural discourse is associated with the Behavioural Insights Team (BIT), an organization that has gained both national and international influence by experimentally developing and disseminating behavioural interventions.[2] BIT conducts experimental trials based on ideas from interrelated scientific disciplines (behavioural economy, psychology, social anthropology), designs behavioural interventions, and advises other organizations to apply behavioural insight in the public domain. It has become a paradigmatic example of behavioural expertise, inspiring the creation of similar project units in other countries, for example, the Social and Behavioural Sciences Team at the White House Office of Science and Technology Policy (OSTP) or, most recently, the project group 'Wirksam Regieren' at the German chancellery. Focusing on an ever-growing scope of policies such as pensions, climate change, or consumer protection, instruments of behavioural intervention are developed, and with them new understandings of governance, namely, the 'soft regulation' of decision-making at the level of individual citizens. Behavioural studies have shown that simplifying messages and reducing complexity may have large effects on people's behaviour.

Behavioural governance can be defined 'as every mode of governing informed, designed or implemented by focusing on psychological as well as cognitive mechanisms of behaviour in both individuals and collectives' (Straßheim/Korinek 2015, 154). This includes behavioural change instruments in non-smoking policies or food safety but also the design of certain policies with respect to the ways people's behaviour affects their effectiveness. Behavioural governance is based on core insights about cognitive heuristics most prominently identified by Kahneman and Tversky (1982 [1974]) in their studies on decision-making under uncertainty. These insights have

been taken up by Thaler and Sunstein (2008) in their popular book titled *Nudge*, showing that the order of traffic lights, the display of food in a cafeteria, the design of a web page structure both the salience of options and the likelihood of certain choices. Policy-makers are then advised to actively engage in designing arrangements that support desirable policy goals and reduce behaviour seen as suboptimal.

While there is a growing literature on approaches to behavioural change, the sources of their contemporary success and the practices by which they are translated into public policy instruments are still unclear. Focussing on the rise of the behavioural change agenda in Britain, we therefore ask, why BIT, as the organizational expression of this discourse, has gained such a remarkable reputation? How come BIT enjoys both attention and authority across UK government working with Jobcentre Plus, the Department for Energy and Climate Change, the Department for Business, Innovation and Skills, the Metropolitan Police, and others? These questions are even more puzzling given the fact that the basic ideas behind behavioural economics and related approaches have been around for more than 50 years. Simon's theorem on 'bounded rationality' (Simon 1957), Kahneman and Tversky's studies on heuristics and biases in making judgements under uncertainty (Kahneman/Tversky 1982 [1974]), and even more recent discussions on 'nudging' triggered by Sunstein and Thaler (2003) are well known for quite some time. They may have prepared the ground. They do not, however, explain the rise of behavioural governance in Britain and the fact that BIT has become an international role model in terms of how to organize behavioural expertise in government. While some authors seek to explain the rise of behavioural approaches in the 'neo-liberal engine' (Corbett/Walker 2013, 451), driving the hollowing out of the state, we would like to direct the attention to the specific practices by which behavioural approaches became authorized and legitimized.

Firstly, we argue that the BIT and similar organizations of behavioural expertise in Britain have successfully cultivated politico-epistemic authority, that is, expectations towards their capacity to produce and validate knowledge about governance that is deemed scientifically sound as well as politically relevant and legitimate in a local context. To understand how the politico-epistemic authority of behavioural expertise is cultivated, we suggest to look at attributions of competence (social dimension), procedures of policy advice (temporal dimension), and facts and forms of evidence that are designed to function as 'boundary objects' at the science–policy interface (object dimension) (Jung et al. 2014; Straßheim in print). As we shall show in more detail later, in the *social dimension*, behavioural experts position themselves as educators and intermediaries between science, society, and the state. In the *object dimension*, behavioural expertise rests on a body of easily demonstrable forms of evidence that is methodologically robust and politically graspable. And in the *temporal dimension*, behavioural interventions

are designed such as to allow the government an experimental approach to policy formulation ('test, learn, adapt' [BIT 2012b]) and to make sure that behaviourally informed policies prompt people in moments when they are most likely to be receptive.

Secondly, we argue that it was the successful cultivation not only of politico-epistemic authority, but also of political legitimacy that accounts for the rise of behavioural governance in Britain. Following our analysis of specific authorization practices, we therefore shall show how behavioural expertise became enmeshed in a specific legitimizing imaginary of state–science–society relations: Proponents of behavioural policies sought to justify the authority of behavioural governance experts in the realm of policy by tightly coupling behavioural expertise to the vision of the 'Big Society'. Sociotechnical imaginaries like this are collectively adopted representations of how descriptive claims about knowing the world and normative claims about ordering the world should be combined (Jasanoff 2015). At its core, Big Society is about shifting the balance from the state towards communities, encouraging citizen's participation in public life through volunteering, charity-giving, and so on, while re-establishing the role of the state as 'choice architect', organizing the context in which people make decisions for their own benefit.

We understand the rise of behavioural governance in the UK as a crucial case, contributing to current research on the multiple ways knowledge about governance is authorized and justified, thus shaping the formation of collective political identities (Ezrahi 2012; Hilgartner et al. 2015; Jasanoff 2015).

Our findings build upon a qualitative analysis of a series of guidelines and reports published at the Cabinet Office by the Prime Minister's Strategy Unit (COSU) and by BIT between 2004 and 2014 as well as political speeches of the current coalition government. Moreover, between 2012 and 2014 we carried out semi-structured interviews with more than 30 policy strategists and civil servants at different government departments and agencies including the Food Standards Agency, the Department for Environment, Food and Rural Affairs (Defra), and the Department for Work and Pensions. While these extremely valuable interviews were targeting broader questions concerning the role of expertise and evidence in British policy-making, the one topic that regularly came up and quickly caught our interest was the influence of behavioural economics across all of these organizations.[3]

The chapter is structured as follows: In the next section, we give a brief overview on the deployment of the behavioural discourse in the UK and of BIT as a politically relevant source of behavioural expertise. In the subsequent section, we focus on how cultural configurations of expertise shape the ways politico-epistemic authority is enacted through BIT across three dimensions of sense-making (social, temporal, object-related). We then show how the sociotechnical imaginary of Big Society is deployed to serve as legitimation of both the reconfiguration of societal relationships and the positioning of

behavioural expertise as the central source of knowing governance. We conclude by summarizing our arguments; we also discuss the possible reasons for the upscaling of behavioural governance and its translation into contexts beyond the British case.

From MINDSPACE to EAST

More than a decade ago, the New Labour administration decided that it was time to consider approaches to behavioural change and to combine these insights with a renewed understanding of public and private responsibilities. In a situation when government policy increasingly came under attack even by the architect of the 'Third Way' agenda (Deacon 2003; Giddens 2002), a shift towards a new 'balance' between individual citizens and the state seemed to promise the redistribution between rights and responsibilities. In its first comprehensive overview on behavioural approaches titled the 'Personal Responsibility and Changing Behaviour' report (COSU 2004), COSU argued that government should place greater emphasis on 'co-production' and behaviourally informed policies. Torn between multiple 'key pressures', such as the insufficiency of the 'traditional model of "economic man"', 'political pressures to sharpen and extend conditional benefits', and the 'desire to enhance personal responsibility and individual control', these new approaches promised to square the circle by making possible both a stronger state and a stronger emphasis on the individual responsibilities of citizens (COSU 2004, 6–7).

Drawing on the notion of 'libertarian paternalism' developed by Sunstein and Thaler (2003), the authors of the report suggested that the role of the state was to engage in 'setting default options in the interests of the public but enabling them to opt for alternatives' (COSU 2004, 9). As we shall see later in more detail, the notion of 'libertarian paternalism' enabled the authors to develop an argumentative style that combined scientific evidence from behavioural and psychological studies with political ideas on the relationship between citizens and the state.

In addition to such efforts of laying the argumentative ground for behavioural governance, the Strategy Unit engaged in a 'joined-up' approach with government departments such as the Defra. Defra had already set up a cross-Whitehall Centre of Expertise on Influencing Behaviour, aiming at identifying possible applications for behavioural change approaches across different policy areas (Jones et al. 2013, 32–33). One of the results was a 'Framework for Pro-Environmental Behaviour' issued by Defra (2008) in 2008. Besides pulling together evidence from behavioural studies, identifying goals for sustainable patterns of consumption and describing the implications for environmental policy, the report also presents findings on the willingness and ability of people to change their behaviour in accordance with specific goals 'at a full population level' (ibid., 6). As the scope of behavioural research

in Defra and other departments became more extensive, these efforts also mirrored the willingness and ability of New Labour government to invest in behavioural approaches beyond mere strategy papers.

In 2010, this willingness was also documented by a guideline paper that became a milestone of the behaviour change agenda in British government: Instead of simply summing up the existing literature, 'MINDSPACE: Influencing Behaviour through Public Policy' set out the standards for a more systematic application of behavioural approaches across different policy areas (Cabinet Office and Institute for Government 2010). Resulting from cooperation between the Cabinet Office and the Institute for Government, MINDSPACE quickly became iconic in that it used acronyms and frameworks typical for later reports and policy papers on the subject. MINDSPACE was introduced as a mnemonic, summarizing nine main influences on behaviour: Messenger, Incentives, Norms, Defaults, Salience, Priming, Affect, Commitments, and Ego. These nine factors condensed the myriads of behavioural studies and theories and, at the same time, functioned as a checklist to 'translate' them into policy-making practices (Cabinet Office and Institute for Government 2010, 7). In addition, the authors presented a framework,[4] originally developed by Defra, that would allow policy-makers to both implement behavioural methods in the policy-making process and systematically interlink the policy-making process to scientific insights and evidence-based evaluations. Carefully arguing for a change in government's behaviour, thus extending the framework to policy-makers themselves, MINDSPACE transformed the traditional modes of policy advice into a kind of 'trading zone' (Galison 1997) between behavioural experts and policy-makers.

It was, however, not until after the election of the Conservative–Liberal coalition government in 2010 that behavioural economics became an official government priority. In July 2010, Prime Minister Cameron established BIT as part of the Cabinet Office. Working together with government departments, local authorities, and NGOs, BIT was at that time one of the first organizations to systematically push for the application of behavioural insights in different areas of policy-making. Since, then, bringing together policy experts from a range of interrelated disciplines such as behavioural economics, psychology, or social anthropology, BIT conducts research often using randomized controlled trials (RCTs), designs policy interventions, and advises policy-makers in applying these insights. Originally working with selected government departments such as the Department of Health, the Department for Business, Innovation and Skills, or the Department for Energy and Climate Change, BIT rapidly expanded. It started as a team of 8 in 2010, doubled its size within the first four years of its existence, and now employs more than 45 experts specializing on a variety of policy areas such as smoking, food hygiene (BIT 2010), reduction of energy consumption (BIT 2011), consumer empowerment (BIT and BIS 2011), reduction of financial fraud, error, and debt (BIT 2012a), charitable payroll giving

(BIT 2013a), organ donation (BIT 2013b), or measuring the value of young people taking part in social action (BIT 2015). Numerous government agencies have developed behaviour change measures, for example, Britain's Food Standards Agency with its National Food Hygiene Rating Scheme providing hygiene information about food businesses by voluntarily displayed stickers in the windows of restaurants and bars (SSRC 2012). Moreover, BIT engages in advising foreign government departments and establishing international networks of behavioural expertise. By now, BIT has worked on most areas of domestic public policy. In 2012, the Civil Service Reform Plan stated that 'all policy makers will be expected to undertake at least five days a year of continuing professional development to ensure they have the right skills, including in new areas such as behavioural sciences' (Cabinet Office 2012, 17). Translating behavioural insights into practice and across contexts, BIT is the manifestation of what has been called a 'boundary organization' (Guston 2000), which is an organization whose purpose is the mediation between science and politics, knowledge and values, citizens and the state. In 2014, BIT was partly privatized by moving it from Whitehall to the headquarters of NESTA (National Endowment for Science, Technology and the Arts), a charity that will co-own it alongside staff and government. Some observers have interpreted this development as the last and most consequent step of crossing the boundary between the public and the private.[5]

In its most recent guideline paper, BIT proposes an even shorter and simpler mnemonic, the 'EAST framework' (BIT 2014). In accordance with Sunstein and others who argue that the future of government lies in simplifications, BIT uses insights from behavioural economics about the importance of easy and clear information to increase the impact of its message on policy-makers (BIT 2014, 3; Sunstein 2013). EAST stands for Easy, Attractive, Social, and Timely, emphasizing simplicity, salience, norms, and networks as well as timing in policy processes. Embedded in an implementation framework of 'testing, learning, and adapting', EAST is probably the most significant representation of a British 'civic epistemology' as visualized in Wright of Derby's painting, translating the values of experimentalism, empiricism, and collective enlightenment into a postmodern compound of knowledge about behavioural governance. We can, however, fully understand BIT's enormous success over the past five years only if we look more closely at *how* the proponents of behavioural interventions managed to gain both authority and legitimacy.

Political and epistemic authority in the making

We argue that the 'persuasive power' of behavioural expertise (Lunn 2014) – as well that as of any other form of authoritative political expertise – rests on the combination of political and epistemic authority in terms of three interconnected dimensions of sense-making, that is, the *social*, *temporal*, and *object* dimension (Jung et al. 2014; Straßheim in print; Straßheim et al. 2015).[6]

In the *social dimension* individual or collective actors are constituted as experts by becoming the object of competence attributions and role expectations. In general, such expectations determine the formal and informal rules of how to recruit experts, the practices by which experts gain credibility, and the criteria of separating insiders from outsiders. From early on, behavioural experts in the UK have reflected upon the 'ecology of human behaviour' (COSU 2004, 16) identifying 'authority' as a powerful social force working to influence behaviour (COSU 2004, 24). Going one step further, MINDSPACE presents an essential argument in favour of the need to boost the authority of the government as 'just one influence on our behaviour amongst many others' (Cabinet Office and Institute for Government 2010, 13).

> Whether we like it or not, the actions of policymakers, public service professionals, markets and our fellow citizens around us have big, and often unintended, impacts. 'Doing nothing' is never a neutral option: we are always busy shaping each other's behaviour. (ibid.)

It is, then, the role of behavioural economists, the MINDSPACE authors make clear, to support policy-makers in both making the right choices for a better society and making them visible to citizens:

> Nearly everyone wishes to live in a 'good society', even if people emphasize different things when defining it. Government often intervenes to promote a better society [. . .]. Although very few people when questioned want the state intervening more in their lives, they are likely to give permission for new policies in this area if the benefits are made salient to them. (ibid., 36)

This argument is very much in line with Thaler and Sunstein's warning against the 'misconception [. . .] that it is possible to avoid influencing people's choices' (Thaler/Sunstein 2008, 10–11). Since policy-makers are inevitably changing the 'choice architecture' of societies with every decision, it is argued, policy-makers are better off if they rely on behavioural experts: 'Nudgers will be able to make good guesses when they have much more expertise at their disposal' (Thaler/Sunstein 2008, 247–248). Thus, in this narrative, behavioural experts play a pivotal role in both deciding upon behavioural interventions across policy domains *and* evaluating the effectiveness of such instruments. They claim the competence of illuminating the intricacies of choice architectures and of providing means to justify and evaluate behavioural governance, as is emphasized repeatedly in later reports. Policy-makers are urged 'to get the advice of experts and academics on what has the best chance of success – and how success can best be measured' (BIT 2014, 50).

Thus, an essential aspect of the behavioural discourse is that it attributes both judgemental and decision-making competence to behavioural experts.

Summing up, in the *social dimension*, the politico-epistemic authority of behavioural expertise is the result of competence attributions referring to both the competence to validate claims in terms of choice architectures (epistemic authority) *and* the capability to decide upon behavioural interventions and to justify them in terms of societal relevance (political authority).

In the *object dimension*, the authority of expertise depends on artefacts of knowledge such as statistics, simulations, or surveys. As more or less robust manifestations of expert knowledge, these and other forms of evidence tend to be regarded as collectively held and hardly questionable body of facts. By stabilizing and legitimating the integrity of expertise, objects of knowledge travel across different contexts: 'It is through these processes that facts produced in one locality come to speak with authority to other questions even to other fields, times and places' (Morgan 2011, 7; Star/Griesemer 1989). In the case of behavioural governance, we can distinguish between two interrelated forms of knowledge objects: Firstly, throughout MINDSPACE and other guideline papers of the early years of behavioural expertise in British government, the authors refer to findings based on RCTs and other experimental methods. EAST can build on the numerous trials carried out by BIT. On nearly every page, findings on pension defaults, tax collection letters, university application programmes, or reducing prescription errors are presented in simple bar charts, demonstrating the efficiency of behavioural interventions by comparing them to control groups. The success of such interventions is thus instantly graspable (even if the methodological background might be much harder to understand). While being easily understandable for non-scientists, behavioural interventions and RCTs not only increasingly enjoy the academic recognition of peers as a 'gold standard' in economic and social research, but are also promoted as a valuable policy toolkit.

> These two methods – applying policy interventions informed by the growing body of behavioural research, together with rigorous testing and trialling based on a rich understanding of the context in which a policy is being delivered – are the hallmarks of the Behavioural Insights Team's methodology. We think that they should become more routine aspects of the policy maker's tool kit. (BIT 2014, 8)

By combining methodologically 'sound' evidence with easily applicable 'rules of thumb' (Thaler/Sunstein 2008), behavioural expertise becomes especially persuasive.

Secondly, these 'rules of thumb' are objectified in mnemonics, checklists, or flow charts, making it easier for decision-makers and civil servants to memorize and implement them in everyday action. As simplifications of complex individual and social dynamics, MINDSPACE or EAST can be promoted to a wide range of goals and, at the same time, 'shared by people with diverse political views' (Sunstein 2013, 14). It is this ideological flexibility

that helps to explain why behavioural governance became so attractive for both New Labour and the Conservatives.

In the *temporal dimension*, expertise becomes a matter of timing and opportunities. 'Scripts' – understood as compilations of procedural rules and routines – structure the practices of knowledge production, sorting them in a consecutive order. In committee rules and guidelines of scientific policy advice, the rhythm of procedural dynamics, together with the opening and closing of opportunity windows, influences which knowledge claims are perceived as politically relevant and scientifically valid (Brown 2009; Jasanoff 1990). In the course of agenda setting and decision-making, potentially contested expertise might – once it has been entrenched in the proceedings and protocols of advisory processes – emerge later as an incontestable premise for further decisions (Zahariadis 2015). In the long run, claims made by experts may be reinforced by positive feedback dynamics in public debates. The temporal dimension has become increasingly relevant in publications issued by BIT in a twofold manner: Firstly, even early papers aim at modelling the policy process after experimental designs, framing the incorporation of behavioural expertise as routine and necessity in public policy-making. This aspect becomes especially evident in an influential paper published by BIT – 'Test, learn, adapt. Developing Public Policy with Randomised Controlled Trials' (BIT 2012b), which has received widespread attention, for example, by the Joint Research Centre at the European Commission (Van Bavel et al. 2013). The authors argue that the integration of behavioural sciences into the policy-making process changes the very stages and time horizons of agenda setting, decision-making, implementing, and monitoring. 'Good policy-making', it is argued, is based on the right timing of identifying and studying behavioural elements (ibid., 3). Secondly, the EAST report emphasizes the importance of synchronizing policy-making processes with broader life-cycle patterns among citizens (BIT 2014, 37–42). Targeting the major transition periods of change that people experience in their lives such as going to school or having a child, it is argued, increases the likelihood of behaviour interventions being successful:

> We are more likely to change their habits and behaviours during periods of transition, which disrupt and reshape our existing patterns. [. . .] Often, these periods involve some form of interaction with public bodies. The public sector may therefore have the opportunity to promote a change [. . .]. These 'life moments' deserve more attention from policy makers. (BIT 2014, 39)

Scientific experts have to perform across multiple audiences to cultivate authority in the political realm (Hilgartner 2000; Korinek 2014; Straßheim in print). Faced with changing and contradictory role expectations, temporal restrictions, and contested knowledge objects, they have to be prepared to

struggle for authority and acceptance. It seems that behavioural experts in the UK are up to this task. They are acting as interlocutors between citizens and the state, crossing boundaries by constructing social architectures, creating facts that can travel and synchronizing moments in policy-making and everyday life. Most importantly, as a plea for experimental and evidence-based practices, behavioural expertise is perfectly compatible with the British way of public knowledge production as depicted in Wright of Derby's painting (see also Straßheim et al. 2015). As we argue in the following section, however, it is not only authorized as a manifestation of British 'civic epistemology', but also legitimized by 'sociotechnical imaginaries' (Jasanoff/Kim 2009, 2015), envisioning a renewed state–citizen relationship in the UK.

State–science–society: re-imagining public relationships

As illustrated above, even the earliest strategy papers arguing for the political relevance of behavioural expertise, as well as the later application guidelines, framed behavioural approaches in terms suggesting their legitimate role in empowering both a stronger state and the personal responsibility of citizens. The renewal of the state–society relationship was, in turn, portrayed as a necessary precondition for tackling complex policy problems, ranging from unemployment and health to education and environment. Thus, from the beginning a particular political vision of the 'division of responsibilities between citizens and state' (COSU 2004, 5) has been used to justify the use of behavioural expertise in public policy. However, while the relevant policy documents and guidelines entailing such political justifications are primarily addressed to the 'inner circles' of policy-makers, the Conservative-Liberal Democrat coalition government managed it to more actively integrate behavioural science into the discourse on the 'Big Society' – a discourse which was performed in the arenas of the general public. It is through its embedding into the Big Society discourse, we argue, that behavioural expertise came to function as a 'sociotechnical imaginary' in Britain and was consequently stabilized as a new mode of knowing governance. Following Jasanoff (2015) sociotechnical imaginaries are 'collectively held and performed visions of desirable futures (or of resistance against the undesirable)' that are 'animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology' (Jasanoff 2015, 19). In what follows we will illustrate how, through the imaginative work of the current British coalition government and other philosophers of 'Big Society' (Norman 2010), behavioural science became enmeshed producing a progressive vision of the collective good in Britain.

As the solution to what was called a 'broken society' (Cameron 2008), a diagnosis of a society in which social responsibility has eroded (Cameron 2009a), the prime minister first set out his vision for a 'Big Society' in his Hugo Young lecture in November 2009 (Cameron 2009b). Since then,

the concept of Big Society has been established as a catch phrase in the Conservative general election manifesto (Conservative Party 2010) and figured a as a major theme in the UK coalition government's agenda. While the concept of Big Society has been highly contested among both academic observers and politicians (Bulley/Sokhi-Bulley 2014; Corbett/Walker 2013; Jones et al. 2010; Williams 2011), it did play a vital role, particularly in the early days of David Cameron's first term of office – this at a time when the BIT was set up within the Cabinet Office.

At its core, the Big Society concept blames the breakdown of the welfare society (Social Justice Policy Group 2006) on too much state involvement in the life of communities and individuals (Bulley/Sokhi-Bulley 2014, 455). Under the Labour government, Cameron claims, government has grown to the point where 'it is now inhibiting, not advancing the progressive aims of reducing poverty, fighting inequality, and increasing general well-being' and where 'it has promoted not social solidarity, but selfishness and individualism' (Cameron 2009b). 'What is seen in principle as an act of social solidarity', he argues, 'has in practice led to the greatest atomisation of our society. The once natural bonds that existed between people – of duty and responsibility – have been replaced with the synthetic bonds of the state – regulation and bureaucracy' (Cameron 2009b).

The fundamental analytical move made by the advocates of Big Society then is to suggest not a Thatcherite 'simplistic retrenchment of the state', but 'a thoughtful *re-imagination* of the role, as well as the size, of the state' (Cameron 2009b, own emphasis). This locates the concept of the Big Society within the Burkean Conservative historical tradition that is not 'anti-state' per se (Ellison 2011, 49):

> [T]he re-imagined state should not stop at creating opportunities for people to take control of their lives. It must actively help people take advantage of this new freedom. (Cameron 2009b)

The claim is that with the shift from 'big government' to 'big society', citizens will be encouraged to engage and participate, in concert with their families and communities, in the solution of social problems, rather than relying upon government. Big Society is thus about an empowered and decentralized civil society, but one rooted in socially Conservative values – and one to be enabled by a smart state:

> Similarly, there has been the assumption that central government can only change people's behaviour through rules and regulations. Our government will be a much smarter one, shunning the bureaucratic levers of the past and finding intelligent ways to encourage, support and enable people to make better choices for themselves. (Cameron/Clegg 2010, 7–8)

Combining scepticism towards the state with the recognition that it has a vital role to play in empowering social responsibility, the Big Society discourse reflects Sunstein and Thaler's philosophy of 'libertarian paternalism', which has been referred to as a central reference already in the early UK government's policy papers on behavioural expertise, as we have illustrated in the previous chapters.

In their philosophy of libertarian paternalism, Sunstein and Thaler justify the need 'for self-conscious efforts, by private and public institutions, to steer people's choices in directions that will improve the chooser's own welfare' and 'impose [. . .] trivial costs on those who seek to depart from the planner's preferred option' (Sunstein/Thaler 2003, 1162). Thus, the apparent oxymoron of 'liberal paternalism' provides policy-makers with the capacities of 'choice architects' to create situations where citizens make better choices to enhance their own welfare, thereby reconciling contested political positions on individual autonomy as opposed to political interventions (Straßheim et al. 2015).

With its imagined rearrangement of the state–society relationship, the Big Society discourse is not only perfectly consistent with Thaler and Sunstein's concept of 'choice architects' in that it promises to provide the state with the smart tools necessary to steer citizens' behaviour in desired ways, while at the same time preserving the 'free choice' of individuals. In a number of speeches and publications, Cameron and other advocates of the Big Society concept also repeatedly referred directly to leading behavioural scientists, Thaler and Sunstein in particular. In order to both justify and achieve the grand social transformation from big government to Big Society, Cameron suggests that Britain should learn from the lessons of behavioural sciences:

> Of course there are no easy answers, short cuts, or simplistic levers we can pull. But there are lessons we can learn from the latest academic research which shows how government by going with the grain of human nature can better influence behaviour. The behavioural psychologist, Robert Cialdini, argues that one of the most important influences on how we behave are 'social norms' – that is, how other people behave. Cass Sunstein and Richard Thaler have argued that with the right prompting, or 'nudge', government can effect a whole culture change [. . .]. We can also learn from evidence that physical connection is paramount in building trust and strong communities. In a big state bureaucracy, where everything is distant and removed, it is hard for trust to grow. (Cameron 2009b)

Jesse Norman, who is with his 2010 *The Big Society: The Anatomy of the New Politics* the biggest philosophical advocate of the Big Society, has also embraced 'nudge theory' as 'compassionate economics' that puts an emphasis on the conservative communitarian roots of the Big Society discourse (Norman 2010, 187):

> Compassionate Economics [. . .] rejects any monopoly of textbook economics within British government. It opens the doors to the new wisdom both within the discipline and outside, and it places a greater responsibility on those in government to become wiser as to the limits of their thinking. We have seen a huge amount of recent interest in behavioural economics, through the discussion of books such as *Nudge* or *Predictably Irrational*. Compassionate Economics consolidates and extends this line of thought.

Thus, as these programmatic political statements show, the insights of behavioural economics and behavioural psychology are used here to re-imagine the government as 'choice architect' playing a vital role in empowering the personal responsibilities of citizens to make 'better choices' for themselves, their families, and communities. The politico-epistemic authority of behavioural sciences that was originally unfolded by the progressive extension of policy papers and application guidelines on behavioural interventions is thus further stabilized by its active integration into the Big Society imaginary, with the latter being, in turn, legitimated by referring to the insights of behavioural sciences.

Conclusion

Summing up, we have suggested here that knowing behavioural governance is the result of a double movement: Firstly, behavioural experts have cultivated politico-epistemic authority by claiming the role of 'choice architects', mobilizing easily demonstrable forms of evidence and modelling the policy process after experimental designs. Secondly, the political vision of Big Society was put forward that constitutes a powerful diagnosis of the UK's social and economic problems as well as a frame of an alternative, progressive future. Behavioural expertise and the nudge concept associated with it enable the advocates of Big Society to imagine a much smaller, but smarter state that empowers citizens in terms of making better choices for their individual and collective good. Behavioural governance is unfolded and stabilized not by the simple diffusion of ideas or the provision of new insights about human rationality. Rather, it is the result of a complex interlinkage between expert authority and sociotechnical imaginaries about future state–citizen relationships. Essential to the success of the three-dimensional practices of authorization described in the previous chapter is thus their combination with the concept of Big Society.

In their seminal work on the psychoanalytic expertise under advanced liberalism, Miller and Rose have predicted the birth of a new 'species of authority', that seeks to govern

> through the responsible self-regulation of [. . .] actors, through utilizing their own desires to maximise their well-being, profitability or quality of

> life. To govern in advanced liberalism is to presuppose the implantation of certain norms of self-promotion in these actors, and a willingness to turn to experts for advice in these decisions [. . .]. It is here that the therapeutic vocation of authority comes into consonance with a whole new regime for the conduct of free individuals seeking to maximise their quality of life in a world of choices. (Miller and Rose 1994, 59–60)

Indeed, members of BIT are already engaging in an even more far-reaching vision of the Big Society, arguing for the advancement of indicators on subjective wellbeing and happiness as new measures of economic and societal progress. The success of governments, it is proposed, should be understood in terms of life satisfaction: 'If governments are doing a good job, they will be enhancing their citizens' perceptions of how satisfied overall they are with their lives' (O'Donnell et al. 2014, 11). Research on subjective wellbeing has raised a debate on the future foundations of growth, thus challenging former visions of progress.

Worldwide, governments are introducing indicators of subjective wellbeing as alternative to measurements of national income (Davies 2015). The rise of the 'psychological state' (Jones et al. 2013) is already changing the 'ecosystems of expertise' in Europe and beyond (Doubleday/Wilsdon 2013). For example, bottom-up networks such as 'iNudgeyou' in Denmark or 'greennudge' in Norway characterize Scandinavian approaches to behavioural governance. Situated at the interface of applied behavioural science, public institutions, NGOs, and private stakeholders, these initiatives engage in research on environmental policy and public health, changing littering behaviour or nudging smoking down.

Just like the experimenter in Wright of Derby's image, behavioural experts are envisioned as educators and therapists, analysing and enlightening citizens on their way to a more happy and knowledgeable life. Future research will have to show how behavioural expertise is justified, legitimized, and culturally embedded across countries, gaining authority and imagining an ideal of 'humanizing' regulation (Sunstein 2014) that turns societies into highly individualized states of mind.

Notes

1 For the beholder this rational understanding is comprehensible in the facial expressions of the onlookers, beginning with the terrified reaction of the youngest girl, leading to the reflective and inwards-turned attitude of the elder man on the right.
2 Formerly situated at the Cabinet Office, BIT was 'mutualized' in 2014 as company owned by its employees, the UK government, and NESTA, a charity organization.
3 Our research is based on a project 'Studying the Changing Orders of Political Expertise' (SCOPE), carried out from 2011 to 2014 at the WZB Social Science Center in cooperation with Humboldt University (funded by the Volkswagen Foundation) and on a research project on 'Knowledge politics and welfare change' carried out at

the University of Darmstadt from 2011 to 2014 (funded by the German Research Foundation). This paper is also based on selected findings presented in Straßheim et al. (2015) and Straßheim and Korinek (2015).

4 The so-called '6 Es' framework: Enable, Encourage, Engage, Exemplify, Explore, and Evaluate.

5 See the comment in *The Guardian*, 5 February 2014, by Ian Dunt: 'It is the first time privatisation has reached beyond its usual terrain of public services and utilities to include an actual bona-fide government policy team' (http://www.theguardian.com/commentisfree/2014/feb/05/nudge-say-no-more-behavioural-insights-team), accessed on 31 March 2015.

6 These three dimensions of sense-making have been used in remarkably similar ways by different strands of social theory (Berger/Luckmann 1967; Luhmann 1995; Scott 1995). Jasanoff has suggested a different typology of expert dimensions, identifying 'three bodies of expertise' that are connected to the problems of expert legitimacy (Jasanoff 2005b). These include the evidence produced by experts, the advisory bodies, and other collective bodies of expertise and the individual bodies of the experts themselves. However, the temporal dimension seems to be missing. Elliott (2011) has presented a fruitful application of Jasanoff's three-body typology on environmental policy and research.

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6

Realizing Instruments: Performativity in Emissions Trading and Citizen Panels

Jan-Peter Voß

Introduction

Instruments of governance are widely discussed in the policy and governance literature (see reviews in Lascoumes/Le Galès 2007; Howlett 2011). This research distinguishes between the various types of instruments, seeks to explain their effects, and is concerned with processes of choosing and implementing them. Articulating governance in terms of instruments has been a major concern of political science since World War II, following Harold Lasswell's call for a 'policy science' (Lerner/Lasswell 1951) and leading to the establishment of 'policy analysis' as a research orientation and professional practice.[1]

Yet, there is surprisingly little concern for how governance instruments actually come into being, and close to no research into processes of their making. Both in policy and governance studies and in public discourse, these instruments tend to be treated as given options for policy-making and institutional design. They are considered elements of a 'toolbox' provided by experts and are understood as being based on scientific investigations of empirical patterns and cause–effect relations in governing. As such, instruments are viewed as lying 'out there', in the nature of governance itself. They appear as amenably packaged representations of the factual possibilities of governing.

But how do certain options for governing become known in the first place? How are their functional profiles and design specifications established? How do instruments get into the toolbox?

From a perspective of knowing governance these seem to be crucial questions. They direct our attention to the practices of establishing functional models as representations of what governance really is. Here, I argue that this is not a process of knowledge-making involving the neutral observation of a given reality of governing, but a process where specific versions of political reality are actively being created. This is what I refer to as the 'realizing'

of instruments of governance; it comprises both the recognition and accomplishment of particular orders in governance.

Two aspects are relevant here. The more fundamental one is that the making of knowledge about instruments is associated with the realization of a particular model of political agency: It establishes an instrumental problem-solving rationality as the basic operating principle of politics. This is linked to a separation of processes into those that define the goals and values and those that ascertain the means to fulfil them. Long-time practitioners of policy analysis and policy-making van Nispen and Ringeling testify that '[t]he instrumental view of the government has left its mark [. . .] the indirect impact on public policy is hard to neglect. It has forced policy-makers to think in terms of goals and means, in terms of effectiveness, which they did not do before. It has improved the communication between policy-makers as well as between these policy-makers and policy analysts' (1998, 215). Realizing instruments thus constitutes a division of labour and competences between political actors, on the one hand, and scientists, on the other hand (Ezrahi 1990, 2012). As a silently enacted ontology of politics such fundamental ordering can be termed a 'collateral reality' (Law 2012) that comes with the knowing of instruments.

A more specific second aspect in which the making of knowledge is tied up with the creation of political realities is the establishment of scripts for collective action. Anything that is known as a 'toolbox' of instruments in any area of governance, say in climate protection or public participation, constitutes a set of distinct alternatives for rational agency. The instruments define options that are publicly accepted as reasonable, feasible and justifiable. Performing politics outside the box is regarded as ignorant and unprofessional, or at least implies extra effort and risk. Knowledge about instruments thus has a regulating effect on the conduct of politics that is comparable to that of (legal) norms and institutions (for the general point see Foucault 1972, 21–78 and Burchell et al. 1991).

But for political science, the making of knowledge is often just taken for granted, while all research effort is concentrated on the making of norms and institutions. The knowledge that makes instruments has been an issue for political science only to the extent that it is used (or not) and for what purposes (symbolic legitimation or instrumental learning, see, e.g., Knorr 1976; Weiss 1979; Boswell 2009).

In this chapter, I offer an extended repertoire for studying collective ordering by looking at practices of knowledge-making about governance. For this purpose, I mobilize the concept of 'performativity'. The concept holds that representing, describing, and depicting are acts that do something to the reality that is actualised in this way. Studies of performativity seek to trace how naming and signifying are constitutively entangled with being, and existing (Hacking 2002). These studies explicitly appreciate the ways in which representations are constitutive of what they represent. Representation is so

understood with regard to its active, mediating, and transformative work in constituting realities.[2]

By examining the act of knowing governance as a performative process, I propose to look at recursive dynamics of describing realities of governance and effectuating them. For any description of governance, this comes down to scrutinizing how it contributes to constituting and changing realities of governing rather than passively mirroring them. For instrumental models of governance it suggests that their practical effect and power does not derive from accurate correspondence with a given reality, but from their ability to mobilize and align agencies to 'do' a reality of governance that generates the promised functional effect. Instruments do not *mirror* aspects of a naturally given political reality; they *programme* the doing of a particular political reality. Making knowledge about them is a process of constructing political order in correspondence with a model that describes it.[3] It can thus be said that the articulation of instrumental models is itself a form of governing, a fundamental, ontological mode of governing that works by suggesting realities of governance for collective enactment.

The remainder of the chapter comprises two conceptual steps and two case studies. I introduce the concept of performativity as it has developed in science and technology studies (STS) as part of an attempt to understand the work of science. This is what I refer to as 'epistemic performativity'. Then I add a symmetrical concept of 'political performativity', which centres on practices of political representation. Both modes of performativity are juxtaposed to generate an approach that studies the 'realizing' of instruments. This brings us to a brief discussion of two cases where epistemic and political performativity are intertwined in different ways. 'Emissions trading' as a model of market-based environmental governance is presented as a case where epistemic and political performativity work in parallel and mutually support each other in realizing a new instrument. The 'citizen panel' – as a model of deliberative participatory governance – is portrayed as a case in which epistemic and political performativity counter each other and dynamically balance each other's reality effect. In conclusion, I discuss the implications of understanding instruments of governance in terms of their performativity.

Epistemic performativity

Performativity in STS is primarily related to practices of scientific representation. The concept emerged from studies of laboratory practices in the natural sciences. While these studies sought insights into the making of authoritative claims of fact, they found that a lot of hard work and tinkering went into creating artificial realities that produced phenomena that could be described and theorized in an orderly manner. They found that scientists configure their own realities, which are simple and small enough to be manipulated

by experiment, and which are intelligible, or even predictable, by theories. Rather than making the world as such known by testing and observing reality 'in the wild', knowable worlds are fabricated by rebuilding, ordering, purifying, and reducing realities 'in seclusion' (Latour/Woolgar 1979; Knorr Cetina 1981; Hacking 1983; Latour 1987; Callon et al. 2009). The realities of science are 'mounted realities' (Rip 1997), 'isolated microcosms' (Rouse 1987), or 'experimental systems' (Hagner/Rheinberger 1998). Therefore, if hypotheses are tested, they are not tested against nature, but against realities that are artificially created in experimental assemblies, selective field contacts, and methodically generated data sets (Hacking 1992). This includes the training of a 'thought collective' (Fleck 1994 [1935]) to reliably operate experiments and interpret the phenomena that they show in a convergent manner.

What is then referred to as evidence for scientific claims and publicly presented (and accepted) as laws of nature and universal conditions of being are actually representations of artfully constructed orders, phenomena that are materially and socially performed by a specific epistemic culture (Knorr Cetina 1999). Early in the 20th century, Gaston Bachelard coined the terms 'technoscience' and 'phenomenotechnique' for this mode of knowledge production (Bachelard 1984 [1934]; Rheinberger 2005). In this sense, science is performative 'writ small'. It composes the realities in its laboratories that it describes in its theories.

But performativity goes further when such practices generate epistemic authority. Then they become performative writ large. Modern science seeks to demonstrate the truth of statements through long chains of reference which translate experimentally configured realities into journal articles, schoolbooks, and policy programmes (Latour 1986, 1999). Specific material, literal, and social techniques are here involved, from building the experimental apparatus, to the invention of a language of impersonal reporting, to an ethics of unemotional, fact-based critique (Shapin 1984). What happens locally in laboratories, field sites, or computer simulations can thus be mobilized to circulate as evidence for a larger audience. When people accept science as speaking for nature and providing a truth that holds for everybody and everywhere, then science can provide an infrastructure of factual conditions that define, in a collectively binding way, a commonly inhabited reality and possibility space of actions.

More than this, the cause–effect relations as demonstrated in the laboratory may suggest themselves for 'application'. Since scientific 'discoveries' are tied up with the specific configurations of reality that have been achieved locally in the laboratory, however, their replication and use requires expanding the ordered worlds of the laboratory (Latour 1983). This takes place within dedicated strategies of innovation, by setting up platforms, building prototypes, conducting field trials, recruiting pilot users, soliciting public acceptance, lobbying for adapted regulations, and so on. Here, the

explicit goal is to install a functional order on a larger scale. But there are also more subtle ways in which scientific realities proliferate. Laboratory orders are inscribed in practical tools, measurement devices, data, and skilled people: any tool implies a model of its users, data imply a categorization of what they measure, and skills imply purposes. This may be exemplified here by accounting tools like cost–benefit analysis and their inscribed assumptions about worth, by questionnaires and how they force upon respondents a certain way of reporting on and perceiving themselves, or by target-group-specific advertisements and product designs and how they invoke some distinctly modelled lifestyles. Engaging with the mundane products of scientific work can thus contribute to the enactment of scientifically devised orders as a result of the possibilities implicit in their materiality, without the need to communicate or convince anybody of underlying models or theories. This may be referred to as a 'co-performation' of a scientifically devised order by different agencies and across sites. For the case of economics Michel Callon refers here to accountants, engineers, policy-makers, households, and so on, who, often unwittingly, collaborate in the realization of calculative models of human behaviour and social relations (Callon 2007, 335).

STS research provides detailed accounts of the practices and material devices involved in such processes. Work on knowledge production in the social and political sciences is particularly relevant here (Callon/Latour 1981; Law/Urry 2004; Camic et al. 2011), for example, when it comes to statistics (Desrosières 1998), public opinion research (Osborne/Rose 1999), social surveying (Law 2009), focus groups (Lezaun 2007), or the experimental testing of political leadership models (Lezaun/Calvillo 2013). Many of the concepts that are developed here can offer a closer look at the material–practical dimension of constructing facts and functionalities, and of epistemic authority, also in relation to politics and governing itself. A concern for epistemic authority and a conceptual repertoire for studying its generation in practice could add to the understanding of power in interpretive political science (Bevir/Rhodes 2006; Bevir 2010) and political discourse studies (Burchell et al. 1991; Hajer 2010; Wodak 2011). Knowledges, rationalities, cultures, or traditions of politics are here often taken to be historically emerging or primarily being shaped in communication (through discourse, rhetoric, and media performance).

The concept of performativity from STS shall be used here to capture that dimension in the making of instruments of governance. It suggests that, prior to their scientific modelling and experimental articulation, the described functions are not given anywhere. But neither are they a mere illusion or a discursive construct that gains robustness solely through language and belief (see discussion of such positions in Linder/Peters 1998). In the process of making them, scientifically constructed models of governance become enacted, with the result that the instruments create their own reality.

Political performativity

In addition to garnering a better understanding of authoritative knowledge-making, there is more to be gained from STS's elaboration of the performativity of epistemic representation. One concept that is particularly relevant for concerns with governance and politics is a generic conception of power as an effect of representation: The entity (or person) that 'does' a representation assumes the power to enact the represented in a particular way; it is actualized and brought into being in a particular situation as the thing that it is represented to be. Yet, there is no representation that does not entail a transformation, but any representation involves the selection and subsuming of some aspects of what the entity is said to be. The power to perform this transformation is at the heart of a concern with 'mediators' in actor-network theory (ANT) and it is central to the analytical project to make the mediation, the transformation, and thus the power that is connected with the practising of representations visible. The basic concept is contained in various ANT terms like blackboxing, spokespersonship, point representations (Callon/Latour 1981), obligatory passage point (Callon 1986), centre of calculation (Latour 1987, 215–248), or oligopticon (Latour 2005, 174). Such a generic understanding of representational power can be specified for areas of social life other than science and its claim to represent nature.

For a conception of political performativity along these lines we may draw on Bruno Latour's elaboration of the various 'modes of existence' in which modern realities are enunciated and enacted (Latour 2013). He suggests that political speech is performative in a specific way: it articulates collective subjects and their common will and thus makes groups with a shared identity.

Hence, practices of representing collective subjects and their common will are at the centre of doing politics. They may generate legitimate speaker positions on behalf of a particular 'we' (e.g. the working class, a nation state, the peace movement, or women). But the challenge is to first establish a collective subject with a common will and agency. That is the work of politics. It comes in statements like 'we want a future that . . .', 'for our survival we have to . . .', 'we owe it to our children', 'it is in our collective interest to . . .'. But it also emerges in symbols like flags, uniforms and party badges, the architecture of parliaments and government buildings, procedures of election and appointment, rituals like the bestowal of honours on behalf of a collective, marches, battle songs and anthems, which contribute to representing and performing collective subjectivity (cf. Manow 2004, 2006). If 'felicitous', such acts of representation actually work to align the willing, wanting, and doing of human bodies and to bring about a collective being with identity, interest, and capacity to act.

The specific power of politics can, like science, be conceptualized as a reality effect of such representations. Politics is to work up 'representative

claims' (Saward 2006) that constitute authority to oblige members of a collective to contribute to a common will. That grants a power that is voluntarily obeyed, as it is performed and imagined not to oppress, but to increase the autonomy of any member of the collective. If political representations have sufficient traction to perform the collective subjectivities that they represent, politics can transform a multitude of diverse existences into a collective agency (Latour 2003).

This concept of politics is related to studies of scientific representation in STS, and the generic concept of power developed in ANT, but it also connects with more established lines of thought in political research. A conception which takes the performative representation of collective identity, will, and interest as the unique productive force of politics can, for example, be found (in otherwise very diversely orientated) writings by Hobbes (1651), Durkheim (Giesen 2006), Schmitt (1927), Simmel (Mongardini 1996), Dewey (2012 [1954]), Voegelin (1987 [1952]) and Arendt (1979 [1969]). Relevant linkages also exist with approaches to politics in social constructivism and ethnomethodology (Soeffner/Tänzler 2002; Patzelt 2013a). Most explicitly described is the performativity of politics in Bourdieu's work on symbolic power and social group making (1991, 2009 [1984]) and in Pierre Rosanvallon's discussion of the figurative dimensions of political representation and democracy (Rosanvallon 2000, 2002; Disch 2008; Diehl et al. 2014).

Examining politics as the representation of collective subjects, identities, and interests provides us with a sensitizing concept allowing us to appreciate the making of political authority as another mode of reality-making. Political authority is at work when it comes to determine not the objective functionality of any proposed order but its value, the desirability of its effects, and its normative appropriateness.

Realizing governance

With respect to their effectiveness, both epistemic and political practices rely on being accepted for the purposes of representing a transcendental whole: either objective reality or collective subjectivity (cf. Shapin 1984; Patzelt 2013b). In both cases, however, it is the practices themselves that bring the transcendental whole into existence. In Table 6.1, epistemic and political performativity are juxtaposed. The first column highlights their symmetrical conception as performative representational practices. Columns two and three indicate specific ways in which such practices work. Both modes of performativity build on the construction of simple orders (reduced model worlds, unitary model actors), which are claimed to represent a pre-existing reality (nature, common will). They have different ways of justifying their claims (demonstration by evidence, legitimation by participation) and in doing so they refer to a transcendental entity (objective reality, collective subjectivity). This allows them to generate power (epistemic authority,

Table 6.1 Epistemic and political performativity juxtaposed

	Epistemic performativity	**Political performativity**
Constructing . . .	reduced model worlds, cause effect	unitary model actors, identity
Claiming representation of . . .	nature	common will
Justification by . . .	demonstration by evidence	legitimation by participation
Referring to . . .	objective reality	collective subjectivity
Form of power	epistemic authority	political authority
Effectuated by . . .	invoking necessity/functionality	invoking a 'we'/solidarity
Resulting in . . .	collective truth, reality	collective norms, agency
Social locus	scientific field (epistemic culture)	political coalition (constituency)

political authority) that is not overtly oppressive. It is made effective by invoking obligations to a transcendental whole (necessity/functionality, we/solidarity). This can be effective for establishing collective order (collective truth/reality, collective norms/agency). Both dynamics of power generation and collective ordering pertain to a specific social locus (scientific field/epistemic culture, political coalition/constituency).

To study the realization of governance instruments, I propose to combine both concepts of performativity (see also Voß 2014). By tracing epistemic and political practices of representation, we may study how their performativity intertwines. In the following section, I present two case studies that illustrate different patterns.[4]

Emissions trading: economists make markets – but not alone

Emissions trading is a model of governance that describes how environmentally harmful behaviour is regulated by issuing tradable rights to produce portions of a limited amount of emissions, and by installing and overseeing a market to trade those rights.

A standard account of the innovation of emissions trading is that a scientific model was taken from the laboratory of economic theory to the field of real-world politics, governing, and trading (e.g. Voß 2007). The European Union Emissions Trading System (EU ETS) appears as the shining pinnacle of this process. It came into operation in 2005 and is proudly described on the Commission of the EU's website as its 'key tool for reducing industrial greenhouse gas emissions cost-effectively' and 'by far the biggest' emissions trading system in the world (Commission 2015). EU ETS involves more than 11,000 industrial plants in 31 countries being required to account for their greenhouse gas emissions and engaging in the trading of allowances for more than 2 billion tons of CO_2 equivalent (Commission 2013).

The model has obviously become a reality in the material practices of European governments and companies. For that, emissions trading is considered an exemplary case of epistemic performativity and is studied by STS-inspired economic sociology with regard to the process through which this new market has been experimentally constructed (Callon 1998; MacKenzie et al. 2007). Empirical studies have focused on the practical work and the devices that translate heterogeneous elements into a calculative machinery that works according to an economic model (Callon et al. 2007; MacKenzie 2009; Lovell/MacKenzie 2011). The work that makes markets is studied within different sites of experimentation, in vitro and in vivo (Muniesa/Callon 2007; Callon 2009). Here, emissions trading is presented as a 'socio-technical innovation' that makes economic theories true in ever wider areas of interaction (Callon 2005, 2007).

In the following, I turn to two episodes where the performativity of epistemic representations of emissions trading is visible, but where it also becomes clear that it is not economists alone who have made emissions trading (or scientific authority and distributed epistemic practices, for that matter), but also politicians (or political authority and distributed political practices).

The 'proof of principle' for emissions trading: the political dismantling of clean air regulation epistemically exploited

The case that came to be established as the first 'proof of principle' of emissions trading was actually not especially influenced by economic theory at all. The emissions trading policy of the US Environmental Protection Agency (ET EPA) was the result of a direct struggle over the implementation of technological standards required by the Clean Air Act legislation (Voß 2007; Lane 2012; Simons/Voß 2014).

During the 1970s, industry actors and their counterparts in government pressed the newly established EPA to accept a controlled breaching of standards, in exchange for certified overcompensation in other installations. Regulatory mechanisms using terms such as 'bubble', 'offset', and 'banking' were introduced ad hoc as concessions to political pressure by regulated industries. They were grafted onto a policy framework that followed quite a different model, one of standards-based environmental governance (Meidinger 1985; Cook 1988). In 1982, they were brought together under a unified framework, of an 'Emissions Trading Policy' which set out 'General Principles for the Creation, Banking and Use of Emission Reduction Units'.

The move was pushed by an increasingly strong constituency of economists at the EPA. But their power at the EPA came about due to interventions that mobilized political authority, not only epistemic authority. In 1978, the newly incoming Carter Administration appointed a market-friendly director of the agency and a deputy with responsibility for the Office of Planning and Management (Cook 1988, 50). With support from the new government,

they successively built it up 'as an organizational home for reformers in the agency' (Cook 1988, 10). The influence of economists and their work to modify regulatory practices was made possible by political work and by the seizing of governmental positions. But how did ET EPA become established as a model case of emissions trading in practice, if it was actually the perforated leftover of a system of regulatory standards?

The science to support the epistemic claim of functionality was still weak in the 1970s. Up to the end of the 1970s, emission trading had only been articulated in the abstract. It had first been articulated as a theoretical mechanism that allowed for the substitution of state regulation by a market mechanism to allocate 'bads' (Coase 1960). Then, it was articulated at the end of the 1960s as an alternative instrument of environmental governance to replace technically defined and legally enforced standards (Crocker 1966; Dales 1968). In the beginning, it was only relevant and intelligible to economists who shared its basic paradigmatic assumptions. But the model simulations pointed to possible cost savings in comparison with other forms of environmental governance and served to convince further actors of the superior functionality of the instrument (Montgomery 1972; Atkinson/Tietenberg 1982).

The ongoing ET EPA process became an empirical case illustrating the more abstract model (Liroff 1980, 1986; Tietenberg 1985; Dudek/Palmisano 1987). The actual complexity of the regulatory assemblage was reduced so that it could be calculated as a variant of the model – and evaluated against optimal market designs derived from the theory. The politically negotiated order of ET EPA could thus, in all its incoherence, be captured and drawn into the lab as a real-world case of emissions trading. Efficiency, as the main functionality of economic market models, became established as the purpose of environmental regulation and a measure for further improvements. At the same time it was suggested that emissions trading had been implemented in practice for the first time, which demonstrated that it did not only work in theory.

A study that evaluated ET EPA in relation to simulated effects of ideal market designs became a widely referenced source for claims that emissions trading could work in practice and that it could outperform alternative governance approaches like direct standards or taxes (Tietenberg 1985; Simons forthcoming). While the successes of the ET EPA were identified as features of the generic model, the programme's more apparent failures were attributed to improper implementation. Evaluation studies emphasized the experimental nature of the ET EPA (Lane 2012, 598; Simons forthcoming). While ET EPA was, in fact, full of idiosyncrasies that threatened its recognition as a case of emissions trading, economic evaluation studies served to maintain equivalence between politically reconfigured practices of regulation and the model of emissions trading. They did so by establishing a difference between the particular case and the optimum of market design as determined in simulations. It was claimed that 'widespread adoption of emissions trading has been handicapped by bureaucratic inertia and infighting, dogmatic

opposition by environmentalists, hostility in Congress, as well as indifference by polluters. Yet emissions trading is sufficiently well-developed to justify an endorsement of its performance and its continued role in solving air quality problems' (Dudek/Palmisano 1987, 218). This set a trajectory for further reforms of environmental governance, which sought to fully realize the calculated benefits that would emerge from the proper implementation of the emissions trading model.

With regard to the intertwining of epistemic and political performativity, we find that regulatory practices, which provided a case in which economics could corroborate its model, were in fact reconfigured by the mobilization of political authority. We further see how reducing the wider worlds of environmental governance into simple models allowed economists to calculate effects and determine standards of rationality for further reform.

The emissions trading breakthrough: a new political collective sets up a real-world experiment

Another episode to consider is the process leading up to a first prototype of emissions trading as a governance instrument. The US Acid Rain Program (US ARP) is regarded as the first proper implementation of emissions trading theory. Importantly, it helped emissions trading to win a place in the environmental governance toolbox beyond the US. Here too, we find a constitutive intertwining of epistemic and political authority.

Tietenberg's evaluation of ET EPA fed into a process to negotiate the setting up of a proper emissions trading system on the federal level in the US; it actually led to a major real-world experiment with the model. At first sight, the episode may be regarded as a clear case of epistemic performativity: economics provided a model of governance, and functionality claims were corroborated with evidence from ET EPA as a practice case. But here again, there were performative political practices at work. Dedicated political work was needed to establish a public interest in the experiment and to mobilize agency for setting it up. We turn to 'Project 88' as a process in which a new political collective was assembled around the claim that there was a broader collective interest in the US in a turn to market-based environmental policy.

Project 88 was initiated by economists at the Environmental Defense Fund (EDF) together with Senator Timothy Wirth (Colorado, Democrat) and Senator John Heinz (Pennsylvania, Republican) (Pooley 2010). The plan was to assemble a broad coalition of actors from both political parties and various social groups (representatives of industry and environmental NGOs, different regions, etc.) for a collective initiative to push a new market-based approach to environmental governance. The coalition was brought together to articulate a policy proposal for the new administration that would come in after the 1988 US presidential elections (McCauley et al. 2008; Pooley 2010). Economics professor and former EDF staff member Robert Stavins was convinced to lead the project and other key individuals were also successively

enrolled as spokespersons for various fields of academia, private industry, environmental organizations, and government.

Project 88 paved the way for a broad political coalition by framing environmental policy as a question of technical design, independent of competing values and political positions. Its final report titled 'Project 88, Harnessing Market Forces to Protect Our Environment: Initiatives for the New President' included a proposal to introduce 'a market based approach to acid rain reduction' and connected this proposal to the promise that such an approach 'could save $3 billion per year, compared with the costs of a dictated technological solution' (Project 88 1988, 5). It said that 'Project 88 steps away from ongoing debates over specific environmental goals, to focus instead on finding better mechanisms for achieving whatever standards are set' (Project 88 1988, ix). This promise was backed up by multiple references to the existing emissions trading literature.

In his campaign, presidential candidate Bush positioned himself as a supporter of new acid rain regulations. After his victory and inauguration, he set up a team with close ties to the Project 88 coalition to craft a reform of the Clean Air Act (McCauley et al. 2008). The group worked closely with EDF staffers to overcome opposition from groups that had thus far not been included in the negotiations (Pooley 2010). One of the members of the team recalls: 'We would pull out Project 88 and say this is what the best and brightest say they should do' (McCauley et al. 2008, 25).

Looking back in 1991, when he introduced proposals to include emissions trading into the Clean Air Act, President Bush said: 'Let me commend Project 88 and groups like the Environmental Defense Fund for bringing creative solutions to long-standing problems, for not only breaking the mold, but helping to build a new one' (Project 88 – Round II 1991, 2).

A comprehensive evaluation of the US ARP in 2000 (Ellerman et al. 2000) found that experience with the US ARP 'clearly establishes that large-scale tradable-permit programs can work more or less as textbooks describe' (315). This concluding statement neglected their earlier acknowledgement that non-modelled and unintended interactions with the parallel liberalization of railroads and price drops for transporting low-sulphur coal over long distances produced the effect of reduced emissions at low costs (Ellerman et al. 2000, 104–105). It was claimed that with the US ARP 'market-based instruments have moved centre stage, and policy debates look very different from the time when these ideas were characterized as "licenses to pollute" or dismissed as completely impractical' (Stavins 2001, 14).

This episode around Project 88 shows that reality-making in relation to emissions trading was an effect of cobbling together new collective actors who had an interest in the instrument, as well as an effect of building up epistemic authority for the model. Indeed, both go hand in hand. In order to set up an experiment that can generate evidence and epistemic authority, collective agency must be mobilized by negotiating the accepted representation of a collective interest.

Emissions trading co-performed as objective function and collective interest

Both episodes portray a process in which epistemic authority in support of its functionality was gradually built up as emissions trading went back and forth between the lab and the wider world. Each time, epistemic authority got stronger due to the increasing correspondence of US environmental policy with the market model and the gathering of more and better data to enhance the model. Upon closer inspection, we find that science did not perform reality on its own. Knowledge work required political authority to configure the experimental setups that it could draw on for evidence (and to testify for a public interest and the relevance in related research). The development of emissions trading thus required the building of political coalitions and the construction and representation of collective interests as much as the construction of model worlds and forceful claims to represent reality.

Citizen panels: a technoscience of democracy – and its politics

The citizen panel model refers to a procedure for convening small groups of 'ordinary citizens' and for facilitating the deliberation of a predefined issue to produce a 'public view' with recommendations for policy. The case is special in that the modelled governance function here refers to the production of legitimate goals via specific forms of political representation. Citizen panels constitute a model for the basic political task of translating a heterogeneous multitude into a collective subject. Epistemic authority in support of the model comes to bear on the process by which collective values and norms are to be articulated.

In contrast with the lab-driven development of emissions trading, the innovation of citizen panels can be described as a gradual technoscientization of public participation practices. They first took shape 'in the wild' and only later became 'laboratorized' (Voß/Amelung forthcoming).

We examine in more detail an episode in which the establishment of authoritative design standards through scientific testing and evidence generation occurred. Such attempts to epistemically define public participation procedures not only were supported by political authority, but are also contested on political grounds. They gave rise to attempts to claim a collective interest in a process of articulating publics and democracy that was not disciplined by experts and technologies of democracy.

Political practices brought into the lab

Early citizen panel practices developed from immediate concerns with existing governance patterns in particular contexts. The planning cell developed in the context of infrastructure planning in North Rhine-Westphalia in Germany (Dienel 1970), the citizens' jury in the context of civic education in Minnesota in the US (Crosby 1974), and the consensus conference in the

context of parliamentary technology assessment in Denmark (Joss/Durant 1995). The doing of these early versions of citizen panels was embedded in local networks, inspired by general philosophical ideas, intuitions about what was needed, and experience of what may work in practice (Vergne 2010). Even if articulated as general methods, the procedures of participation that were practised were not theorized and did not correspond with a particular theory. While methodical approaches were supported by credentials like academic titles and by some philosophical reasoning, they tended to be appealing more for normative reasons and because they signalled organizational capacities to do citizen participation as a service.

For the first wave of proliferation, this epistemic and technical openness was helpful. When participation became subject to hype in the 1990s, this allowed procedures to be mobilized and flexibly adopted for application in other political contexts, to other issue areas, and by other actors. The field of participatory governance practitioners rapidly expanded. During the 1990s, citizen panels spread along with the rise of a transnationally operating industry of professional organizers that included established public relations and market research institutes. They picked up on citizen panel methods to serve a growing demand for organized public participation. Citizen panels were particularly sought after for technological projects that risked being blocked by public protest (e.g. in relation to nuclear power and biotechnology) and by decision bodies without representative legitimation like the EU and international regimes, but also by governments in China, or private governance initiatives.

But the proliferation of citizen panels brought up serious concerns about the methodical reliability of exercises. It gave rise to a critique related to manipulation and raised public distrust of results. This worked to undermine their performance and threatened the emerging market for participation instruments and services. As a result, the making of knowledge about governance shifted gear. In order to consolidate the field by incorporating some guiding principles and to make the functions of particular procedures explicit, projects were started to empirically demonstrate their effectiveness. The design of participatory procedure was turned into a technological challenge concerning how to guarantee the general functions of citizen participation irrespective of the issues, political cultures, persons, or other situational circumstances involved.

This new development included burgeoning research to classify and evaluate situated practices. As 'democratic innovations' (Smith 2009; Geissel/Newton 2011), they were abstracted and aggregated for systematic surveys, comparisons, and databases, as well as for explanations and evaluations of their effects (Rowe/Frewer 2000; OECD 2001; Elliott et al. 2005; Fung 2006). This brought the methods together under umbrella terms like 'citizen panels', 'deliberative forums', or 'mini-publics' (Hörning 1999; Brown 2006; Goodin/Dryzek 2006; Hendriks 2006). Linked to such labels were comparative schemes and case depositories.

Around 2000, citizen panel practices started to become embedded in a transnational design discourse and in the infrastructure of research institutes and service providers, conference series, websites, journals, and professional organizations that connected citizen panel practices across the world. The development of abstract design knowledge started to take shape as a separate task, distinct from the doing of participation in particular situations.

In addition to orchestrated efforts at consolidation and standard setting in several projects funded by the EU (e.g. PATH 2004–2006; CIPAST 2005–2008), the practice of doing citizen panels became linked up with the theory of deliberative democracy (Dryzek 2000; Smith/Wales 2002). While there were sporadic linkages before, they were now developed for a socio-technical innovation agenda, which sought to experimentally test and develop theoretical claims. Deliberative democracy provided a model of deliberation to enhance public reasoning and elicit what must be regarded as the true public opinion (Grönlund et al. 2014). The link provided advocates of citizen panels with a theory. And it gave advocates of deliberative democracy a practice field to demonstrate its relevance as a 'working theory' (Chambers 2003), as well as ample case material for an 'empirical turn' in deliberation research (Carpini et al. 2004). The approach was to put 'Habermas in the lab' (Sulkin/Simon 2001) and take experimental evidence as a basis for establishing design standards and regaining public trust.

In effect, the combination of citizen panels with deliberative democracy constituted a new technoscientific approach to the design and implementation of participation methods (Laurent 2009; Bogner 2012). A division of labour emerged. Some locales, like transnational expert bodies, EU projects, research institutes, and consultancies, took on the task of developing citizen panels as a generic method of participation. Experts in participation came to occupy a central position from which they circulated concepts and tools for configuring participatory practices to other locales (Chilvers 2008; Laurent 2009).

Reflexive engagement with technologies of participation

Those efforts co-evolved with political coalitions and were supported by the political authority they could generate (e.g. EU-funded research and networking projects). But the epistemic construction of political order did not remain unopposed. It also gave rise to a political countermovement. Contestation was not only in the form of competing epistemic claims that attacked the functionality of specific designs, but it addressed the basic approach of scientizing and standardizing political agency and the formation of public opinion. It challenged the attempt to epistemically define what legitimate political agency was to be.

Towards the end of the 1990s a discourse took shape that problematized the 'technologizing of democracy' (Levidow 1998) and the establishment of a new class of 'experts of community who invent, operate and market' devices

for eliciting communal values (Rose 1999, 189). One of the main concerns was that these methods construct particular types of citizens and publics (Irwin 2001; Wynne 2006, 2007; Lezaun/Soneryd 2007; Braun/Schultz 2010) – and that they conceal their political performativity by objectifying methods of participation as a matter of technical functionality and expertise. This discourse problematized an emerging technocracy of democratic procedure, which turned democratic representation from a matter of concern into a matter of fact (Braun/Schultz 2010; Bogner 2012). This was linked to more fundamental reflections on the artificial creation of publics and citizens in any particular procedure for public participation, and on the impossibility of engaging citizens in a neutral way (Gomart/Hajer 2003).

In addition to a critical academic discourse, the attempt to establish a dominant design based on deliberative democratic theory prompted the development of more empowering variants of citizen panel procedures, like a do-it-yourself citizens jury for citizens to articulate concerns and organize activities of engagement on their own initiative (PEALS 2003; Wakeford et al. 2004). It also prompted direct protest against the deployment of allegedly neutral technologies of participation. A pronounced example was a strategic campaign by the radical protest movement 'Pieces et maine d'Oeuvre' (PMO) to disrupt public participation on nanotechnology in France (Laurent 2011). PMO problematized organized events like citizen panels and other procedures as a project to create a 'machine man in a machine world' (Laurent 2011, 426) and made several attempts to sabotage participatory procedures and undermine their working of as 'both a (social) scientific model, and a political one' (Laurent 2011, 431). More formal approaches to technology assessment were also undertaken, such as a constructive assessment exercise on the innovation dynamics of citizen panels and possible future repercussions (Mann et al. 2014; Voß forthcoming).

Academic discourse, protest action, alternative designs, and dedicated assessment exercises all problematized the epistemic construction of political order. They questioned the neutrality of the scientific representation of publics, how they are formed, and what their collective interest is. They thus exposed the subtle power of any attempt at functionally optimizing the political process and socio-technologically controlling political agency. They partly positioned methods of public participation as a strategy of domination and, in line with that, created a collective interest in resisting them and mobilized collective agency to prevent the model of governance being realized. Alternatively, they sought to articulate a reflexive approach to deal with the power of methods by explicating their epistemic performativity and making their design itself a public issue (Chilvers 2013; Pallett/Chilvers 2013; Voß forthcoming).

Epistemic constitution building is politically contested

In the case of citizen panels and the modelling of processes to produce 'public views', the epistemic construction of political order concerns factual conditions

of effective political representation. Participation methods describe particular ways in which citizens participate in the articulation of publics, the production of legitimate representations of a common will, and thus the generation of political authority. Epistemic performativity thus comes to work on the felicity conditions of political performativity.

Our quick rush through relevant episodes of the innovation journey indicates, however, that the encroachment of technoscientific reality-making on the fundamental premises of politics and political agency did not remain uncontested. We can instead see how the epistemic performativity of functionally modelling the articulation of public will was counteracted with the articulation of collective interests in relation to those models themselves. Along with increasing efforts to epistemically standardize public participation, practices took shape to represent the making of methods itself as a matter of collective interest and a public concern. Here then, political performativity not only worked in convergence with epistemic authority (which is also apparent as political practices supported the epistemic construction of citizen panels, for example, in commissioning experimental applications, research, and professional networking), but we see here how the representation of collective interests can also counter the generation of epistemic authority and undermine the dynamics of scientific reality-making. This case indicates that an increasing role of science in governance will not necessarily be the end of politics, but that it may bring about new forms of collective interest articulation with regard to the 'infragovernance' of establishing authoritative knowledge about governance (Voß/Freeman, this volume, p.5). The 'infrapolitics' of modelling governance may be made public – and turned into explicit politics (Latour 2007).

Conclusions

The realizing of instruments comprises both making them known and bringing them into existence. The cases here portray different patterns in which epistemic and political performativity intertwine. Instruments of governance are made both in the experimental reconfiguration of objective reality, as part of their representation in science, and in the mobilization of collective interests, as part of political representation. Dynamics of governance research (and success in establishing facts about governance) and political coalition building (and success in mobilizing collective agency) feed into each other. But epistemic and political performativity do not necessarily work in concert. Representations of objective reality and collective interests may undermine each other in their reality effects. Certain forms of political science co-evolve with certain forms of politics as they co-perform *and* counterperform certain realities of governance (for yet another case see Voß 2014).

This is relevant, because it means that instruments of governance cannot be attributed a cause either in science or in politics. Neither do they exist

either as knowledge or as power. They incrementally grow as joint processes of epistemic and political authority building. Evidence based on data from experimental implementations is tied up with capacities to mobilize agency for the purpose of reconfiguring governmental practices. If understood in this way, instruments are not just discursive or cognitive constructs; they have a material existence. Instrumental knowledge of governance is embedded in and constitutive of a set of aligned practices, skilled bodies, specifically configured tools, supportive data, and organizational infrastructures (Voß/Simons 2014).

By using the concept of performativity, we conceive of instruments as politico-epistemic cultures that do a specific reality of governance. Innovating instruments, then, is a process of articulating and expanding the space in which this particular reality is cultivated. It not only proceeds in staged moments of choice and utilization, but also includes the entangled practices of performing epistemic and political representations that pave the way for the establishment of instruments as functional options and the development of collectives that want them and have agency to do them.

We thus come to see knowledge of governance and political power as two facets of a single historical process of collective ordering. There is some resonance here with the notion of power/knowledge from Foucault and its development in governmentality studies (Foucault 1980). But a performativity approach as developed in STS, and in the further elaboration of ANT, focuses on the distributed, interactive, contested, and contingent processes of building material–semiotic orders. Rather than revealing epochal orders of discourse, our studies describe the epistemic construction of political order as an ongoing process of making, remaking, and contesting representative claims in relation to objective realities and collective subjects. The focus is not on governmentalities that are already made and how they are at work, but on governmentalities being assembled and in the making.

Finally, the performativity approach highlights a paradox related to the view of instruments in political science. The performativity approach shows that functionalities are artificial orders that are invented, negotiated, and experimentally configured in the process of becoming known. As part of this process, the actual complexity of enmeshed, entangled, blended, and mutually including practices of governing is selectively reduced. In order to describe governance scientifically, the majority of the interactions, dimensions, and entanglements that constitute governance 'in the wild' need to be excluded or analytically purified. Moreover, in order to render human agency knowable, it has to be modelled in a way that makes it calculable. Functional models are artificial orders that are made in a process of social interaction that is hugely underdetermined by the world as it is, but full of agency, decision, and contingency. Such knowledge is never neutral or value free. It is the result of negotiations among experts about how they want the world to be ordered, and the product of these experts trying out in protected spaces how it can be made to work. This has two important implications.

First, the production of knowledge goes along with the production of ignorance (Wehling 2006): Anything that does not add to the functional model is excluded from consideration. Making governance known in any particular way paradoxically goes along with reduced capacities to perceive complexity, broader interactions, recursivity, and creative agency. Realizing instruments may thus be understood as a mode of world ordering that is productively blindfolded. But it is only productive with regard to the accomplishment of a narrowly defined function, and only in the short term. As actors seek to expand scientifically reduced and purified orders, the process generates 'side effects', 'externalities', and 'collateral realities' (Law 2012). When non-modelled repercussions accumulate, they may in the long term even undermine the narrowly defined function of the instrument. Promising solutions may thus become a source of new problems.

A second implication is that the making of instruments must be understood as a site of politics. It is a transformative process. The making of instruments entails decisions on collective life; it sets out trajectories of world ordering. Unlike programmes of collective order that are presented as political proposals, however, the articulation of instruments evades public contestation and democratic decision by claiming to neutrally represent given functionalities. Designing and experimentally testing instruments so appears as humble learning from nature rather than a laborious remaking of political orders.

Instrumental knowledge about governance is thus inherently problematic. It is connected with fundamental problems of science and technology that accrue from producing reduced and simplified world orders in 'secluded research', which are then re-inserted into the thick of social and ecological interactions. It may be said that, just like other socio-technical innovations (Callon et al. 2009), governance instruments require specific forms of reflexive engagement to constructively assess the wider consequences and political implications of instrumental knowledge agendas.

Notes

1 The instrumental orientation is most obvious when it is highlighted in terms like 'policy instruments' (Woodside 1986; Linder/Peters 1989; Bemelmans-Videc et al. 1998; Peters/van Nispen 1998), 'tools of government' (Hood 1983; Salamon 2002), or 'technologies of governance' (Swyngedouw 2005; Shore/Wright 2011). But it may also be found in the articulation of functional models of governance which are presented as 'mechanisms of governance' (Williamson 1999) or 'modes of governance' (Treib et al. 2007). Also, functional models of whole political systems (Easton 1979 [1967]) and types of democratic constitutions (Lijphart 1991) exhibit characteristics of instruments as discussed here.

2 Performativity concerns all kinds of cultural products such as words, gestures, icons, designed artefacts. The concept highlights that they do not refer to a pre-existing reality, but it draws attention to how making and using them brings particular realities into existence. There are obvious examples, like a priest at the wedding altar uttering 'you are married'. But there are also more subtle, complex, and materially diverse ways of talking and signalling realities into existence. Performativity is

studied to be at work in the appellative dimension of speech acts, the bodily performance of gender, the raising of microorganisms and elementary particles in the laboratory, the actualization of visions of technology, the enactment of certain types of people and social orders, and even the reflexive constitution of self (Foucault 1974 [1966]; Austin 1975 [1962]; Butler 1988; Hacking 2002; Latour 2013).

3 There are links with a wider a tradition of constructivist social science, where reality is studied as being made in and through interpretation and symbolic interaction (Goffman 1959; Berger/Luckmann 1966; Edelman 1988). But performativity emphasizes two aspects that are not always central to constructivist research (Hacking 1999). This is, first, the material and practical dimension of reality construction: Knowledges may be performative without being communicated, understood, and consciously believed (e.g. when they are habitually enacted by trained bodies or when they are inscribed in artefacts and infrastructures that afford specific forms of engagement with them). The second point is an explicit concern with the ontological status of performed realities. Performativity studies are concerned with the enactment and material actualization of knowledges. The 'reification' of social practices is not only a matter of 'false consciousness' where the social construction of reality is simply 'forgotten' and can be opened up again with a gentle reminder by sociology (Berger/Pullberg 1965). Reality-making is rather understood as the incremental growing and stabilizing of specific ways of knowing and materially doing the world. Realities start somewhere locally and may then gradually expand (e.g. from a laboratory, a pilot project, or a subculture). A crucial point is that different realities are not only a matter of 'standpoints' and partial 'perspectives'. As the world is engaged with in different ways, in practice there are indeed multiple realities (Mol 2002). Knowing the world, this way or that way, is thus always a decision for making the world, this way or that way. There is 'no innocence' in knowing (Law/Urry 2004).

4 Case studies are based on research in the Innovation in Governance Research Group. I acknowledge cooperation with all my colleagues involved in this endeavour and generous funding by the German Federal Ministry of Research and Education (grant number 01UU0906). Empirical work on emissions trading was carried out in cooperation with Arno Simons (Simons/Voß 2014; Voß/Simons 2014; Simons forthcoming), on citizen panels with Nina Amelung (Amelung 2012; Voß/Amelung 2013). It comprised a review of academic literature and process documents as well as 45 interviews with people who were involved in the making of those instruments in different roles.

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7

Translating Participation: Scenario Workshops and Citizens' Juries across Situations and Contexts

Linda Soneryd and *Nina Amelung*

Introduction

The starting point of this chapter is recent growing interest in and criticism of public participation instruments, that is, ready-made designs for conducting dialogue with stakeholders or the general public. Several participation instruments emerged simultaneously as the idea of 'good governance' based on participation and deliberation gained ascendency. Participation instruments have been praised not only by practitioners and policymakers but also by social scientists for how well they function in overcoming expert–lay divisions and preventing technocratic decision-making, and for how easily they travel to new settings. Recent criticism has emphasized the irony that these instruments can in fact impose an extra layer of technocracy: by being carefully designed and increasingly professionalized, they can alienate the public to whom they are intended to give a voice. This chapter will discuss two such participation instruments, 'the scenario workshop', as developed by the Danish Board of Technology (DBT), and 'the do-it-yourself citizens' jury', as developed and used by the Policy, Ethics and Life Sciences Centre at Newcastle University (PEALS).

In this chapter, we will analyse these two examples as cases of translation. The first case examines how elements of the 'future workshop', developed as a tool to encourage grassroots involvement, become entangled with those of the 'scenario workshop', a method used in participatory technology assessments. The second case examines how the reaction against top-down government and academic approaches to participation via citizens' juries became a vehicle for the development of the 'do-it-yourself citizens' jury', a tool that emphasizes a citizen-led bottom-up approach. We suggest that growing interest in participation instruments should be studied as an object in its own right. One way to do this, we argue, is to analyse participatory instruments as continuously involved in processes of translation. We favour a notion of translation that both takes into account the fact that translation always involves shifts in meaning (cf. Freeman 2009) and creates new links

between entities and agents that modify these entities and agents (Latour 1991). Depending on their local application, our analysed participation instruments potentially draw on different representations of participatory governance, which in turn rely on different imaginations of the public and its role in planning and decision-making. Ready-made participation designs embody particular values as well as abstract notions of 'participants', 'citizens', 'public deliberation', and so on, and can be seen as tools for engendering new forms of socio-technical relationships (Lezaun/Soneryd 2007). Their normative potential to put such values into practice, however, does not arise from the ability of these designs to manipulate abstract categories, such as 'stakeholders', 'citizens', or 'experts' (categories imbued with different meanings in specific ready-made designs); instead, it arises from the complex and unpredictable mixtures generated when people put the designs into practice (cf. Garrety/Badham 2004).

The main focus in the comparative analysis of our two cases is on translation in the first sense mentioned above, that is, the shifting meanings of 'participation', 'citizens', 'experts', and so on. The dimensions we include in our analysis are as given: (1) The problem definition itself, that is, to what problem is 'the participation instrument' thought to be a solution? (2) How do conceptualizations of participants and public participation change when ideas and elements of a participatory design are combined in new ways?

In discussing the relevance of our analysis to knowing governance, however, we draw on notions of translation in the second sense as well, which implies a radically relational approach to governance. This means that neither the objects of governance nor the actors involved in governance can be seen as given entities, but rather as constantly transformed through their relationships. In the studied cases, this means that the pressure on organizations to increasingly engage with publics not only is embedded in shifting discourse, but also entails the active shaping of devices and transformation of agents when they act to meet such demands. We primarily discuss this notion of translation in the concluding section of this chapter.

Processes of translating and stabilizing public participation instruments

Social scientists have in various ways contributed to the emergence of numerous mechanisms for facilitating citizen engagement in science, technology, and environmental issues (Burgess et al. 2007; Fishkin 1991; cf. Chilvers 2008). The recent widespread interest in publics and public dialogue has been criticized, sometimes by the same scholars who have been dedicated advocates of extended dialogue between experts and laypeople (cf. Irwin 2006). This criticism by social scientists has sometimes been described as a criticism of instrumental uses of public engagement mechanisms, suggesting that there are other more authentic ways to follow the advice of social

scientists regarding how to engage with the public. Social scientists have tended to treat the expansion of organized public engagement initiatives as 'mere talk', 'business as usual', and as the efforts of dominant institutions to legitimize already made decisions.

If we want to understand changing conditions for governance, we need to treat this growing interest in public engagement instruments as a research object in its own right and potentially as a new organized space that changes the conditions for governance. The language of science and technology studies has now been 'reconstructed as the language of policy' and the need to take social concerns seriously now 'represents a standard part of the policy repertoire'; (Irwin 2006, 300).

The shift described above has resulted in academic discussion of the need for new analytical perspectives differing from previous ones that emphasized, on the one hand, developing normative criteria for evaluating initiatives to improve interactions between experts and laypeople and, on the other hand, criticizing the inadequacies of such initiatives. Among the suggested new approaches is Irwin's (2006) proposal to consider how a combination of 'new' and 'old' elements of scientific governance are symptomatic of changed science–society relationships in which, for example, the old cognitive deficit has been replaced with a new trust deficit. Marres (2007) argues that a commitment to scientific democracy, at least if such commitment results in the formulation of abstract rules for democratic processes, is difficult to combine with other commitments within science and technology studies, such as the study of practice in the making. Marres suggests paying less attention to formal engagement processes and more attention to the wider processes of issue formation and how these bring publics into being. There has also been a call for greater attention to processes of co-production. For example, Chilvers and Evans (2009, 359) point out that 'social scientists are just as much part of the extended science–policy interface as any other actor, and are involved in and influence the very networks and assemblages they study'. In addition, some studies criticize participation instruments as involved in constructing certain versions or imaginaries of publics at the expense of others (Bogner 2012; Braun/Schultz 2010; Felt/Fochler 2010; Irwin 2001; Laurent 2011; Welsh/Wynne 2013).

We suggest yet another approach, not opposed to the above, but attending to the way knowledge of how to engage with the public and stakeholders travels, transforming meanings of public participation in practice. Doing this entails also considering the carriers of such ideas and how these ideas are packaged into participation instruments that can travel across institutions and political contexts.

An approach that is attentive to translation fosters a better understanding of the dynamics of institutional change. We argue that there is a need to look more closely at those promoting and using ready-made designs for public participation and at how such designs are packaged into objects that can

travel (Czarniawska 2014). When ideas about participation are packaged into participation instruments, they largely take the form of text-based objects, such as handbooks, guidelines, books, and reports, that carry instructions for how to perform participatory events and how to evaluate their results (cf. Chow/Leiringer 2014; Tummons 2010). Furthermore, an approach that focuses on translation rejects the idea of a clear-cut distinction between, for example, users and suppliers, as the point is that all the entities entering into a new relationship are transformed through it; translation is thus not a linear process of reception, rejection, resistance, or acceptance (Latour 1991, 116).

As stated in a previous section of the analysis, we use the concept of translation primarily to capture the dynamics of shifting meanings. When discussing the wider relevance of a translation approach, we argue that it is not only the participation instruments themselves that change as objects that can travel to new contexts. Participation instruments can also become deeply involved in constituting new identities and agencies in participatory governance. When ideas travel across time and space, this always involves processes of translation, which go beyond mere linguistic interpretations and involve 'displacement, drift, invention, mediation, the creation of a link that did not exist before and that to some degree modifies two elements or agents' (Latour 1994, 32).

Ganuza and Baiocchi (2012) use the concept of translation to illustrate how participatory budgeting can become entangled with local administrative reform efforts, and to demonstrate that what travels are those elements of a device that actually can travel, in the sense that they can be decontextualized from a particular time and place. This is also how Czarniawska and Sevón (1996) connect the travel and translation approach to organizational change. Devices that have started to circulate and become recontextualized in new settings can be seen as 'mediating between the local and global time/spaces' (Czarniawska/Joerges 1996, 23). The two cases presented here exemplify participatory devices that have started to move, that are recontextualized and reconstituted, and that connect problematizations of participatory governance from different sites and times with each other.

Background to the two cases of participation instruments

The selected cases, that is, the scenario workshop and citizens' juries, were chosen due to the recognition they have received as instruments that 'travel well' and due to their radical transformation of the related meanings of public participation. Before we analyse the cases in more detail, we will first briefly introduce them. Our cases exemplify designs for deliberative procedures categorized in related clusters of typologies of deliberative democracy as 'deliberative forums' (Fung/Wright 2003) sharing certain generic features; that is, they assemble small groups, deliberate for short periods, and produce final recommendations or action plans for public decision-making.

These typologies derive from a functional perspective and the designs have been articulated and used in practice with various differences in their ideas, values, and implementation. Our analysis is based on handbooks on these designs, on policy documents and documentation of the uses of future workshops, scenario workshops, citizens' juries, and DIY citizens' juries, and on interviews with key actors.

The 'future workshop' (or *Zukunftswerkstatt*) was developed by philosopher Robert Jungk in the 1960s in Germany. Its basic idea was to gather citizens in discussions about the future, and to encourage efforts to make these envisaged futures real. Inspired by the future workshops, the DBT developed the 'scenario workshop' in the early 1990s. The future workshop emerged at a time when grassroots involvement was flourishing and was part of that movement. In contrast, the DBT was an established advisory body to the Danish Folketing and had the specific task of enhancing public debates on technological developments in Denmark.

Ida-Elisabeth Andersen at DBT, who developed the scenario workshop, had been studying Jungk's work in the early 1980s in her previous profession, university teaching: 'He received great attention in Denmark during the 1980s . . . I brought the ideas with me to DBT. When we started working on the theme "future ecological housing", we all agreed that future workshops were very exciting' (Interview, DBT).[1]

The scenario workshop was developed by the DBT, inspired by the Jungkian future workshop, and similarly it uses three phases in organizing public deliberations: a critique phase (although in the scenario workshop version this entails critical discussions of predefined scenarios for, for example, energy policy, ecological housing, and climate change), a fantasy phase, and an implementation phase.

Apart from Andersen's previous personal experience of conducting future workshops before she started to work at the DBT, the DBT had two main motives for developing the scenario workshop in the way it did. First, the DBT was searching for a method to use in longer-term projects to foster citizen involvement throughout the process extending from initial ideas to final implementation. Second, the DBT was tasked with engaging citizens in discussions of technology, so predefined scenarios were added 'to make sure we would stimulate discussions that would focus on technology' (Interview, DBT). In the 1990s, when it started to take an interest in participation instruments, the European Commission (EC) initiated scenario workshop pilot projects. Officially called the 'European Awareness Scenario Workshop', it is the only method developed by the DBT that has become a registered trademark.

Like the scenario workshop, the 'citizens' jury', as articulated and implemented by the Institute of Public Policy Research (IPPR) in the early 1990s, is an offshoot of initiatives taken in the late 1960s and early 1970s. The citizens' jury emerged in the UK from two different origins. In the early 1970s

in the USA, political scientist Ned Crosby, inspired by the court jury, came up with the idea of a panel of citizens that deliberates on an issue of public concern, invites expert witnesses to broaden participants' understanding, and concludes by presenting final recommendations to policymakers. At the same time, sociologist Peter Dienel and his colleagues developed a similar approach called the 'planning cell' in Germany that was used mainly in urban planning. In both contexts, the development can be seen as prompted by ascendant social movements demanding more participation and by a desire to provide procedures to channel this demand in a way that could be productively linked to established decision-making procedures.

At the time when both the DBT and the IPPR initiated their versions of the scenario workshop and the citizens' jury, respectively, citizen participation was still in an experimental phase. In the 1990s, interest in such initiatives was growing and participation subsequently became institutionalized as 'good governance' in the area of environmental decision-making and science and technology. The year after the first scenario workshop was organized, in 1994, the EC, which had increasingly started to display interest in public participation methods, invited the DBT and other organizations specializing in various participation methods to present them. Based on this meeting, the EC later developed the scenario workshop into one of its own participatory instruments, to enhance participation in urban planning.

In the late 1990s and early 2000s, controversies concerning technological developments, such as genetically modified (GM) food and the *bovine spongiform encephalopathy* (BSE) scandal demanded new approaches to increasing political legitimacy in a climate of decreasing trust in politics and science. In the 1990s, the 'New Labour' government in the UK advocated changing the former style of politics and supported new participation initiatives, and the DBT gained a worldwide reputation for its methods.

When the 'do-it-yourself citizens' jury' was developed in the early 2000s, it explicitly opposed the institutionalization of participation through government-led initiatives in general and through public authority – and state-led citizens' juries in particular. Tom Wakeford and his colleagues from PEALS came up with a new version of the citizens' jury, adding the 'do-it-yourself' (DIY) prefix to signal support for citizens' initiating their own citizens' juries. While the IPPR model had been developed for policymakers and several national policy issues, the PEALS version was developed for local community groups and citizens to be used for local community issues.

We approach our two cases of translated participation at somewhat different points in time, as the future/scenario workshop connections were made in the early 1990s whereas the DIY citizens' jury emerged in reaction to the top-down approach to citizens' juries almost a decade later, in the early 2000s. In both cases, the key actors involved in developing these participation instruments highlighted the crucial role played by text-based objects for the translation to occur in the first place, notably, a book on future

workshops (Jungk/Müllert 1987) and IPPR publications on the citizens' jury (Coote/Lenaghan 1997; Stewart et al. 1994). These objects conveyed some of the logics and designs underlying the participation instruments that some of our interviewees were involved in developing. More important, however, was previous experience and implementation of future workshops and citizens' juries. In the case of the scenario workshop, the developer Andersen had her own experience of facilitating future workshops, which she used as inspiration when designing the scenario workshop. In the case of the DIY citizens' jury, the developer Wakeford was reacting to how the citizens' juries had been 'misunderstood' and 'misused' by the UK government (Interview, Wakeford).[2]

The two cases we have chosen to analyse have also travelled via routes other than those examined here. For example, apart from being taken up by the DBT, the future workshop has especially spread in educational contexts in Germany and Austria, where a network of future workshop facilitators was established, but also to other European countries and to the USA. Similarly, the citizens' jury has travelled to institutional contexts other than the one explored here. It has been implemented several hundred times in the UK and has inspired imitations in other countries, and the large range of implementation practices has spawned a wide variety of design interpretations.

The translations of participation instruments into new contexts

Some governance ideas become popular and powerful not because of any intrinsic properties but because of how they have been formulated and packaged and because of who disseminates them (Djelic/Sahlin-Andersson 2006). In analysing our two participation instruments, we first focus on some very general and abstract ideas discernible in previous versions of the designs and picked up in later versions, such as 'empowering citizens' and 'the need to improve decision-making'. These general ideas will be attached to different meanings depending on the contexts in which they are applied. We then analyse how such ideas, together with their associated design elements, and different conceptualizations of current problems, produce different imaginaries of the participants and public participation. The following analysis is thus not solely bringing forward the linguistic aspect of translation. How participation is made sense of in the two cases is due to how ideas are packaged into text-based objects that have circulated and translated across organizational boundaries as well as different political situations and contexts.

Shifted meanings of participatory governance

Dialogues to make desired futures real

The future workshop and the scenario workshop are both designed to encourage participant involvement in decision-making that affects future societal

development. Both models are motivated by the idea that those who express their 'desired' futures should also be involved in making those futures real.

The basic ideas of the future workshop (or *Zukunftswerkstatt*) were influenced by Robert Jungk's own engagement in the peace movement and anti-nuclear activism. From the standpoint that the future belongs to everybody, Jungk and Müllert (1987) outline the many ways citizens' opportunities to influence future developments are circumscribed in contemporary society. The way that the future workshop tackles the limited opportunities for participation is not to wait for the decision-makers, but rather for citizens to create such opportunities themselves: citizens need to take initiatives, but need help in doing so. People need to abandon their 'passive resignation and start to see themselves as active participants in local, regional, national and international events' (Jungk/Müllert 1987, 13).

The future workshop aims to empower citizens, gradually taking participants from apathy to action. To make participants' suppressed imaginations start to flow, the future workshop presents a psychological version of the human being that goes as far as to explore the participants' childhoods. In addition, it presents what one could call 'managerial ideas' about how to accomplish things, that is, what tools and facilitation style to use, and to what effect.

A future workshop is publicly announced, which means that anyone who is interested can sign up for it. The workshop is divided into four phases: the first one is a preparatory phase in which participants receive information about the subject, get to know each other, and are introduced to the principles of the workshop; a critique phase follows in which negative experiences relating to the chosen topic are brought into the open; then comes a fantasy phase in which participants elaborate on their own preferred solutions and ideas; finally there is the implementation phase, in which participants assess the chances that their projects will be implemented and draw up a plan of action (Jungk/Müllert 1987, 12).

In contrast, the overall aim of the scenario workshop is to involve a broad set of actors and to promote dialogue across sectors. The assumption that groups and sectors in society have different stakes in the issue that the scenario workshop aims to discuss guides how the interactions between participants as stakeholders in the scenario workshop are organized and differs from the ways people as 'citizens' in contrast to 'governing elites' are invited in the future workshop.

Giving voice to citizens' views on controversial issues

While the future workshop and the scenario workshop both start with a perceived problem and aim to come up with action plans, the citizens' jury is designed to advise policymakers, informing them of citizens' views of controversial issues. It gathers citizens to deliberate on a predetermined topic, invites expert witnesses to broaden participants' understanding, and

concludes by presenting final recommendations to policymakers. Both the IPPR and PEALS versions of the citizens' jury emphasize the ability of the participatory instrument to empower citizens and enrich policy decisions, yet differ in their specific notions of empowerment.

The former deputy director of the IPPR says that, even before the citizens' jury was used as a participatory instrument in the UK, people were using the term: '"Perhaps we should start thinking about citizens' juries", and when I started asking and said, "Well what are they?" nobody knew the answer. And so, it was sort of a, a form of word that didn't have any substance to it in policy, at all' (Interview, IPPR).[3]

The introduction of the citizens' jury by the IPPR was partly in response to an already perceived interest in the method by people outside the IPPR and was not, as in the case of the DBT, related to internal organizational tasks. The reports in which IPPR introduced the citizens' jury also contained a broad and extensive analysis of the current state of representative democracy and the relationship between political decision-makers and citizens (Coote/Lenaghan 1997; Stewart et al. 1994). The introduction of the design therefore touches on a wide range of claims and promises. In their analysis, the authors of the IPPR model cite the shortcomings of representative democracy as the crucial reason why citizen involvement is needed.

The authors of the IPPR model do not believe devices such as opinion polls, focus groups, public meetings, and citizen juries can solve these problems but that they can help to find a new style of democratic politics that aims to foster mutual trust and active citizenship (Coote/Lenaghan 1997, 4). This could create a political relationship between citizens and authorities based on openness, interaction, and mutual respect instead of secrecy, passivity, and mutual contempt, replacing the view of citizens as customers (Coote/Lenaghan 1997, 4).

As mentioned in the previous section, IPPR's introduction of the citizens' jury as a participatory instrument attracted massive media attention and subsequently led to frequent use of the method, particularly in the UK, but also elsewhere in Europe. This frequent use was accompanied by increased criticism of the method. The introduction of the DIY citizens' jury was a reaction to instrumental and manipulative uses of the citizens' jury by the UK government and market research agencies.

The DIY citizens' jury, like the IPPR version, is motivated by questions of democracy and citizen involvement but it engages such issues from a different angle. The DIY version is not about improving representative democracy but about strengthening citizens' rights, particularly those of disadvantaged groups. The inherent normative mission is to improve elements of direct democracy to increase the influence of marginalized groups on political decision-making.

The DIY version of the citizens' jury introduced by the PEALS institute emphasizes the authentic co-production of knowledge and preventing

participants' statements from being reinterpreted by research. Transparency of process is another principle, which is realized by recording the deliberations and interactions within the jury procedure and making the recordings public (Wakeford et al. 2004, 6). The DIY version changes the targeted participants from being a cross section of the general public, as in the IPPR version, to minority groups. The DIY version was not introduced as an alternative to the IPPR version but rather to misapplications of citizens' juries that made 'false' claims of representing public views of given issues. Ideas about democracy and empowering citizens are translated according to both a certain institutional logic and political context, which we will analyse in more detail in the following sections.

Conceptualizations of participants and public participation

In the studied cases, ideas of empowering citizens, improving decision-making, and involving diverse actors in discussions of the future are connected to designs for realizing these ideas through participatory instruments. The ideas that motivate these participatory instruments are related to different methods of formulating the problem or current state. How these methods enact different problem formulations and articulate different societal relationships shape how citizens and public participation are constructed.

Conflictual or dialogical approaches

When the DBT developed the scenario workshop, inspired by the future workshop, it did so in relation to a particular view of societal structural change. While the participants in the future workshop were mobilized primarily through what they had in common versus a 'constitutive outside' that, according to Mouffe (1993, 2–3), is a prerequisite for the political to emerge, the scenario workshop gathers participants because of the different stakes they are assumed to have in an issue, and with the belief that it is possible to overcome such differences and to reach a joint decision.

The threats to achieving the goals of the scenario workshop and the future workshop also differ. To set up a scenario workshop, the DBT says that there is a need to have a 'neutral' organizer, such as the DBT, as any municipal or government agency would be perceived as having an interest in a specific outcome of the event. In the future workshop, it is recommended that any connection between organizers and businesses, governments, and presumably institutions such as the DBT should be avoided, not only because of the threat of bias but also because 'the threat of bureaucratic interference can be considerable' (Jungk/Müllert 1987, 105).

The DBT description of current trends differs from that of Jungk and Müllert (1987), who argue that the boundaries between 'rulers and the ruled' are becoming sharper, while the DBT claims that stakeholders are gaining a greater role in decision-making. In a stakeholder society, the boundaries

between 'rulers and the ruled' are more diffuse, which does not mean that they have equal opportunities to influence policy, but rather that such opportunities are reserved for those who manage to become stakeholders who are recognized as possessing some authority or importance (cf. Tamm-Hallström/Boström 2010).

The overall aim of the scenario workshop is to involve a broad set of actors and to promote dialogue across sectors. The workshop is based on the belief that 'if anything is going to happen, if anything is going to change, then the people, citizens must be [involved] in it, they should want it' (Interview, DBT). The problem of barriers to public influence on decisions is described mainly in terms of 'barriers to dialogue' (Andersen et al. 1993, 12) between different sectors and groups of people who are assumed to have different interests.

Participants are selected because they are stakeholders, and they are encouraged to think as stakeholders. Within the format of the scenario workshop, participants first discuss the issue within their homogeneous groups (e.g., 'residents' or 'technical experts'), which are later combined to enhance discussions across sectors/groups. The different stakes involved in the first scenario workshop on ecological housing were defined by the DBT using the categories of residents, businesses, policymakers, and technical experts, and interests related to these were seen as 'decisive for the preferences for urban ecology solutions' (Interview, DBT).

Considerable work is put into the predefined scenarios: experts on the topic are involved in formulating them and another group is involved in reviewing them to ensure that they avoid biases. A reason for using predefined scenarios in the three workshop phases, borrowed from the Jungkian future workshop, was that the DBT had to ensure that discussions focused on technology, because of its official commission to promote public involvement in discussions of technology. For this reason, the scenarios in the workshop on ecological housing were based on two variables: one concerning technology (i.e., high versus low) and one concerning how the work was to be organized (i.e., collectively versus individually).

The scenario workshop does not start from controversial and complex technology or science, but from a description of societal dysfunctions so as to generate positive discussions of technology and of how technological development could be used to remedy certain problems. By making the involved groups' interests explicit and by putting these groups together in a dialogue with the task of developing action plans, the scenario workshop aims to mitigate situations in which 'interests' influence policy in a way perceived as threatening democracy. This design is based on a view of society in which 'interest groups are considered to be exerting an increasing influence on policy' (Interview, DBT). This view, among other trends and changes in society, is something that the DBT considers when it develops and applies its participatory technology assessment methods.

Participation instruments as tools for empowering citizens or contesting power structures

Both the IPPR and PEALS versions of the citizens' jury relate to explicit understandings of unequal social relationships that the participatory instrument is sought to remedy. The IPPR version of the citizens' jury was developed at approximately the same time as was the DBT scenario workshop, in the early to mid-1990s. It was presented in relation to an analysis of current dysfunctions of representative democracy. This currently dysfunctional democracy was characterized, according to this view, by several features: by distance between the electorate and their elected representatives, by distorted representations because the mass media inaccurately mirror the electorate–representative relationship, by the mistaken identification of citizens as customers, by the lack of dialogue as a two-way process of accountability between authorities and citizens (in addition to regular elections), and by prejudices on both sides – policymakers' assumption that citizens are incapable of dealing with complex issues and citizens' scepticism as to whether their opinions make any difference in decision-making processes (Coote/Lenaghan 1997, 1–3). Governments are in fact in many ways involved in increasing 'distrust, frustration and mounting insecurity' and therefore 'pollute the democratic environment' (Coote/Lenaghan 1997, 4).

The citizens' juries developed by the IPPR are assumed to increase the legitimacy and accountability of governments and are therefore often conducted as citizen consultation processes by state authorities. Because of this, values such as statistical representation in the sense of random selection of participants are of great importance.

To recruit participants, techniques of random selection balanced by the social–structural criteria of social class, age, gender, ethnic background, and housing tenure are used. Two methods for matching these criteria are suggested, although problems are associated with each one. The first method entails visiting and recruiting people door-to-door and on the street until the profile is constructed. The problem with this method is that it reaches only mobile people and those at home. The second method is random selection from the electoral register via letter, though here self-selection by positive response is a problem (Coote/Lenaghan 1997, 71f).

As no selection method can guarantee representativeness, Coote and Lenaghan (1997, 91) speak of 'symbolic representation'. Representation, they claim, is symbolic because of the small number of participants and because no adequate participant selection method is available. This lack of representativeness is taken here as an argument for an advisory rather than a binding role for citizens' jury verdicts.

The approach of the DIY citizens' juries developed by the PEALS institute addresses the problem of unequal/biased social relationships in a quite different way. Obstacles to participation also arise because of the immense number of participation instruments used in an instrumental way, which gives citizens a passive role.

The reasons the PEALS model authors see that participation, citizen involvement, and, in particular, citizens' juries are needed ends in radically different views from those of the IPPR model authors. Two recent trends in political systems, 'the thirst of politicians for political novelty, and their desire to be seen to be good rulers', favour new devices for public participation (Wakeford et al. 2008, 339). Policymaker legitimizing as the main objective of participatory devices then becomes the target of opposition. Rebuilding democratic engagement by means of action-inquiry projects and experiments is attempted through the invention of a new version of DIY citizens' juries that enhances traditional grassroots-based processes of citizen participation and addresses citizens and community groups instead of policymakers (Wakeford et al. 2004, 4f, 2008, 340).

The authors of the DIY citizens' jury concept partly concur with the IPPR view of society, though their analysis of society and the political system ends in a largely different conclusion as to the role participatory devices should play. Agreeing with the IPPR authors on the decline of direct contact between electorates and their representatives, Wakeford and his colleagues shift to a different notion of the role of the mass media. While the mass media are deemed a crucial element in shaping communication, images, and meanings passing between politicians and citizens, government and competing political parties put resources into the skilful use of the media in their interest. Wakeford and his colleagues see the political system as favouring the power positions of politicians upholding the mainstream view of citizens at the expense of citizens' rights, particularly those of minority groups. The power constellations therefore must be supported by empowering citizens' rights, and the contribution of the PEALS vision to the participation field is seen as contradicting the traditions of state-led policymaking. Instead, bottom-up participation needs to be strengthened in reaction to top-down participation in officially sanctioned citizens' juries (PEALS 2003).

In the IPPR version of the citizens' jury, citizens are easily shaped into the means by which the whole process leads to final 'substantial and confident recommendations' to be taken seriously by the commissioning body. This functionalist view of citizen participation puts pressure on the instrument's design, the role of moderators, and the citizens themselves. The instrument's design and the citizens' role in the process have to prove themselves capable of dealing with complex issues and of producing recommendations for policymakers. The focus lies on the efficient and effective process of citizen consultation. This output-oriented view of the relationship with the commissioning body structures the whole procedure, even though the commissioning body is reminded that it should expect recommendations that it may not like. In this context, the role of the moderator and the facilitators is crucial.

In summary, the future workshop and the DIY citizens' jury both rely on a conflictual approach: citizens are articulated as opposed to governing elites and the participatory instruments are mainly intended to empower citizens

to make their voices heard. In contrast, the scenario workshop and the IPPR version of the citizens' jury are based on a consensus approach, that is, the belief that gathering citizens and experts in dialogue is a way to resolve conflicts. In the future workshop and DIY citizens' jury, participants are seen as citizens who should be empowered in their political engagement; in the DIY citizens' jury, citizens who are members of minority groups are especially targeted, while the future workshop seeks to emancipate an entire oppressed citizenry. The IPPR version of the citizens' jury and the scenario workshop instead construct a 'scientific citizen', that is, participants who can, with the right assistance and facilitation, deliberate upon complex matters and substantially contribute to decision-making. Both are output oriented, in contrast to the future workshop and DIY citizens' jury, which place greater emphasis on the emancipatory potential of participation.

The carriers and institutional contexts

In the present cases, different types of carriers package ideas in particular ways through the designs of participatory instruments. The success of these instruments, that is, how well these ideas and designs are received, also depends on the institutional contexts of these carriers. Djelic and Sahlin-Andersson (2006, 67ff) distinguish between different categories of carriers: organizational carriers are understood broadly in terms of classical organizations and networks or meta-organizations; in the present context, the IPPR and DBT exemplify organizations, while the future workshop and the DIY citizens' jury are not associated with single organizations. Djelic and Sahlin-Andersson (2006, 67ff) also speak of normative and symbolic systems as powerful carriers of ideas, because they can obtain the status of unquestioned 'truths'. Ideological frames or institutional 'myths' can thus shape behaviours and interactions in unexamined ways. For example, when the former deputy director of IPPR said that 'citizens' juries' was a term people used – 'it was in the air' – it exemplified how concepts may at first exist simply as words that become widely used, and only later become anchored in routines and practices. The normative scheme associated with the term justifies the implementation of such routines and practices, and the implementation, in turn, further stabilizes the concept and the normative scheme.

The focus new institutionalist studies place on organizational carriers can be said to correspond to the focus on devices, such as computer programmes, indexes, and technical objects in Actor-Network Theory (Fries 2009). In our cases the most obvious devices are the text-based objects such as guidelines, handbooks, and reports that are circulating and put into practice. Factors accounting for why some ideas succeed and others do not include whether an idea is presented as a 'product' or as a simple message that is easy to understand and use, and the timing of the idea's emergence, that is, whether the idea is presented as something new, modern, and future oriented, providing an answer to problems of our time (Røvik 2002, 142). To be successful,

an organizational idea needs to be linked to central values of modern society, such as rationality, efficiency, innovation, development, democracy, individuality, or justice (Røvik 2002, 115). Both the IPPR version of the citizens' jury and the scenario workshop developed at a time when powerful organizational carriers, such as the EC, were receptive to these ideas and when central values linked to democracy were perceived as threatened. This is not so say that public participation was always motivated by democratic values, as public concerns could also be perceived as threatening continued competitiveness and technological innovation.

The now widely recognized understanding of technological innovation as nonlinear, open, and distributed, and as involving a heterogeneity of actors, has paved the way for recognition of the social dimensions of technical innovation as well as for the perceived need for participatory and inclusive processes for resolving pressing societal challenges (Rip/Schot 2001; Van de Ven et al. 1999). An increasingly complex understanding of innovation processes, however, is not always accompanied by the recognition of a more complex understanding of participation (as including not only diverse actors but also new options for exploration) or of how social and technological dimensions interact and shape technological innovation paths and the resulting political orders.

A regime of 'collective experimentation' is arguably a precondition for a 'vibrant European knowledge society' that can meet social needs in the long run, as it involves shaping new forms of interaction between concerned actors (Felt et al. 2007). Here 'collective' refers not to 'the public' or 'society' in general, but to the interactions between concerned actors, constellations that will vary depending on the issues involved.

How these now widely recognized shifts in the understanding of innovation relate to the shift in governance towards more inclusive and participatory forms has only recently become a focus of academic discussion. In recent years, public participation has become a yardstick for the quality and legitimacy of governance across a host of domains globally. It has emerged as a site of experimentation with models and methods of public policymaking, and a locus for new forms of expertise, institutional design, and commerce.

The future workshop and the scenario workshop as well as the citizens' jury and the DIY citizens' jury were developed in reaction to democratic deficits, but they emerged in very different political contexts with different prevalent understandings of society, individuals, and the preconditions for collective action. Another, and perhaps the greatest, difference is that the scenario workshop and the two versions of the citizens' jury were developed at a time when participatory approaches to technology assessments had already been institutionalized.

Table 7.1 summarizes our analysis. In the next and concluding section, we will discuss the wider implications of this analysis in terms of 'knowing governance'.

Table 7.1 Overview of participation instruments

Participatory instrument	**Future workshop**	**Scenario workshop**	**Citizens' jury**	**DIY citizens' jury**
Problem definition: what problem is the participatory instrument thought to solve?	Enables dialogues to make possible futures real	Involves stakeholders in order to overcome communication barriers	Compensates for shortcomings of representative democracy	Empowers citizens' views of controversial issues
Imaginaries of participants and public participation	Encourages citizens to move from apathy to action Distinguishes between 'rulers and the ruled'; perceives stakeholder interests as threats to democracy	Connects groups to certain stakes/ interests Endeavours to make stakeholders relevant to decision-making	Participants are randomly selected using social–structural criteria that legitimate mini-publics Increases the accountability of governments	Participants rather than policymakers are enhanced and empowered The DIY approach is a critique of the production of new devices for public participation
Text-based objects and organizational carriers	A handbook on future workshops (Jungk and Müllert 1984, published in Danish)	DBT, EC	Leaflets on the citizens' juries (Coote and Lenaghan 1997; Stewart et al. 1994)	PEALS

Stabilizing and diversifying ready-made designs for public participation

As our analysis demonstrates, certain elements of public participation have remained stable, such as the realization of desired futures in the case of future workshops and scenario workshops, and the aim of empowering citizens to articulate their views in the case of citizens' juries and DIY citizens' juries. When public participation instruments are situated in specific local contexts, however, their ideas, values, formal rules, and tools become remixed, giving rise to new meanings. For example, the participant selection and recruitment procedures have changed according to the particular views of publics and citizens and to the particular governance settings in which the participation instruments are implemented.

In relation to ideas connected with public participation, there are various potential organizational carriers: the European Union, consultant firms, research centres, and public authorities or other bodies especially tasked with science communication or participatory technology assessment. It seems important to be sensitive to the power differences between different types of carriers. Although participatory process professionals may have gained a more prominent role (Chilvers 2008), they might not be the most powerful carriers of public participation instruments. What they do and can do, for example, likely depends on funding and on efficient channels for diffusion. Furthermore, when these professionals carry their ideas to other organizations, such as the organizations that employed or funded them, their ideas will be translated and their meanings changed – and in ways that the initiators of a particular design cannot control.

Both versions of the citizens' jury developed as reactions to other instruments used to engage citizens in policy discussions: the IPPR model emerged in reaction to the extensive use of focus groups in the UK and the PEALS version emerged in reaction to the instrumental use of citizens' juries. The DIY citizens' jury, however, must not be seen simply as a critique of the IPPR version, but rather as illustrating how the use of participatory instruments can escape their initiators' control. The increased use of participation instruments should be understood as symptomatic of significant changes in the governance of science and technology and as part of wider institutional changes. The pressure on organizations to be more transparent and deliberative, and to engage with the public and various stakeholders, is embedded in more general discursive and institutional developments. However, these processes do not emerge and develop automatically, as the knowledge of how to meet such demands must be actively shaped and transformed (Czarniawska/Sevón 1996).

The translation processes explored here expose the local, contextual dimensions of participatory instruments as well as processes of their stabilization. Through the differences that both the scenario workshop and

the DIY citizens' juries display in relation to their predecessors, both the old and the new versions have become stabilized. Through the concept of translation, it is possible to emphasize not only the epistemic construction of political order, but also its material dimensions. We would like to end by highlighting two important implications of a translation approach that goes beyond the limited analysis we have presented here. First, processes of translation are at work every time that a participatory instrument is put into practice in relation to a particular issue and context. This means that, for example, when a scenario workshop is held on the issue of climate change adaptation in Denmark, or when a DIY citizens' jury discusses the role of GM food in the UK, translating participation will intermesh with the creation of linkages between ideas, people, and objects related to these issues and contexts. Second, the production of text-based objects that enable ideas about participatory governance to circulate is a continuous process. Formalized participatory events generate a lot of products not only in the form of guidelines and handbooks, but also in the shape of professionals that develop expertise around organizing and facilitating, and the official documentation of participatory events which entail strong scripts for how the events should be interpreted and made sense of. The devices that are able to mediate between local and global time and space are materialized in concrete objects and powerful organizational carriers that can make these devices real by creating new entanglements between people, ideas, and things. How to do this, as our examples show, is never known in advance, but something that needs to be made known again and again.

Notes

1 Interviews conducted by Linda Soneryd, 12 September and 31 October 2007.
2 Interviews conducted by Nina Amelung, 12 and 22 November 2010.
3 Interview with former staff at IPPR, conducted by Linda Soneryd, 10 March 2008.

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Part III

Material Knowing: Documents and Bodies

8

Fact-making in Permit Markets: Document Networks as Infrastructures of Emissions Trading

Arno Simons

Introduction

Around the world, so-called environmental markets are on the rise as a new form of environmental policy. The idea is to govern environmental problems by setting up special markets for environmental bads and goods, such as air pollution, climate change, or biodiversity protection (e.g. Anderson/Libecap 2014; Carroll et al. 2007; Ellerman et al. 2010; Sandor et al. 2014; Tietenberg 2006). By far the largest environmental market today is the European Union's (EU) emissions trading system (EU-ETS). As we learn from the official EU-ETS website, the system is the 'European Union's . . . key tool for reducing industrial greenhouse gas emissions cost-effectively' and 'works on the "cap and trade" principle' (European Commission 2014), meaning that an overall limit (cap) on carbon emissions is divided up into shares (allowances) and allocated to polluters who can then trade these shares among each other and other market participants. The EU-ETS was formally established in 2003 and commenced operation in 2005. Since then, it has undergone a series of trading 'phases', and changes were made to its design. Many observers speak of a real-world experiment in this regard, highlighting opportunities for policy learning (e.g. Callon 2009; Kruger/Pizer 2004). Although the EU-ETS has been under attack by market-sceptical environmentalists for years (e.g. Amigos de la Terra et al. 2013; Lohmann 2006; Spash 2010) and is currently in a state of crisis due to an overallocation of allowances resulting in a low carbon price, it is unlikely that the EU will get rid of carbon trading any time soon. In fact, the EU-ETS has long become a policy exemplar for how carbon markets could (or could not) work in practice and as such inspires the implementation of other carbon markets elsewhere (Betsill/Hoffmann 2009; Hoffmann 2011; Stephan/Lane 2014). This is proudly acknowledged by the EU Commission, stating on the official EU-ETS website that '[t]he success of the EU ETS has inspired other countries and regions to launch cap and trade schemes of their own'.

How does a government like the EU know how to govern through a cap and trade system? This question concerns the status of knowledge about governing in contemporary (environmental) policymaking. While the often ambivalent role of knowledge *for* governing is widely acknowledged and debated – think, for example, of the contested status of the International Panel on Climate Change and their work on defining the climate change problem (Beck 2011) – the role of knowledge *about* governing seems less clear (see introduction to this volume). After all, don't policymakers simply know how to govern as part of their job? Yes and no. As the emissions trading case shows, policymakers tend to make use of policy blueprints, such as the 'cap and trade' principle, which tell them how to design and implement policies. In the context of a more general trend towards the transnationalization of policymaking (Bulkeley et al. 2012; Bulkeley/Jordan 2012; Djelic/Quack 2010; Djelic/Sahlin-Andersson 2006), governing through policy blueprints has become an increasingly accepted, if not indispensable, mode of governing (Peck/Theodore 2010, 2012; Radaelli 2004; Voß/Simons 2014). Governments may feel compelled to work with a blueprint that holds a status of best practice and is used by other governments as well. Policymaking through blueprints thus amounts to a special form of what Miller and Rose (1990, 2008) have coined 'government at a distance': blueprints, by virtue of their cosmopolitan authority, not only shape the conduct of actors without shattering their formally autonomous character – which is the author's original definition of governing at a distance – but they also orient policymaking from outside of the traditional boundaries of jurisdictions.

This then shifts the question to how such policy blueprints are produced and circulated and how they gain authority. There might not be a general answer to this. Policy fields are very different and so might be the production and use of policy blueprints. But it is certainly instructive to take a look at how this is done in the case of 'cap and trade', the blueprint that has oriented emissions trading systems around the world for decades. As this case makes clear, the production of knowledge about governing may take place both inside and outside the traditional confines of government. Intellectual debates about the existence or nature of boundaries between science and policy (Etzkowitz/Leydesdorff 2000; Gibbons 2000; Jasanoff 2004; Weingart 1999) aside, 'cap and trade' can be thought of as a product of science–policy interaction. While cap and trade systems are typically referred to as economic or market-based policy instruments, since they 'harness the powerful effects of economic incentives' (Stavins 1988, 30), they are above all *economics-based* instruments in the sense that they are the creation of economists and the type of actor networks Callon (2007) calls 'economics at large'. As MacKenzie (2009b, 139) highlights, emission markets 'are a quintessential example of a strong form of the kind of process . . . in which economics has done something: its role has not been to analyse an already-existing market, but to help bring a new market into existence'. Callon and MacKenzie

spearhead research on the 'performativity' of economics, that is, the question if and how economics shapes, rather than merely analyses, economic practice (Callon 1998; MacKenzie 2006; MacKenzie et al. 2007). Thus, in analysing 'cap and trade' systems, performativity scholars have focused on the socio-technical work that goes into bringing such markets alive, such as building measurement, trading, or accounting infrastructures (Holm/Nielsen 2007; MacKenzie 2009a, 2009b). However, given their particular research interest, these authors have not given much attention to the role of 'cap and trade' as a policy blueprint and how that blueprint is produced and circulated.

More instructive in this regard are recent studies on the making of environmental markets as a result of interrelated practices of policy modelling and implementation facilitated by the formation of instrument constituencies (Mann/Simons 2014; Simons et al. 2014; Simons/Voß 2015; Ureta 2013; Voß 2007; Voß/Simons 2014). As these studies show, the 'cap and trade' blueprint is not a passive device waiting in a 'toolbox' of government. Instead, it is a condensed knowledge package produced and made to bear in and by a social network consisting of actors from various backgrounds, most notably academia, policy consulting, administration, and business. This chapter contributes to this line of research by focusing on a particular mode of production and circulation of the 'cap and trade' blueprint. It focuses on the dynamics by which knowledge about governance instruments is materially inscribed and stabilized in cross-referencing documents. Mobilizing insights on the social roles of documents from science and technology studies, media studies, and organizational sociology, I explore the notion of document networks at the science–policy interface as infrastructures of the production of authoritative governance knowledge. I argue that documents, especially in networked form, produce a strong sense of extra-local authority and thereby allow for governing at a distance, which as just explained underlies policymaking through generic blueprints. Conceptually, this means elaborating the material dimension of governance knowledge and its relevance for a 'society made durable' as part of an understanding of reality-making as a discursive process relying on documentary communication.

Directive 2003/87/EC as entry point

A decisive moment in the transnational history of emissions trading was the release of *Directive 2003/87/EC* in 2003, the legal document that formally established the EU-ETS 'in order to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner'. *Directive 2003/87/EC* is a good example of policymaking through blueprints. The EU-ETS is presented as a particular implementation of the emissions trading principle within the European Community. Other particular implementations of the emissions trading principle are mentioned as well, for example,

international emissions trading under the Kyoto Protocol or potential trading schemes in EU member states. Thus, while *Directive 2003/87/EC* lays out how emissions trading should be implemented at the EU level, it seems to draw from already established knowledge on how to design emissions trading schemes in general. It mobilizes a policy blueprint.

To make this a legitimate move, *Directive 2003/87/EC* refers to a lengthy policy formulation and consultation process, where the applicability of the blueprint had been positively evaluated. The directive's preamble reads:

> The Green Paper on greenhouse gas emissions trading within the European Union launched a debate across Europe on the suitability and possible functioning of greenhouse gas emissions trading within the European Union. The European Climate Change Programme has considered Community policies and measures through a multi-stakeholder process, including a scheme for greenhouse gas emission allowance trading within the Community (the Community scheme) based on the Green Paper. In its Conclusions of 8 March 2001, the Council recognised the particular importance of the European Climate Change Programme and of work based on the Green Paper, and underlined the urgent need for concrete action at Community level.

Note that two other documents are referenced here: a *Green Paper* and *Conclusions of the Council*, both of which are presented as key discursive events in the process leading up to the release of *Directive 2003/87/EC*. Besides accounting for an official 'paper trail', these references have the purpose of legitimizing the directive, to position it in a discursive setting where a European carbon market appears as a 'suitable' and 'functioning' policy tool. Pointing to these documents in this context is almost like saying: 'You don't believe that the EU-ETS is a good idea? Well, then go and read some other documents that support our opinion!'

Go and read some more documents is exactly what we should do now in order to understand how emissions trading became accepted as a promising policy blueprint. We need to travel along such references, almost as if they were roads in a transport network connecting places of interest. Before we embark on that journey, where we'll use *Directive 2003/87/EC* as an entry point into a network of heterogeneous documents, which, in their interrelations, establish the authority of the emissions trading blueprint, let me introduce a number of theoretical concepts from science and technology studies, media studies, and organizational sociology on the role of document networks in social life and especially at the science–policy interface.

Document networks

While documents are pervasive in most areas of modern life the sociology of documents remains a scattered intellectual landscape. Since Foucault has

elevated the status of documents to that of monuments, claiming that 'in our time, history is that which transforms *documents* into *monuments*' (Foucault 2002, 8, original emphasis), the study of documents as vehicles of discourse reproduction has been central to discourse analysts of various backgrounds (Keller 2005; Prior 1997). Whereas the latter typically analyse the content of documents to trace the emergence and modification of statements or story lines, other traditions have focused more closely on how documents are used as material objects in social interaction. Especially the science and technology studies literature has produced the notion of documents as 'immutable mobiles', capable of exerting force at a distance (e.g. Callon et al. 1986; Latour 1987). Probably most obvious, documents, by virtue of their material properties, facilitate ways of communication across time and space and have thereby changed the scale and pace of human association (Mcluhan 2001). As Freeman and Maybin (2011, 160) point out, in the political domain this has allowed for new modes of control 'at a distance':

> The physical properties of policy documents extend the scope and reach of governments in space and time. Their material inscription means that a standard message can be communicated to numerous public servants in numerous and often distant locations, coordinating their actions.

Organizational ethnographer Smith (2001) has similarly stressed the ability of documents to produce, by virtue of their material properties, a sense of 'extralocality' and 'standardization', essential for modern social organization. 'It is the constancy of the text that provides for the standardization effect', she notes and adds that '[t]he multiple replication of exactly the same text that technologies of print made possible enable an organization of social relations independent of local time, place and person' (175). Thus, it is already by means of their specific material properties that documents have the 'capacity to transcend the essentially transitory character of social processes and to remain uniform across separate and diverse local settings', and which is 'key to their peculiar force' (Smith 1990, 156).

Utterances in ongoing documentary discourses, documents actualize and modify these discourses while positioning themselves in the context of previous (documentary) utterances. Documentary utterances are thus enabled and constrained by previous documentary utterances and they enable and constrain further documentary utterances. Another way of putting this is to look at documentary discourses as an intertext, that is to say, a dynamic structure where documentary utterances mutually constitute each other's meaning (Allen 2011; Chandler 2007; Kristeva 1982). The interpretation of what a document says, what it stands for, why it is or isn't important, and so on, are all mediated in such intertextual relations, which are essentially acts of 'translation' that displace the original document (Callon et al. 1986; Latour 1987).

At the science–policy interface intertextual relations are often explicitly acknowledged when documents cite each other. Science and technology

studies scholars have forcefully argued that the discursive enrolment of documents by other documents is particularly effective in the process of establishing (scientific) facts (Callon et al. 1986; Gilbert 1977; Latour 1987). If part of what characterizes facticity is that a statement or a set of statements acquire a status in which they are no longer contested, then documents can 'fortify' themselves by enrolling other documents that support their statements. '[Y]ou can transform a fact into fiction or a fiction into fact just by adding or subtracting references,' Latour (1987, 33) writes, 'attacking a paper heavy with footnotes means that the dissenter has to weaken each of the other papers, or will at least be threatened with having to do so, whereas attacking a naked paper means that the reader and the author are of the same weight: face to face'.[1] He also adds that in being cited a document 'is not only referred to; it is also qualified or (. . .) modalised' (35). Thus, '[i]f any of these operations is taken up and accepted by the others as a fact, then that's it; it is a fact and not a deformation, however much the author may protest' (40).[2]

After this little theoretical detour, let us now return to *Directive 2003/87/EC*. We'll use the latter as an entry point to a document network that has helped to establish the authority of the emissions trading blueprint. We'll explore this network by tracing the connections between the documents the network is made of both quantitatively and qualitatively.

Back (in)to the emissions trading network

In the following analysis I make use of a set of 185 academic, policy, and legal documents, all of which deal with emissions trading as a (potentially) promising policy tool. I assembled these documents using a snowballing approach (Doreian/Woodard 1992; Marsden 2005) based on citation counts, the underlying idea of which was to let the emissions trading discourse select the most relevant documents for me. Starting from an initial set of roughly 600 documents retrieved through a Scopus keyword search, I selectively added documents that were highly cited in this set but published not later than *Directive 2003/87/EC* and not already included in the set, thereby expanding the latter. I repeated this step until a point of saturation was reached, where adding new documents to my expanding set would no longer bring much change to the list of highly cited documents. Finally, I reduced the entire set to the 185 most cited documents. Note that this strategy rests on the assumption that citation signifies some form of discursive relevance. Making this assumption here, I treat the resulting document network as a representation of the most relevant documentary utterances in the discourse that established emissions trading as an authoritative form of governance knowledge.

The first stop on our journey through this document network is the aforementioned EU-ETS *Green Paper* (European Commission 2000), issued by the European Commission in 2000 to advocate the implementation of emissions

trading in the EU, at that time a rather new idea in Brussels.[3] The *Green Paper* explains that

> the key economic rationale behind emissions trading is to use market mechanisms to ensure that emissions reductions required to achieve a pre-determined environmental outcome take place where the cost of reduction is the lowest. (8)

The *Green Paper* further promises that emissions trading 'would save the EU almost €2bn per annum in 2010' (28). To back up such claims, the *Green Paper* makes multiple references to very different types of documents. Among these are official communications of other EU agencies, international treaties such as the *Kyoto Protocol* cited also by Directive 2003/87/EC, and a number of econometric studies estimating the costs of carbon emissions trading both in the international and in the European context, published both in academic journals and as technical scientific input to governmental decision-making processes. This means that by taking only two different roads in our transport network we are able to travel from an official EU regulation to several peer-reviewed economic journal articles – from government to academia, if you will.

Admittedly, the cost-estimation studies within reach of two steps from *Directive 2003/87/EC* are still very much 'applied' in the sense of being deliberately targeted towards the analysis of a specific implementation of the emissions trading blueprint. However, as soon as we allow travelling more than two roads starting from *Directive 2003/87/EC* we are able to reach, via the 'applied' studies, very much 'abstract' academic treatments of emissions trading, in which only the blueprint as such is discussed. For example, we can go from a 1999 special issue in the *Energy Journal* (Weyant 1999) cited by the *Green Paper* (two steps), to a 1972 article in the *Journal of Economic Theory* that claims to prove, mathematically that is, certain aspects of the emissions trading theory (Montgomery 1972). As you may already sense, from here it takes us only one more step to the document that widely counts as 'the invention' of the whole emissions trading idea, namely, Dales' 1968 essay on *Pollution, Property, and Prices*, first published by the University of Toronto Press (Dales 1968). That makes exactly four steps from *Directive 2003/87/EC*, a legal document of 2003 that seeks to implement carbon trading in the EU, to a late 1960s contribution in abstract economic theory.

Connectivity and interaction

What is at stake here? Most importantly: Connectivity and interaction! Heterogeneous documents refer to each other in a dense network, spanning an intertext about emissions trading. Figure 8.1 visualizes this interaction in the following way. The nodes in the graph represent different types or classes

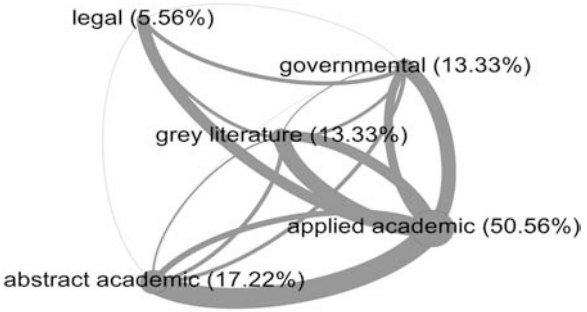

Figure 8.1 Network of referencing documents

of documents: First, academic documents, such as Dales' *Pollution, Property, and Prices* or the articles in the *Energy Journal*, are published as academic articles or books by academic publishers. Second, grey literature comprises policy reports and studies released by non-governmental bodies, such as NGOs or think tanks. Third, governmental documents are documents released by governmental authorities or commissioned by such authorities (and that do not belong in the next class). The European Commission's *Green Paper* belongs to this class. Finally, legal documents include official statues, directives, or laws, such as *Directive 2003/87/EC*.

I further distinguished between two subclasses of academic documents to mark a difference between academic documents that have an applied focus and those that don't. Applied here means that a document's analysis is specifically targeted to some real-world policymaking context, for example, by simulating, advocating, or evaluating an emissions trading system in that particular context. So, for example, the articles in the special issue of the *Energy Journal* cited in the *Green Paper* of the EU Commission are all applied since they analyse 'the economic and energy sector impacts of the Kyoto Protocol on Climate Change' as well as 'identify[] policy-relevant insights and analyses that are robust across wide ranges of models' (Weyant 1999, vii). The purpose of Montgomery's 1972 article in the *Journal of Economic Theory*, in contrast, was 'to provide a solid theoretical foundation' for the concept of emissions trading, which then had already been around for a few years.

The size of the nodes as well as the added percentages indicates each class' share of the total set of utterances in the network. Whereas the horizontal alignment of nodes is for purposes of readability only, their vertical alignment reflects degrees of 'abstraction' or 'appliedness', abstract academic documents being the most abstract and official legal documents being the most applied. The curved lines between the nodes in the graph represent

aggregated citations between documents of the different classes, whereby we can read the direction of the citations by following the curves in a clockwise direction. The size of the curves is proportional to the number of aggregated citations.

Read in this way, the graph in Figure 8.1 reveals some of the dynamics going on in the mediation of emissions trading as blueprint and implemented practice, a precondition for governing at a distance. It shows, for example, that academic documents are in the centre of the network, forming the bulk of utterances in the expert emissions trading discourse. Taken together, abstract academic documents and applied academic documents make for almost 68% of all documents in the network, but there are more applied academic documents (50.56%) than abstract ones (17.22%). Another difference between the two is that the former frequently cite all other subclasses whereas the latter hardly cite out of class and if so they mostly cite other academic documents (the applied ones) and sometimes grey literature. Note that abstract academic documents do not cite governmental documents at all. Also, there are only two citations from abstract academic documents to legal documents (hence the very thin clockwise curved line between the two document classes on the left side of the graph). The reason for this is that abstract documents refrain from discussing real-world policymaking contexts, so there is no need to cite documents that represent these contexts.

At the other end of the abstract applied spectrum, legal documents make the smallest share of documents (5.56%) and they cite out of class even less frequently than abstract documents. In fact, the only other document class cited by legal documents is governmental documents. It is through the later, therefore, that legal documents access the rest of the network through citation. Governmental documents make up 13.33% of all documents in the network. They cite all other types of documents, but mostly applied academic documents. Structurally, they are thus very similar to grey literature documents, which not only make for the same share (13.33%), but which also show a similar aggregated citation pattern.

While Figure 8.1 reveals such dynamics in a quantified way, it cannot tell us anything particular about the quality of interaction between the document classes. Neither does it say anything about the interaction of documents belonging to the same class. To explore these aspects of the expert emissions trading discourse, we need to 'zoom' back in on the documents' content in order to analyse their interaction interpretatively.

Intertextual translations

The science and technology studies literature has argued that one can trace the making of scientific facts by following chains of successive translations in chains of successive documents (e.g. Callon et al. 1986; Latour 1987). A translation, in this regard means the re-combination of discursive elements,

which can be 'fortified', as elaborated above, by adding references in the form of citations. A fact at the science–policy interface, the statement that 'emissions trading is a functioning policy instrument' is the result of exactly such chains of translations in the emissions trading literature. Let's put on our interpretative glasses and travel some more routes through our network. This time we start from a document that widely counts as the original formulation of the emissions trading idea: Dales' 1968 book *Pollution, Property, and Prices*. In it the author suggests the following: 'Unless I am very much mistaken, markets *can* be used to implement any anti-pollution policy that you or I can dream up' (Dales 1968, 100, original emphasis). Note how much subjectivity and vagueness is involved in this claim. Pollution markets appear as a potentiality, something that may work if the author is not 'mistaken'.

Now let's travel on to Montgomery's 1972 article in the *Journal of Economic Theory*. I already mentioned that Montgomery's aim was to provide a theoretical foundation for the emissions trading concept. In the second paragraph of the introduction he writes that since

> many forms of pollution are perfect substitutes for each other . . . [t]his leads to the possibility of establishing markets in rights (or 'licenses') which will bring together many buyers and sellers. Dales [2] has discussed a wide variety of such arrangements. (Montgomery 1972, 395)

Dales' book is referenced here as a source that discusses the 'possibility' of governing pollution through emissions trading systems. While this certainly transfers credit to Dales as the inventor of the emissions trading proposal, the reference serves just as much the purpose of justifying Montgomery's specific aims in the paper. 'See, dear readers,' he seems to write, 'emissions trading systems have been proposed in the literature. They are thus worth studying further. By the way, I am doing this here.' In fact, what Montgomery does in his article is to translate the emissions trading idea from prose to math. Whereas Dales' book contains hardly any math, Montgomery, by way of mobilizing sophisticated mathematical expressions and formulas, claims to have proven

> that even in quite complex circumstances the market in licenses has an equilibrium which achieves externally given standards of environmental quality at least cost to the regulated industries. (396)

The chain of translation from Dales to Montgomery has from then on served as a key point of reference for the theoretical functioning of emissions trading systems. Compare, for example, the following exemplary quote from a 1995 applied academic article evaluating the effects of transaction costs on the performance of existing and future emission markets:

> More than two decades ago, Crocker [5][4] and Dales [8] developed the idea of using transferable discharge permits to allocate the pollution-control

> burden among firms or individuals; and Montgomery [29] provided a rigorous proof that a tradeable-permit system could, in theory, provide a cost-effective policy instrument for pollution control. A sizeable literature on tradeable permits has followed. (Stavins 1995, 134)

What about emissions trading practice then? When during the 1970s and 1980s the US Environmental Protection Agency (US EPA) began to introduce a set of new policies as a means to provide regulated industries with more flexibility in reducing their emissions, emissions trading authors jumped on these developments as 'almost' applications of the emissions trading proposals formulated by Dales, Montgomery, and others (cf. Lane 2012; Simons et al. 2014; Simons/Voß 2015; Voß/Simons 2014). 'As is well known in the economics literature,' Tietenberg writes in his highly cited evaluation study of these US EPA policies released by an influential US environmental think tank, 'the mechanism that is most closely related to the emissions trading program is the transferable discharge permit (TDP) market' (Tietenberg 1985, 14). Note how 'the economic literature' – as a whole that is – is referenced here as an authoritative source of knowledge on the emissions trading principle. In discursively linking abstract academic treatments of the emissions trading idea, including the works by Dales and Montgomery, with simulation studies about potential costs and benefits of the new US EPA policies, Tietenberg contributes to establishing a first solid theory–practice link in the emissions trading discourse. The only problem was that the new policies did not perform very well. Thus, in order to criticize them while saving the emissions trading principle authors used a rhetorical trick. They attributed the policies' failure to the intricacies of the implementation context and maintained that the former, nonetheless, provided a first proof of principle that emissions trading can work in practice (cf. Lane 2012; Simons et al. 2014; Simons/Voß 2015; Voß 2007; Voß/Simons 2014).

Acknowledging that 'uncertainties about the future course of the [US EPA's] programs have made firms reluctant to participate,' a coalition of emissions trading supporters from academia and politics mobilized the US EPA policies together with the theoretical literature on emissions trading to advocate a whole range of new applications in a grey literature policy report called *Report 88* released during the US presidential election campaign of 1988 (Stavins 1988, 30). The coalition's key proposal was to implement a national market for sulphur emissions to tackle the then pressing acid rain problem. This market, they argued, should be '[p]atterned after EPA's emissions trading program . . . [footnote:] A detailed evaluation of [which] can be found in: Tietenberg, Tom. Emissions Trading: An Exercise in Reforming Pollution Policy' (36). *Report 88* had a huge effect on US policymakers and convinced the newly elected Bush administration to task a number of coalition members to draft what later became established as the US acid rain programme (cf. McCauley et al. 2008; Pooley 2010).

Such chains of translation continue, for example, when emissions trading authors began considering the application of emissions trading to the problem of climate change, as it happened inter alia in another part of the *Project 88* report (cf. Simons/Voß 2015). Above we have already investigated a similar chain leading towards the release of *Directive 2003/87/EC*. The dynamics in all these instances are pretty much the same. Documents advocating new emissions trading systems point to earlier documents as authoritative sources on the 'functionality' of emissions trading in theory and practice. Likewise, evaluation studies of the various existing emissions trading systems link theory to practice by referring to documents representing both aspects, for example, abstract academic documents as well as legal or governmental documents, and they show a remarkable tendency of attributing failures to the implementation context and successes to the superiority of the principle – which is, however, not to say that nothing has ever been 'learned' here. Both empirical evaluation studies and newer abstract analyses have yielded suggestions for improving the emissions trading blueprint. The main point here is that all this is discursively managed by referring to other documents, and crucially to documents of different types, as 'allies' that help to 'fortify' one's claims. As a result, it is the intertext produced in the interaction of connected documents, more than any individual document, that gives rise to the authority of the claim that emissions trading 'functions' as a policy instrument. Internally, this is also reflected in non-specific references of emissions trading authors to 'the literature' (see above). The document network thereby functions as a reservoir of authoritative governing knowledge, which itself exerts a force. As such, this network affords governing at a distance because it can be enrolled to legitimate the use of a policy blueprint rendered 'functional' by this network.

Conclusion

At a general level, this chapter addressed the question how generic policy blueprints develop as authoritative knowledge on how to govern. I picked emissions trading, or 'cap and trade', as a case study, because it constitutes a blueprint that has oriented policy design and implementation practices in jurisdictions around the world and continues to do so despite apparent problems with existing emissions trading systems, most notably the EU-ETS.

My particular theoretical and empirical focus was on the dynamics by which the 'cap and trade' blueprint became discursively constructed in documentary communication at the science–policy interface. An 'invention' of environmental economics, 'cap and trade' must be seen as a product of science–policy interaction, and much of this interaction is mediated in documents. To study these dynamics, I assembled a citation network of 185 heterogeneous documents, which I analysed both quantitatively and qualitatively.

A key finding of this analysis is that the document network under study works as an intertext, in which authoritative claims about emissions trading have become stabilized in the interaction of connected individual documentary utterances belonging to different document classes. At the same time, this network or intertext can be understood as a discourse 'made durable' in the sense that the utterances and their connections are in the world by virtue of the fact that emissions trading documents circulate as physical or digital copies, retrievable everywhere and at any time by anyone with access to these copies. Or to put it slightly differently, the document network functions as a socio-material infrastructure that helps to re-produce the discourse that constructs emissions trading as a working policy instrument.

A related insight is that the emissions trading document network allows for governing 'at a distance', in the sense that it provides a pretty stable reservoir of authoritative governing knowledge, which exerts a particular force on its own by orienting policymaking from outside of the traditional boundaries of jurisdictions. For policymakers around the world, it becomes difficult to ignore, let alone dismiss, 'cap and trade' as a policy prescription given that a whole army of interconnected documents from academia, policy, and law render this prescription knowledgeable and 'functional'. Policy scholars are well advised to consider and study such and similar effects of document networks on policymaking practice.

Notes

1 In reverse, this might also mean that an article that doesn't get cited is lost. 'No matter what a paper did to the former literature, if no one else does anything with it, then it is as if it had never existed at all' (Latour 1987, 40).
2 In fact, referencing not only modifies the meaning of documents but also affects the status of those who reference and are referenced. A scientist who doesn't cite other scientific articles in his publication simply wouldn't be recognized as a scientist in the first place. In other words, part of what makes a scientist a scientist is that this person engages in the practice of publishing documents in which certain other documents are referenced in a particular institutionalized way.
3 For an account of the Commissions 'u-turn' with regard to its position towards emissions trading see Christiansen and Wettestad (2003), Damro and Mendez (2003), and Cass (2005).
4 Crocker's 1966 academic book chapter on *The structuring of atmospheric pollution control systems* (Crocker 1966) counts as a second original source of the emissions trading principle. However, this document is cited much less than Dales' book.

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9

Training Participants: Building a Community of Practice to Negotiate Sustainability

Sonja van der Arend and *Jelle Behagel*

Introduction: knowing participation

Sometime over the last two decades, the call for public participation seems to have turned sides. Where once social movements demanded inclusion in policy-making, governments are now asking or even demanding citizens and NGOs to get actively involved. In this turn, participation – and perhaps democracy itself – has become both a policy goal and a means of governing (Uitermark/Van Beek 2010). Participation is now widely embraced as a key element of the shift 'from government to governance', including by the EU, the UN, and most national and regional governments around the world (Bulkely/Mol 2003). Listed benefits of participation include higher levels of democratic legitimacy and local support, and increased effectiveness and efficiency of policy implementation. Governments' demand for effective methods of participation has engendered a new domain for experts and professionals to provide knowledge and services in the design and management of interactions between state and civil society (Van der Arend 2007; Chilvers 2008). The dynamics in the market for these services may even generate a 'supply push' for particular participation methods – or 'technologies of participation', as they might be called in this respect (Voß/Simons 2014). So, over the years, participation has evolved from a socio-political ideal to an organisational issue, something to be understood by a new type of experts in the role of process managers, facilitators, or officeholders. Provided they have the expertise to apply the right tools to the right situations, the available methods of participation would enable them to gear governance processes to desired outcomes (Uitermark/Van Beek 2010). This type of expertise is seen to be supported and fed by a system of knowledge production and dissemination with a strong rationalist–functionalist disposition (Bevir 2010; Behagel/Arts 2014), that is to say that it assumes causal links between participatory outcomes and organisational schemes and/or institutional design.

The expert discourse on participation has introduced two new roles in the public sector, the process manager and the participant (Van der Arend 2007),

which are projected to either replace or supplement the known divisions of democratic labour between the existing roles available to public, private, and civic actors. In addition, it introduced several new supporting roles, such as the problem owner, the expert, the convener, and so on. Participatory governance knowledge constitutes these roles and also works through them. Actors come to see the rationality of acting in accordance with the expectations associated with one or more of these roles and keep to the proposed division of labour between process managers and participants. The dominant science–policy interface supports this division of labour as it develops participatory governance as a domain for managerial expertise, where knowledge of participation is built around the role of the process manager. Moreover, participatory policy projects and events are studied as if they were experiments that tease out linkages between managerial action and participatory outcomes (Bogner 2012).

The managerial focus of participation science and expertise has invited broad critiques. Specifically, authors point out the irony to be found in the idea of a group of experts assuming the power to define what participation is and how it works. Voß and Amelung (2013) argue that this irony is best captured in the term 'anti-technocratic expertise'. They argue that by introducing a new kind of procedural technocracy on participation, the basic purpose of participation – participants having an active part in policy-making – is undermined. Another form of irony is that participation – as a result of government interference – moves from society to a 'laboratory setting, becoming increasingly unreal in the process' (Bogner 2012). In this vein, other authors argue that in the process of managerialising participation, citizens and/or stakeholders are not merely represented, but 'made' into ideal participants or publics (Lezaun/Soneryd 2007; Bevir 2010; Braun/Schultz 2010; Felt/Fochler 2010; Turnhout et al. 2010). We can view such critiques as an extension of the type of critique that Cooke and Kothari already offered in their book *Participation: the new tyranny?* (2001; cf. Cruikshank 1999). Such critiques boil down to the neglect of the role of power in democratic governance in the rationalist–functionalist interpretation, which leads to the irony of participation as democratisation from above and inspires efforts to centrally manage instances of networked governance.

We recognise the above critiques. But based on our earlier work, we also point to the role that participants – despite a pervading discourse of managerial expertise – may have in shaping practices and knowledges of participation, and thus in shaping their own roles, identities, and practices as participants, stakeholders, citizens, laypersons, members of the public, activists, and so on (Van der Arend 2007; Van der Arend/Behagel 2011; Behagel/Van der Arend 2013; cf. Cleaver/Franks 2005; Laurent 2011). To us, offering critique also includes pointing out what alternatives there are to power from above, or, in the words of Foucault, finding out what it means to 'not be governed so much' (Foucault 1997). In doing so, we seek to uncover a type of

knowledge that is performative rather than rationalist–functionalist, meaning that it does not produce models of reality that can be implemented in reality relatively unchanged, but that it strives for 'alignments and temporary stabilizations between our accounts of the world and its various forms of agency' (Wagenaar 2012, 93). Therefore, to complement studies focusing on the role of communities of experts in knowing participatory governance, we take an interest in the ways of knowing that are performed by those who embody these forms of agency: the actual practitioners of participation – those playing the role of participant in policy-making and governance. Research will show how the impact of transnational expert power may be countered, mitigated, or amplified in participatory practice and related knowledge practices. Incorporating participants' actions in this body of literature therefore gives a more complete, perhaps less negative, but always critical, analysis.

As an example of the knowledge practices of participants, this chapter presents and analyses the case of the International Programme on the Management of Sustainability (IPMS). IPMS is a short, intensive course on the mutual gains approach (MGA) to negotiation that has been taken, over the last 20 years, by hundreds of practitioners in the field of (international) environmental governance. The premise of the course is that knowing how to negotiate is one of the key assets that participants need to operate effectively in transnational environmental policy- and decision-making. We analyse our case using two concepts of community and their role in the dynamics of governance knowledge: expert communities and Communities of Practice (CoPs). By way of exploratory hypothesis, the section below juxtaposes these two archetypes of knowledge communities to conceptualise the differences between rationalist–functionalist and performative modes of knowing governance. The next section contains the case-study; it goes into the historical and intellectual background to the IPMS course and describes the week of the course itself drawing on participatory observation. Thereafter, we analyse IPMS as a 'community of practice' in participation. The final section is an effort to draw more general conclusions on participants' knowledge on participatory governance in the context of this volume.

The role of communities in the dynamics of governance knowledge

We have chosen the concept of community to explore and analyse the knowledge practices of participatory governance. The key role of communities in the production and dissemination of governance knowledge has been pointed out by several authors. The community concepts they apply vary: policy model network (Rap 2006); innovation network (Voß 2007); social movement and profession (Van der Arend 2007, 2010, 2011); epistemic community (Stone 2000; Chilvers 2008); hydro-policy community (Boelens

2008); transnational community (Djelic/Quack 2010); and instrument constituency (Voß/Simons 2014). With all the differences between their theoretical backgrounds and the empirical manifestations studied, there are some notable similarities in how the authors use the concept of communities in this field. Taken together, the emphasis of these authors is clearly on a particular kind of social assemblies:

- *Networks*: the communities are built on networked relations between people from different organisations. Thus, the communities have many links with private and public organisations, but they themselves are not commercial or governmental, and often not even established as an organisation – although there may be one or more organisations at their core.
- *Transnational*: many of the communities studied typically cross and exceed national boundaries. The relational networks are often dynamic and fluid.
- *Commonality*: the relations between people in such networks are more than functional. Members share a common project or interest and they may have a sense of belonging. Over time they develop shared cultures, collective identities, and a common knowledge base.
- *Knowledge based*: the connections between people in the communities are based on a shared interest in a specific governance topic or method. Knowledge is seen as key in their interactions – these are all to a significant extent knowledge-based communities.
- *Communities of expertise*: the knowledge of these communities is identified as expertise. The people in the communities are described as experts with abstract knowledge on the conduct of conduct in certain issue areas. Claiming expertise in governance may be one of the key shared activities in such communities.
- *Standardisation*: the expert knowledge is seen to be structured and travelling by way of more or less standardised instruments, policy models, institutional designs, and so on.
- *Instrument constituencies*: the communities are seen to be connected around specific instruments. Knowing and shaping the instrument is what the experts share, but they can also often be seen to actively advocate the instrument.
- *Impact*: the communities 'can align the cognitive and normative orientations of their members over time and thereby influence emergent transnational governance arrangements' (Djelic/Quack 2010, xix).

With their overlapping linkages, participation expert communities operate in a context of multiple fields of practice, many with transnational coverage. Here, our focus is on the knowledge practices that they are engaged in. The texts cited above in this section underline the centrality of standardised tools, methods, models, and instruments – technologies of participation – to

the roles of governance experts in the dynamics of knowledge production and dissemination. Their common identity as experts hinges on the claim that their community as a whole can make technologies effective in different governance settings and fit these to apply in various policy issues in places all over the world. To do so, they organise knowledge production around case studies and experiments that test participation technologies in more or less standardised settings (Bogner 2012). Transnational dissemination of knowledge is implicated in these studies and further promoted through benchmarking and best practices (Tews et al. 2003). In these dynamics of production and dissemination, rationalist–functionalist idealisations are made regarding the productive relation between science and government. These idealisations help to sustain a notion of centralised control in the otherwise networked, horizontal pluralism of governance. Knowledge is produced and disseminated to (1) enhance the efficacy and aptness of (new) technologies of participation and to (2) extend the worldwide managerial expertise to accurately apply the proper technologies in local settings. Participants themselves are not included in these knowledge practices. Apart from their traits that are included as categories in participation instruments, participants' personal particularities and other local contingencies are not monitored and not expected to have a bearing on the course and outcomes of participatory projects and events.

With this chapter, we introduce the knowledge of participants themselves as a factor in the shaping of practices of participatory governance. We use the concept of expert communities to understand their roles in knowledge practices on participation. In addition, we explore the adequacy of the concept of Communities of Practice (CoPs) for the same purpose. The CoP concept originates in education theory, as a critique of how learning in classrooms is generally organised (Wenger 1998). Following Wenger and other authors in this field, CoPs are ubiquitous. Where people engage in similar activities and discuss these or do them together, social learning may take place in the way Wenger proposes. Below, we describe our case using three distinctive features of CoPs, that is, community, domain, and practice (Wenger 2011). Here, we briefly discuss the concept by juxtaposing it to the type of expert community described above. This leads to a slightly simplified dichotomous hypothesis of the differences between the ways in which expert communities and practitioners' communities may conceive, shape, and spread knowledge on governance.

- Communities of participation experts (epistemic communities, instrument constituencies, policy networks) share knowledge about operating on governance practices. Their approach fits a technocratic, top-down view on participation as something that can be controlled and will yield better results if better designed and managed. In this view, participatory governance is something to design and manage with the use of methods/

technologies of participation. What binds these experts is their interest in promoting an instrument, policy model, technology of participation. They seek to influence or control participation practices through the instrument and work together to secure that 'policy instruments become established as functional models of governance' (Voß/Simons 2014).

- In contrast, communities of participatory practice share knowledge about operating in governance practices. Their approach fits a practice-based, performative view on participation as something that cannot be externally controlled and will only yield worthwhile results if done by critical, knowledgeable, and capable participants negotiating and deliberating for their purposes, interests, and values. In this view, participatory governance is an inherent practice in the domain of policy-making, technology development, and science. It is always already structured by informal and formal institutions, which may or may not be affected by technologies of participation. What connects members of these CoPs is their shared ambition to enhance their performance in participation practices. They seek to get better results from participation and work together to establish their own positions in a practice. They are less likely to be transnational (Djelic/Quack 2010, 21) and more likely to be focused on specific issues.

However simplified, this comparison indicates that both modes of knowing governance are dynamic and socially embedded. Thus, the concept of community enables us to go beyond such dichotomies as objective–subjective, lay–expert, or local–universal knowledge. Below, we flesh out what we consider an example of a community of participatory practice. We will use it to further reflect on the value of the CoP concept for understanding participation knowledge and governance knowledge in general in the remainder of the chapter.

Case study: the International Programme on the Management of Sustainability

This section gives an overview of the knowledge practices of the IPMS, by describing its backgrounds, organisation, content, programme, and a personal account of doing the programme. We base these descriptions on data obtained from participatory observation by the second author as a student and a member of staff, online and paper documents, and interviews with current and previous contributors to the course.

Origins and foundations of IPMS

The 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro was key to placing the idea of sustainable development on the international agenda. At the time, sustainable development could be regarded as a lofty ideal at best and an unattainable political compromise at

worst. Many had no idea how to realise development, environmental protection and poverty reduction goals in unison. It was in this context that the IPMS was created. At the same time, the Sustainable Challenge Foundation (SCF) was founded as the supporting organisation to IPMS. Under this flag, a number of people – from government, academia, and environmental NGOs, including Lawrence Susskind, who acted as director of the programme for the first ten years – came together and organised the first edition of IPMS in 1994, in the Netherlands. With sponsorship from governments (most prominently the Dutch ministry of spatial planning and environment) and NGOs (notably the Dutch nature organisation 'Natuurmonumenten'), participants from around the world were trained in MGA and consensus-building techniques.

MGA is an approach to negotiation that is based on Fischer and Ury's book *Getting to YES* (1981), which describes the method of *principled* negotiation. This method of negotiation is said to be is 'hard on merits, soft on people' (Fischer/Ury 1981, 6) and supposed to be applicable by anyone, from a diplomat discussing arms control to a couple discussing their next vacation (cf. Susskind et al. 1999). In their book, Fischer and Ury (1981, xix) describe four principles of negotiation:

1. Separate the people from the problem.
2. Focus on interests, not positions.
3. Invent options for mutual gain.
4. Insist on using objective criteria.

Getting to YES reads as a practical guide on negotiation, using many examples from historical situations and describing many hypothetical situations taken from daily life (e.g. a negotiation of a renewal of a lease between a tenant and her landlady). The book concludes that reading a book does not make you skilful on its own, one needs to 'learn by doing' (Fischer/Ury 1981, 71).

By 2013, 738 participants had attended the annual IPMS training (Koppen 2013). Throughout its now 21 years of existence, IPMS has always included participants from around the world, from more than 90 countries altogether. These participants have included government officials, NGO representatives, academics, and private sector representatives. They represent a mix of actors from developing and developed countries, across the continents. They, moreover, often represent influential positions within the international sphere of sustainable development, be it as a university professor, a high-ranking civil servant, or a representative of a business platform. Participants range from a director general of a ministry in the Netherlands, an IUCN[1] forest programme director in Mozambique, a chief of regional planning in China, to directors and founders of NGOs and foundations in countries as diverse as Russia and Brazil. As such, these alumni use their positions to send their colleagues and/or subordinates within their organisations as new

participants to the programme. Furthermore, regional versions of IPMS – called RPMS – have been organised around specific issues, attended by an additional 370 participants (Koppen 2013). These RPMSs are usually organised by alumni of IPMS and supported by SCF. Today, after hosting IPMS and regional courses for more than two decades, SCF faces hard times. The ministry of spatial planning and environment considerably reduced subsidy for the courses when it was merged with the ministry of infrastructure. The organisers now have to secure paying students and other funds every year to finance staff and to sponsor scholarships for students from developing countries and from academic undergraduate programmes.

Organisation of the IPMS course

IPMS has been organised every year since 1994 and entails a week-long (Sunday to Saturday), intensive course on consensus-building and MGA. Although locations changed over the years, the course is invariably held in the Netherlands, in a hotel or conference centre in a forested environment. Also, the basic structure and contents of the course have remained more or less the same. Naturally, some staff changes have occurred, but many of the core staff are the same as 20 years ago. The week programme has undergone only minor changes in terms of content. The following description is based on the second author's participation in 2010 and his involvement as associate faculty in 2011, supplemented with a review of materials from the course, SCF's website, and a small number of in-depth interviews with key actors.

Each year, between 25 and 50 participants attend IPMS. Dutch ministries (most notably of environment and spatial planning, and of agriculture and nature conservation) have over the years contributed a major part of this funding, either indirectly by giving out scholarships or directly by paying for civil servants of their department to participate. Between 1995 and 2002, the Danish government also played an important role by sponsoring participants from Malaysia, Thailand, and South Africa (Koppen 2013). In addition, the Dutch nature conservation NGO *Natuurmonumenten* sends a few paying participants each year as well. Over the years, participants have also been sponsored by many other NGOs, companies, and institutes. In general, fees paid by participants from developed countries are used to give out partial scholarships for participants from developing countries. This process, as well as the organisation of the actual week, is coordinated by SCF, a not-for-profit foundation.

The core staff of the course consists of around seven or eight academics and professionals. These include academics from the fields of environmental diplomacy and policy and professionals from the field of consensus-building, process facilitation, and mediation. In addition to core staff, usually two members of associate staff (participants from previous years) are part of the team as well. Finally, during the last simulation exercise and the 'clinic'

(both explained below), additional staff from the Netherlands (again, usually alumni) is present to give feedback to participants.

Content of the programme

The programme is built around three core elements: sustainability, consensus-building, and mutual gains negotiating. The principle of sustainability is explained in lectures, using the 'sustainability pyramid' that stresses the three dimensions of environment, economy, and society, and a fourth dimension of individual needs and wants. During the programme, sustainability is presented as a concept that should not be 'imposed' on government, NGOs, or industry, but should be 'negotiated' (Susskind 2013). The sustainability pyramid visualises these negotiations as connections between environment, economy, society, and individuals. What is stressed during the course is that sustainability is a *process*, not an end-point. In other words, the concept of sustainability is presented as something that needs to be negotiated. These negotiations need to include multiple actors (including government, business, and civil society) and integrate different interests (ecological integrity, economic growth, and equity being the overarching interests mentioned). Finally, important sources of conflict within sustainability issues are identified. These include conflicts over 'facts', or what information is relevant; incompatible interests; and values and identities. Other sources of conflict are negative relationships and process factors such as skewed power balances and/or institutional competition and problems of mismatching geographies and timescales.

To deal with the above-mentioned sources of conflict in sustainability processes, IPMS introduces the MGA and consensus-building. The MGA focuses in particular on personal interactions. As was already briefly described above, the first step of MGA is to separate people from problems. In other words, a type of 'professional' mode of interaction is promoted where negotiation is not focused on personal likes or dislikes, but on 'the issue at hand'. Next, MGA takes the basic model from rational choice theory that views man as a 'gains maximiser' and supplements this model with ideas about trust, creativity, and community. Interestingly, it also uses ideas usually associated with sociology that hold that individuals occupy positions based on the larger sociological structures they are situated in. MGA, however, holds that – in order to find solutions – it is necessary to 'move from positions to interests', in other words, to find out what is 'really' driving people to defend a position. These 'real' interests are uncovered by using personal interaction mechanisms: asking 'why' questions and more generally actively inquiring what drives a fellow negotiator/participant to put forward a specific solution and/or point of view. A third core concept in MGA is the idea of creating value. This idea is based on the premise that during negotiations, value is often 'left on the table' as a result of an urge to come to solutions too quickly by distributing benefits among participants. Especially in the case of

sustainability, there are often simply not enough benefits to distribute and trade-offs between different benefits (i.e. development and environmental protection) are frequently present. To overcome this lack of value (to be distributed amongst participants) and need for trade-offs, MGA stresses that one should suspend judgement (on proposals for solutions) and be creative, use package deals, and in general find ways to increase value for all participants. Finally, objectivity is an important aspect of negotiations. A 'professional' ethos in negotiation is encouraged that highlights the importance of, for example, joint fact-finding, the use of established science, and the use of clearly defined indicators to monitor the outcomes of negotiations.

The focus of MGA on personal interaction is supplemented with a more process-oriented focus on *consensus-building*. The consensus-building process is envisaged as a cycle that governs the negotiation (or participatory) process. The cycle starts with identifying stakeholders and assessing their interests and capacities, usually before the actual meeting takes place. It then moves to practical matters that guide the process, including ground rules, a work plan, and, for example, if there will be a facilitator of the process and who that will be. In a third step, facts and technical questions should be discussed to focus the process on what is practically achievable. The fourth step is where mutual gains are sought between the participants, and where MGA techniques of creating value are, for example, highlighted. A fifth step is basically to seek consensus-based agreements, or 'near consensus' should consensus prove to be impossible. The final step is to provide opportunities for stakeholders to revisit and revise their agreements after the process, for example, assisted by agreements on how to monitor implementation of the agreement, after which the cycle is repeated.

A week of IPMS

The IPMS course takes place during a full week, from Sunday evening to Saturday afternoon the next week. Together with around 30 other participants and a staff of around 10 people, including a host of professors and professional mutual gains negotiators/facilitators, participants stay in a conference centre in the green surroundings of Utrecht, the Netherlands. The Sunday afternoon that participants arrive, they enter the 'pressure cooker', perhaps not expecting that what the purpose of this course is no less than to initiate them into a new domain, community, and practice.

The course starts informal, by rounds of introduction during the first dinner at Sunday night, when participants are introduced by their neighbours at the dinner table. Already, they get a feeling of being part of a select group of international participants that are all 'future leaders', 'change agents', and where each participant already has an even more impressive professional background than the other.

After the informal dinner, the first 'serious' part of the course starts. Having had dinner and perhaps some wines, participants do not go to the

bar afterwards, but start negotiating on oil prices. The Harvard Oil Pricing Exercise is a simulation exercise that takes a prisoner's dilemma-style negotiation between representatives of two countries over the monthly price for barrels of oil. The premise of the game is that the two countries do not negotiate with each other because they are not particularly fond of each other (think Colombia and Venezuela) and hence sell their oil for the lowest price to get the biggest market share. As the game progresses, rules change and some options for short dialogue with a representative of the other countries are offered. Regardless of country relations, you learn to build personal trust in order to sell your oil for more money. The purpose of the game is clear: building professional trust will result in win-win solutions, even when personal relations are bad. This first lesson is central to the remainder of the course.

Monday, the first full day of the week, is mostly spend on lectures on sustainable development and MGA. It is designed to create the conceptual framework for the course, and to answer the question of why MGA and consensus-building are important for realising sustainable development. The day finishes with the introduction to a second simulation exercise and the evening is spent in preparation (by identifying stakeholders, interests, and so on). Tuesday morning is spent on this second simulation exercise, while the afternoon is used to highlight the use of (objective) information in consensus-building processes. The day ends with an introduction to the third simulation, for which the whole of Wednesday is used. After a free morning on Thursday, lectures continue, specifically on the consensus-building process. After that, the 'final' simulation exercise is introduced, which takes the whole Friday to play out. Friday evening is reserved to introduce the 'strategy clinic'. This 'clinic' is designed for participants of the course to bring their own issues and challenges, which then will be discussed within the community on Saturday morning. Usually, the clinic on Saturday morning will have alumni from previous years join to brainstorm for solutions, processes, and ideas by which to implement the lessons learned during the week in participants' real-life situations.

During the week, there are many moments for feedback. After each simulation exercise, there is a group debriefing (each simulation takes part in a group of seven to eight people) as well as a plenary debriefing. In addition, individual participants are observed during simulations by staff and receive individual feedback per simulation as well.

The experience of IPMS

During the entire week, participants are kept busy from breakfast to bedtime. It is a day full of lectures, going in record pace: What is sustainability? Why would the world need sustainable thinking? What is the mutual gains approach? How does it help overcome deadlocks in decision-making? The lectures are inspiring and given by seasoned professors who know how to

engage an audience and have first-hand experience of negotiating climate treaties. At the end of most days, before dinner, you get your homework for the evening. You are assigned a role for the upcoming simulation exercise the next day. Right after dinner, you start preparing this role, by discussing strategy with fellow participants, but also by starting the pre-negotiation strategy. You effectively have to start inhabiting your role right away that same evening: you have to find out what the positions of other participants on the subject of the game are, for example, a spatial planning problem for an island that includes agriculture, tourism, and nature conservation activities. Moreover, you have to look for strategies to create a sustainable solution where everybody wins.

If the course fits the metaphor of a pressure cooker, the first full day on Monday is designed to heat up the water. The pressure to reach a sustainable agreement during simulation games thereafter builds up over the week, and participants become tired, elated, frustrated, excited, and so on. The course lets you relate all types of personal emotions to the sustainable negotiation/diplomacy skills that you are acquiring, and it becomes a truly 'lived experience' that many participants state has changed the way they look at the world and act in it. This process is completed in the 'strategy clinic'. It is a direct attempt to implement the skills learned during the course in practice. The course ends with a group evaluation of the week and some sort of 'initiation' in the IPMS network: on Saturday evening, the students receive their diplomas, including a picture with the professors, and are invited to become an active contributor to the network.

The different elements of the course include (1) a conceptual framework, (2) tools and techniques for implementing MGA and consensus-building, (3) simulation exercises, (4) collective and individual feedback, (5) a strategy clinic, and (6) network building. These elements do not simply follow one another, but are rotated during the week of the programme. Consequently, participants find themselves in a process of alternation between conceptual learning, that is, through lectures; learning by doing, that is, through simulation exercise; reflective learning, that is, through debriefing; and peer learning, that is, through interaction with other participants. This learning movement in combination with a full programme 'from breakfast to bed' is highly effective in establishing a community of practice, as we will further elaborate now.

First, you are placed directly in stage 3 (competence) of the five-stage adult skill acquisition model of Dreyfus (2004), where 'students must decide for themselves in each situation what plan or perspective to adopt without being sure that it will turn out to be appropriate' (Dreyfus 2004, 178). Basic knowledge and skills about negotiation (stages 1 and 2) are pre-assumed of participants (often rightly so) and they are directly confronted with the outcomes of their choices. For example, already the first game has as a main learning outcome: you need to build trust in order to maximise gains. This lesson is

first experienced in the game (by winning or losing) and only afterwards explained. Emotional investments in these games lead the participants to be elated, disappointed, happy, or frustrated, much as Dreyfus (2004) describes. By working closely with fellow participants and spending all hours of the day with them, a social process of sharing these emotions occurs. Moreover, as they are given the chance to 'do better in the next game', participants connect this emotional investment to a steep learning curve. This process is, furthermore, supported by individual feedback by a large body of staff that helps participants reflect not only on the more abstract principles of MGA and consensus-building, but also on their more instinctive reactions during the game, the social fears they face, the prejudices they hold, and so on. Eventually, participants find themselves in a stage of liminality – the ambiguous threshold stage between two worlds – where the established stakeholder roles they are used to assuming are increasingly being replaced by a new type of stakeholder identity that seeks mutual gains and builds consensus. Finally, participants come together in the strategy clinic, where they make a collective effort to find solutions for the selected challenges of a few of them (which the participants themselves choose).

Thus, the IPMS experience itself actively builds a community, as it places participants from various segments of society and countries physically together and stimulates networking, peer-to-peer learning, and sharing of personal stories and ideas during breakfast, lunch, dinner, trainings, games, and several social events. Outside the IPMS week, community building also takes place. Many students are referred to IPMS by alumni. For example, one student from a Dutch ministry told the author that 'everyone in my department has gone to IPMS and told me to go'. Also, outside organisations, people meeting in workshops, conferences, and so on, often refer new participants to IPMS. Another way in which the community is supported is by having alumni return to the programme as associate faculty. They assist the core faculty in teaching, supervising small group meetings, and offering individual feedback to participants. The community is also supported by organising side events and having informal meet-ups during larger conferences within the theme of sustainable development, for example, during international climate negotiations of the UNFCCC[2]. An interesting example is when during the UNFCCC Conference of the Parties in Copenhagen in 2009 a member of the Brazilian delegation and a member of the Ecuadorian delegation recognised each other as IPMS alumni during a difficult negotiation and decided to meet on the hallway to discuss mutual gain options to break out of deadlock.

IPMS as a community of participatory practice

To test our hypothesis that the IPMS community is qualitatively different from an expert community, as we described in the second section above, we

now offer a step-by-step analysis of the aspects of expert communities that we identified earlier:

- *Networks*: students of the course come from different organisations as well as from different segments of society. They establish networks through formal and informal ways of interaction during the programme, but also through actively referring each other to the programme, and by both planned and chance encounters during 'sustainability-oriented' events.
- *Transnational*: The group of participants in itself is international, as is the staff, coming from the United States, the Netherlands, Russia, and Brazil. Moreover, the programme originates from meetings at a transnational event, the UNCED conference.
- *Commonality*: IPMS participants share a common interest in sustainability and participatory processes, already at the start of the week. At the end of the week, this common interest is not only strengthened, but also supplemented with a belief in MGA and consensus-building as methods to achieve sustainability ('as a negotiated process').
- *Knowledge based*: Knowledge, both conceptual and skill-based, is key to the course. It introduces a new conceptual framework on how to approach sustainability issues as well as what underlying barriers to achieving sustainable outcomes are.
- *Community of expertise*: Participants achieve a specific type of expertise, although it is not necessarily that of abstract knowledge or the 'conduct of conduct'. The community is much more centred on a 'first-order knowledge' of how to conduct oneself during negotiations or participatory processes.
- *Standardisation*: Participants are introduced to standardised methods of consensus-building (step-by-step process) as well as standardised methods of MGA ('moving from positions to interests', 'creating value', etc.). This type of knowledge, however, is not so much expert knowledge to apply to others as it is a tacit knowledge that participants should apply to themselves and is acquired through shared experience (Polanyi 1997). As such, dissemination of knowledge is mostly a 'bodily' affair, by producing 'sustainable negotiators'. These sustainable negotiators then return as associate faculty, organise RPMSs, or share their skills through apprenticeship (think of a senior and junior employee at a NGO).
- *Instrument constituencies*: Again, participants are connected around specific instruments, which they oftentimes also actively advocate (e.g. by recommending new participants for following years), yet they implement these instruments in their own practices, rather than deliberately shaping or further developing the instrument itself.
- *Impact*: During the course, both cognitive and normative orientations of participants are being aligned. Cognitively, they learn to understand sustainability as a process that needs to be negotiated, rather than an endpoint to work towards. Normatively, they learn to recognise interests of

other groups and to see these interests as not necessarily opposed to their own. Moreover, they are trained to adhere to an ethos of professionalism and objectivity.

From this list, we may conclude that IPMS bears similarities with the transnational expert communities described above. However, there are notable differences too. In the remainder of this section, we analyse the most important differences with reference to the concept of CoP. According to Wenger, three characteristics are crucial to distinguish CoPs from just any community and from other human collections called communities (such as neighbourhoods): the practice, the community, and the domain (Wenger 2011).

The practice

Wenger describes a CoP as a community of practitioners, meaning that they interact about what they *do* (Wenger 2011). Indeed, the knowledge shared and developed through IPMS is knowledge about what participants do. What participants do, according to IPMS, is negotiate. Here, in contrast to most interpretations, the practice of participatory governance is not about deliberation, social learning, or debating policies, but about negotiating solutions to shared problems. By framing participation as negotiation, the Habermasian ideal of participatory governance as communicative action – which is seen by many as naïve – is left aside. In IPMS, strategy and power do play a role in participation, and acknowledging this may actually be more helpful to empower and educate participants than idealist social learning programmes (Leeuwis 2000). IPMS should be very instructive to participants because it generates a lot of negotiation practice in little time. There is some introductory theory, but the role-playing exercises and simulation games are the main dish of the course. Throughout the course, the students in negotiation learn a bit about how to organise negotiation events, but the core of attention is on individual action: knowing how to get the best out of it for oneself or one's constituency. After the course itself, the IPMS community maintains this focus on *doing* rather than *managing* participatory governance. Accordingly, the type of knowledge in the IPMS community differs from the type of knowledge circulated in the transnational expert communities. Unlike theories or technologies of participation, this governance knowledge travels in bodies and interpersonal relations and deals with relating to participants' agency rather than the formal roles they occupy. Participants' skills are 'trapped' in their bodies and are unfit to communicate in words, prescriptions, handbooks, and so on. It can only be exchanged fully by shared experience: doing participation in (simulated) practice.

The community

Wenger states, 'In pursuing their interest in their domain, members [of a CoP] engage in joint activities and discussions, help each other, and share information. They build relationships that enable them to learn from each

other' (2011, 2). This is a key point in the concept of CoP: learning does not only occur through instruction and exercise, but it takes place most effectively in the practical day-to-day exchange between peers who execute similar tasks. Faculty at IPMS seem to have taken note of this point. As Lawrence Susskind said in a note read at the occasion of the 20th anniversary of IPMS:

> Participants learn more from each other than they do from the faculty. It's great to have an experienced and exciting faculty. It's even more important to have an experienced and exciting set of program participants. Program participants learn from each other – watching how someone handles the same role assignment in a different group is very powerful. Sharing stories over meals, on field-trips and during celebratory visits to the city is when all kinds of learning happens that the faculty are not part of. Connections among the 'graduates' of the program, especially if they are supported by IPMS, can be enormously helpful once people head back home. (Susskind 2013)

This is as close to the definition of a CoP as one can get.[3] While practical exercises are the main part of the course, most of the learning may actually not take place during role-playing and simulation, but in between the exercises. Even when they are not all seasoned negotiators yet, students learn from each other during the course by exchanging stories, tips, questions, feelings, and so on. The ambition is to have the CoP expand beyond the week of the course, although not all students remain an active part of it.

The domain

According to Wenger, membership of a CoP implies a commitment to a domain – that is, to a certain kind of expertise. This means that members share a competence that distinguishes them from other people. This characteristic links the concept of CoP closely to theories of professionalism. Learning to do better what one does or aspires to do is the goal of the CoP and its individuals. In the IPMS community, the common project and shared identity is indeed one of professionalism in negotiation. Ida Koppen, vice president of the SCF and faculty member since the first course, underlines this in a speech given at the occasion of the 20th IPMS week: 'It is my hope and conviction that the combination of professional excellence and personal commitment that SCF stands for will continue to contribute to negotiating better solutions for sustainability worldwide' (Koppen 2013, 6).

This ethos of professionalism, of enhancing their own skills in negotiation is what binds and motivates the members of the IPMS CoP. It sets them apart from the expert communities in participation, which authors describe as driven by a shared support for governance technologies that they claim will enable others to do better participation. In their quest, the IPMS community standardises part of governance practice, just as the communities of participation experts cited above do. But in contrast to the experts' technology

projects, the focus of standardisation in IPMS lies with the production of a distinguishable role or identity for the members themselves, as mutual gains negotiators in international (environmental) politics. Professionalisation, as a collective project and as an individual learning process, is precisely the mechanism of standardisation at work here.

The focus on transnational environmental issues in the course seems to strengthen the durability and the impact of the IPMS CoP in participatory governance practice. As Ida Koppen claims in the same speech: 'If you go to an international meeting on [a sustainable development] topic, you can be sure that someone else from the SCF/IPMS/RPMS network will be there' (Koppen 2013, 5). Although this might be a festive amplification, such encounters between IPMS alumni indeed seem to take place regularly. As the governance knowledge in IPMS is an embodied and enacted knowledge, it is performative through the skills and experiences that participants bring to the table during negotiations on environmental issues worldwide.

Conclusions: the performativity of a community of participatory practice

In this chapter, we discussed IPMS as a case of the production and circulation of a particular type of governance knowledge, namely, the skills of participants. In the analysis, we used the concept of community of practice to juxtapose the case of IPMS with the transnational expert communities that are seen as the typical carriers of governance knowledge. We found that, indeed, the case of IPMS exemplifies a type of knowing governance that shares some similarities but also shows notable differences with the knowledge communities studied earlier. In this concluding section, we connect our findings to the more general concerns in this volume.

Based on our case study, we conclude that participants' knowledge of governance is practical and performative through practice. It is made through lived experience and direct exchange – by connecting accounts of sustainability to new forms of agency (i.e. seeking mutual gains, building consensus) that can be applied in stakeholder negotiations – and it is disseminated through performative acts of participation. When the knowledge taught at IPMS and other places proliferates in transnational environmental governance, its efficacy in terms of reaching mutual gains will increase. In other words, the more participants in a negotiation employ the professional ethos of mutual gains bargaining, and the more they know that the others will too, the 'game of negotiation' will also become more predictable and manageable for them, and 'win-win' outcomes become more attainable – as a sort of practical self-fulfilling prophecy.

In this chapter, we have applied a practice-based perspective (Van der Arend/Behagel 2011; Arts et al. 2013) rather than a rationalist–functionalist perspective (i.e. Krott/Giessen 2014) to tease out knowledge practices in participation. Accordingly, our analysis led us to highlight a type of knowledge

that is performative. That is, it (1) connects specific accounts of the social to multiple forms of agency rather than connecting models of the social to specific societal roles and (2) is predominantly disseminated through shared experience and guiding principles rather than through formal instruction and abstract models. This type of performative knowledge is also the major difference we found to exist between expert communities and IPMS as a CoP. It is a form of knowledge that resides in skills and is embodied versus concepts that are abstract; that builds on interpersonal ethics versus (lofty) ideals of equality; and that is disseminated as a practice rather than as an instrument. In short, performative knowledge means to shape the world in direct action, whereas rationalist–functionalist knowledge means to shape the world by causing effects.

If performativity entails that knowing about the world is the same as constituting it (Law/Urry 2004; Callon 2007), we should ask the question, which version of governance is made real through the IPMS course? It is important to note here that IPMS faculty does not actually use the words governance or participation on a regular basis. Still, they clearly aim to prepare students for situations that often go by these words: encounters between representatives of governments and their stakeholders and publics, who debate policy choices to discuss, choose, and/or implement collective solutions to environmental problems. The course teaches that governance in this sense equals negotiation, and thereby it implicitly rejects the notion of changing power relations by just organising and managing participation with the right tools – nor by negotiating, for that matter. Thus, the course teaches a perspective on governance that seems less idealistic and more prosaic than ideas on participation and deliberation inspired by Habermasian ethics, and at the same time not as cynical as purely instrumental interpretations. In the IPMS perspective, there is a clear eye for the role of power in its divergent appearances.

If the knowledge taught in IPMS is less depoliticising than the expert knowledge in technologies of participation, could we then claim that the knowledge practices in IPMS might be less vulnerable to the 'ironies of participation' discussed above? Indeed, both the perspective on governance and the negotiation skills taught in IPMS presuppose and support the agency of participants in governance. Perhaps even, these skills may then form the counteraction to the 'dynamic of an emerging technoscience of participation' as sought after by Voß and Amelung (2013), that is, participants themselves (re)claim the agency in governance that technocratisation of participation is seen to take away from them. Still, IPMS does not fully escape the irony of participation. By urging the students to discipline themselves into professional negotiators, IPMS perhaps oversells the reifications of mutual gains bargaining as an all-purpose fix for environmental debates gone stuck. Furthermore, the way negotiation skills spread and 'create' professional negotiators may induce or enlarge the rift between professional stakeholders (the majority of participants in the course) and lay, unpaid, or inexperienced participants.

What then is the relevance of the case of IPMS for the study of participation more broadly and how is it limited? IPMS as a case of a community of participatory practice is specific in two ways. First, IPMS is primarily policy oriented – particularly on international or transnational environmental policy-making – whereas participation as studied in this volume and elsewhere takes place in the governance of issues in two broad and related domains: (1) policy and planning and (2) science and technology. Second, IPMS seems to teach stakeholder participation specifically rather than other types of participation, such as citizen participation or public participation. This may relate to its policy orientation, as participation of 'purely uninterested' or randomly selected citizens or publics seems much rarer in the policy domain than in the science and technology domain. Therefore, it may be easier to find communities of participatory practice in cases of policy participation and among organised, professionalised interest organisations. Recommendations for further study therefore include the international exchange of methods of protest between environmental activists, contacts between local citizen groups alongside line-shaped infrastructural projects and plans, and developments in the training and recruiting of lobbyists at NGOs. Nevertheless, CoPs may also emerge in less likely settings; think of contacts between opponents of shale gas extraction (fracking) all over the world or between members of the public participating in prolonged exercises on science topics.

Whatever cases they study, our main recommendation to students of participation is to take into account the knowledge and experience that participants bring to governance practices. Here, as in our earlier contributions mentioned above, we have shown that what happens in participatory policy-making hinges at least as much on the practices of participants as on experts' technologies of participation. As said, interesting cases of communities of participatory practice may be found in the domain of science and technology as much as in policy and planning, on local, regional, national, or international levels. The question is then: which approach can researchers take vis-à-vis participants' governance knowledge as an object of research? From a rationalist–functionalist perspective, the role of academics and other researchers is quite clear and familiar. Such studies assess available technologies of participation in empirical cases to conceptually link these to participatory outcomes. Why not add the acquisition of skills of participants to realise their respective projects as another variable in the equation and see what yields the best results? Our answer is that functionalism is part of the problem of irony. Employing participants' skills as an asset of management further eradicates the notion of participation as an uncontrolled, emergent, and contingent activity Therefore, in the vein of the perspective presented in this volume, attention for participants' skills should include a critical eye for how and where participants acquire, develop, distribute, and employ their knowledge. Indeed, like other experts, participants have agency in governance and this form of power is not allocated equally, but concentrated and diluted with the dynamics of power knowledge. Thus, the performativity of

'Communities of Participatory Practice' and the innovation trajectories of participation skills should be studied just as critically as expert communities and their technologies of participation. We have tried to make a start.

Notes

1 International Union for the Conservation of Nature.
2 United Nations Framework Convention on Climate Change.
3 We must add the aside that the IPMS community does not emerge spontaneously but is consciously facilitated and promoted – still, not created. But spontaneity is not a prerequisite for a CoP.

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Part IV

Boundaries of Knowing: Science and Politics

10

Boundary-making in the International Organization: Public Engagement Expertise at the OECD

Brice Laurent

Introduction

Science and Technology Studies (STS) have shown that the production of public expertise is central to understand the functioning of modern democracies. Since Bruno Latour argued that the modern constitution is based on the allocation of work between the representation of nature and the political representation, and a perpetual purification work to make this boundary hold (Latour 1993); many works have explored the role of expertise in the production of this dichotomy. Sheila Jasanoff's detailed analysis of the expertise institutions in the United States, for instance, has displayed how the construction of objective science within public agencies is a component of a constitutional ordering allocating powers and responsibilities, defining individual and collective identities, and stabilizing a shared imaginary of science as a way of dealing with the constrains of an adversarial regulatory system (Jasanoff 1987, 1990, 2005).

These works have displayed the mechanisms through which boundaries are stabilized and hybrid situations purified, so that 'expertise' can be disconnected from policy decisions. Mechanisms such as staging reports and rhetorical strategies (Hilgartner 2000) and the organizational structuration of public bodies (Jasanoff 1990, 1992) produce boundaries between expert advice and policy decisions. These mechanisms might offer more or less rooms for public bodies to redefine the components of acceptable expertise, in terms of both scientific objectivity and political legitimacy. But they all rely on processes through which expertise can be 'purified' from considerations considered 'political'. Empirical works have shown that purification is never a given, and always challenged, especially in controversial areas, as the complexity of the issues at stake and the impossibility to permanently separate science from value considerations might make it difficult for institutions that maintain too rigid a separation – and those who do, such as

the US Environmental Protection Agency (Jasanoff 1992) or the Office of Technology Assessment (OTA) (Bimber 1996), might be at pain to demonstrate both their effective neutrality and the political value of their works.

The STS perspective allows the analysis to explore boundary-making processes. The interest in boundary-making has developed as a way of empirically examining the problem of demarcation between 'science' and 'non-science', or, in the words of sociologist Thomas Gieryn, of considering that 'demarcation is as much a practical problem for scientists as an analytical problem for sociologists and philosophers' (Gieryn 1983, 792). From this perspective, 'boundary' is a term that is related to both institutional and conceptual constructs, whereby scientific activities are distinguished from other domains of social activities (such as politics). It can be extended to other areas, where demarcating processes are central for the construction of social identities (e.g. an academic discipline) and collective organizations (e.g. ensuring that decisions are made in acceptable ways by political institutions). For instance, the technical and institutional solutions crafted to deal with risks are situations where boundary-making is a crucial operation meant to ensure both the scientific objectivity and the democratic legitimacy of public decisions (Jasanoff 1987).

A particular situation where boundary-making is crucial is that of international organizations. International organizations are ordering sites that rely on the production, use of, and negotiation about knowledge (Winickoff et al. 2005; Bonneuil/Levidow 2012). The scope of issues dealt with in international organizations, ranging from the negotiations among countries with divergent interests to the exploration of global issues, make these boundary-making processes complex. The International Panel on Climate Change (IPCC) is a typical illustration of the re-compositions of boundaries that the production of international expertise might entail. As countries argue over conflicting expectations, and scientists disagree on the way of grasping a global issue not easily measurable, producing an expertise both acceptable and objective is a permanent challenge. This results in an original institutional organization, whereby spaces of technical expertise production are related to (but separated from) other zones of political negotiations (Miller 2001).

The IPCC example shows that the interplay between technical examinations and international negotiations has direct consequences on boundary-making processes. In turn, the analysis of boundary-making sheds light on the overall mode of public reasoning of the institutions performing it. The IPCC case suggests examining in further details processes of international ordering through the analysis of boundary-making processes. There are, for that matter, interesting cases to do so, namely, those related to governance knowledge. In STS works about expertise, knowledge is mostly technical, and relates to public issues such as environmental or health risks. But as Michel Foucault's works show, the articulation of knowledge and power occurs in sites where the production of knowledge about the social is undertaken (Foucault 2004; see Desrosières 2002 for the case of statistics).

Such a focus on governance knowledge is rendered necessary by recent evolutions of public bodies, which have extended the domains of public expertise to procedures aimed to 'engage' publics. The development of sophisticated participatory mechanisms has gone hand in hand with that of specific forms of expertise, able to provide advice and, in some cases, ready-made solutions to decision-makers. Consider first the case of the expertise about participatory instruments in the United Kingdom. Jason Chilvers's work has shown that the set of people involved in the promotion of participatory formats are tightly related to a specific format, that of the citizen panel. They compose a complex landscape made of public–private institutions, in which the state plays a role, but also delegates a lot to think tanks and private organizations in charge of developing theoretical and practical reflections about the best forms of public engagement (Chilvers 2010). In France, by contrast, public participation in infrastructure projects was institutionalized in the mid-1990s, and further developed throughout the 2000s. An 'independent administrative authority' called the National Commission for Public Debate (CNDP) is in charge of organizing 'public debates' (*débats publics*) made of several public meetings in which all interested parties can contribute (Revel et al. 2007). The CNDP marks the extension of the expertise of the state to participatory matters. It displays both the ability of the state to internalize additional governance knowledge and the need to adapt it when complex issues are to be publicly discussed (Ehrenstein/Laurent 2015).

In both the British and French cases, what matters is the ability to make the expertise about public participation an expertise about technologies of democracy, separated from the issues on which they are expected to be applied, and which can circulate freely from one issue to the next. But what makes this expertise valid differs in the two cases. While the French situation is that of the extension of state expertise to a new domain of governance practices, the British one is characterized by the multiplication of small-scale experiments, indirectly connected to government activities. The French and British examples show the importance of analysing the making of expertise in order to understand the processes that make it acceptable in democratic societies, and able to demonstrate its results convincingly. They also show that conceiving a specific domain of expertise about participatory practices is not neutral, but is strongly connected to the democratic organization of the state. Thus, the analysis of boundary-making processes related to governance expertise should offer entry points for the study of ordering processes that hinge upon ways of conceiving the sources of political legitimacy.

This chapter analyses boundary-making processes in order to discuss such questions as: What makes governance expertise valid? How does it get accepted? How does it succeed in demonstrating its results? These questions are particularly acute when expertise is produced in international organizations, since the absence of state-like institutions might make the construction of a shared understanding of what constitutes the relevant expertise

difficult. This chapter contends that international expertise about governance (and public participation more specifically) is worth conducting through the study of boundary-making processes. These processes offer, I argue, relevant empirical entry points to understand the type of international ordering at play with the production of governance knowledge. This requires that one understands the joint construction of international/national and expertise/politics boundaries.

In the following, I start by discussing the example I focus on in this chapter, namely, a report about public engagement in nanotechnology produced by the Organisation for Economic Co-operation and Development (OECD) in 2012. I then turn to the processes through which the report was produced, and the boundaries on which it was based. Eventually, I describe processes whereby these boundaries could be maintained and the categories they separated purified, and the kind of international ordering these processes result in.[1]

Public engagement in nanotechnology at the OECD

An international expertise about public engagement

The production of governance expertise at the international level takes various forms. Consider the case of the World Bank. When conducting projects in developing countries, the World Bank promotes 'transparency' and 'participation' – in part as a result of pervasive criticisms of its past practices. Such calls are not neutral, as they participate in the development of market-based solutions, as well as transformations of the role of states (Goldman 2001; Ehrenstein/Laurent 2015). Governance expertise, in these examples at the World Bank, is inscribed in the conduct of technical projects or in the definitions of conditions for loans. By contrast, I focus in this chapter on the construction of an autonomous domain of governance expertise devoted to participatory practices. I do so by examining works undertaken at the OECD.

The OECD has long been involved in 'governance' issues. In particular, it has been active in promoting civic participation and innovative mechanisms such as the internet-based instruments of the expected 'e-democracy'. Throughout the 2000s, the OECD released surveys and reports arguing for participatory ways of engaging the public in policy-making (OECD 2001a, 2001b), and also guidelines that provide principles to help policy-makers plan public engagement initiatives and use 'best practices' (OECD 2001c, 2003a, 2003b, 2003c, 2008). Although OECD publications discussed the need for greater public participation in science as early as in the late 1970s (OECD 1979), the initiatives of the OECD in the field of public engagement are not primarily about science, and for most of them deal with public services and infrastructures. In fact, they have only recently targeted specific science policy domains, such as biotechnology and nanotechnology,[2] while

the 'innovation strategy' released by the OECD in 2010 considers 'public engagement' as a central component of innovation policy.

In the case of emerging technologies, like biotechnology and nanotechnology, public engagement has become a component of policy programmes, called for by social scientists (Macnaghten et al. 2005), and discussed by both policy officials and think tanks (Wilsdon/Willis 2004; Renn/Roco 2006). The interest towards public engagement does not prevent uncertainties about its objectives and evaluation, and, in some cases, oppositions from counter-publics not accepting what they see as mere marketing campaigns (Joly/Kaufmann 2008; Laurent 2011a). These discussions show that public engagement is not to take at face value. It is based on technologies and mechanisms that are far from neutral (Lezaun/Soneryd 2007), and on various forms of expertise, more or less institutionalized. As such, public engagement initiatives contribute in the making of political legitimacy and public objectivity. They are sites where governance knowledge is mobilized and taken to work.

At the OECD, the reflection about public engagement in emerging technology was undertaken at the Working Party on Nanotechnology (WPN), a component of the OECD *Committee for Science and Technology Policy* (CSTP). The WPN undertook projects meant to examine 'public engagement in nanotechnology'. Yet what made this 'policy expertise' specific to nanotechnology was elusive. The WPN produced, as I shall describe in the following pages, an autonomous area of expertise about procedures rather than content, about governance mechanisms rather than the technical issues they are supposed to deal with.

How was this expertise separated from the particularities of nanotechnology and why was this separation considered necessary are topics of empirical investigation. At this stage, one should note that the OECD does not produce the same type of expertise than national organizations involved in public participation. Contrary to the French and British expertise bodies, the expertise of the OECD is not related to the promotion of specific participatory mechanisms and the practical organization of them. In governance as in other domains, the production of expertise at the OECD takes the form of reports, comprising statistical representations, evaluation of policy choices, and recommendations about key areas of policy-making. While its expertise is related to various domains of economic activities and regulation, it is also devoted to the evaluation of governance practices and the promotion of 'good governance'. The work of the WPN resulted in a report released in June 2012. The report was entitled *Planning guide for public engagement and outreach in nanotechnology. Key points for consideration when planning public engagement activities in nanotechnology* (OECD 2012), and was the outcome of a collective work initiated as soon as the WPN was created in March 2007. The report listed eight 'points for consideration', and provided annexes where case studies were presented, using these points.

Problematizing public engagement as a set of activities

The starting point of the report was the affirmation of the central role of 'the public and society at large' in the development of nanotechnology:

> The public and society at large have become key actors in the development of the field of nanotechnology and this engagement is critical to the acceptance of the technology in marketable products. In recognition of this, strategies for outreach and public engagement in nanotechnology have been identified as crucial elements of government policies regarding nanotechnology. The need to clarify how to communicate, with whom and how to engage a wide audience in the debate on nanotechnology, and in the development of policies related to it, has been a major point of discussion amongst policy makers. (*Planning guide* . . . , 3)

In the report, international cooperation problematized public engagement in a specific way. First, it made public engagement a specific field of concern for a 'policy expertise' exercised by the WPN. Second, it considered that OECD member countries were 'at different stages' along a trajectory that went towards more public engagement. Third, it gathered within the banner of 'public engagement' a whole range of 'activities' based on different mechanisms. Fourth, it supposes that the problem of 'public engagement' was to adequately plan and organize given 'activities' targeted to given audiences. The list of these 'activities' comprised a variety of mechanisms, including 'public lectures', 'consensus conferences', 'public hearings', or 'science festivals'.

The list was gathered together from surveys conducted among member states. The diversity of activities was reflected in the diversity of 'objectives', which comprise 'increasing public awareness about nanotechnology and its benefits and risks', 'initiating dialogue between stakeholders', or 'enabling an informed public debate'. A diversity of 'outcomes' thereby followed. They included 'increased awareness and knowledge about nanotechnology, and about societal', 'increase in positive attitudes about nanotechnology and industry activities by the public', or 'increased dialogue between stakeholders'. Eventually, these diverse initiatives were gathered together within a common definition, which could be applied to the various activities listed in the report:

For the purposes of this work by WPN, public engagement is a process that is:

- *Deliberative* – emphasizing mutual learning and dialogue.
- *Inclusive* – involving a wide range of citizens and groups whose views would not otherwise have a direct bearing on policy deliberation.
- *Substantive* – with topics that are related to technical issues, and appropriate to exchange.

- *Consequential* – making a material difference to the governance of nanotechnologies.

In the WPN report, public engagement was based on a linear approach following the organization of single events. Objectives, mechanisms, outcomes, and evaluation were connected in a single reality, separated from the particularities of political contexts. Within such framing, the problem of public engagement is to pick and choose the adequate 'activity' according to the type of 'audience' that is meant to be targeted. This is the model of the 'technologies of democracy', which are expected to travel from one question to another (Laurent 2011a). Concurrently, public engagement is a domain separated from the details of nanotechnology itself. 'Nanotechnology' is never discussed as an entity open for redefinition or transformations. Neither are the controversies and uncertainties about the making of nanotechnology programmes and objects. Public engagement is here problematized as an issue of knowledge about various publics, which requires additional expertise in the selection, identification of interests, and management. It is made a matter of organizing technologies of democracy distinguished from the issue at stake.

What does the technology of democracy format do for the OECD? How does it help maintain international order? Why is it necessary to ensure international cooperation? A way of answering these questions is to consider boundary-making processes as empirical lenses. The boundary that appears from the 2012 report separates technologies of democracy from the issues on which they are applied. But this separation needs to be related to others, which are at the core of international expertise, namely, the international/national boundary and the expertise/politics boundary. How does the focus on technologies of democracy allow the OECD to maintain demarcations between the international arena and national interests? Between a policy expertise meant to be objective and decisions framed as 'political'?

To answer these questions, one needs to delve into the very making of the report, when the components of the expected international expertise are defined. Doing so is a way of rephrasing the question of the 'effects' of the OECD expertise. What matters for us here is not the expected 'impacts' of the WPN report, but the manufacture of the report itself. This approach has particular interest in the case of the OECD. As studies of the OECD working processes have shown, the machinery of report production is a process through which the positions of member countries are elaborated, and reflected in the final report (Gayon 2009). A consequence of the construction of international expertise as separated from national policy choices is that the 'effects' of this expertise are inherently problematic. There have been debates about whether or not OECD reports have tangible effects on national policy choices. But one can also shift this discussion, and consider that precisely because of the nature of international expertise, the process of

report production says as much, if not more, about the international ordering at play within the OECD, than the effects of the OECD expertise once it has been crafted.

Producing the report

The 2012 report is the outcome of a process that started in 2007, as the WPN of the OECD CSTP was created, in order to gather knowledge about governance practices in member countries and examine the conditions under which the global market of nanotechnology could prosper.

The WPN launched a project that was supposed to examine the initiatives of member countries in the fields of 'communications' and 'engagement' about nanotechnology. It proceeded by gathering information about the work of member countries in these fields, in order to produce, in a later stage, the 'points for consideration' that would make the core of the 2012 report. This two-stage process is interesting in that it reveals the micro-mechanisms at play within the OECD for the production of international consensus, and which ended up defining the problem of public engagement as that of the organization of 'activities' about publics, separated from the examination of nanotechnology issues. The discussions and negotiations that took place during the crafting of the report are sites where boundaries are made, between international expertise and national policy choices, between various types of international expertise, be it on governance or on technical matters.

Opening up a questionnaire

As many other topics examined by the OECD, 'public engagement in nanotechnology' was discussed first as a matter of mapping what was done in member countries. A questionnaire was sent by the secretariat of the WPN to member countries and it asked them to provide information about 'public engagement'. This required formalizing what 'public engagement in nanotechnology' could be. This was done not by introducing an explicit definition but by suggesting within the questionnaire what public engagement could do.

The initial version of the questionnaire asked member countries to explain the ways in which public engagement had 'influenced policies related to nanotechnology'. For the members of the secretariat of the WPN who crafted this first version, the objective was to situate member countries on a scale according to their level of 'public participation' in nanotechnology policy-making – direct involvement in regulation making or in the choice of research priorities for public research being at the top of the scale. At the time, the member of the secretariat who crafted the questionnaire worked in close contact with members of the British delegation. The imperative to 'move public engagement upstream' was not foreign for them (cf. Wilsdon/

Willis 2004), and was visible in the proposed scale according to which member countries were expected to situate their public engagement initiatives.

The writing of the questionnaire then took several months, as delegates from member countries reworked the initial proposal. Propositions were made by many delegations, and the WPN Secretariat gradually included them, while also making suggestions of its own. The main evolutions of the questionnaire are worth mentioning. First, the initial scale according to which countries would have been supposed to grade their initiatives disappeared. From the various contributions to the questionnaire, it appeared that 'public engagement in nanotechnology' could not be represented nor evaluated along a single scale. By suggesting that the desirable and ultimate objective of public engagement was the participation of lay publics in decision-making processes, the initial questionnaire was not acceptable by member countries nor by the WPN secretariat. It threatened to define an objective better left for countries to decide. The final version of the questionnaire asked them to list their objectives, which, as the 2012 report shows (see above), were diverse. Korea, for instance, could list among public engagement activities public communication initiatives aimed to turn high school students into potential university students in nanotechnology, while the United Kingdom centred its contribution around its objective of 'upstream public engagement' expected to involve various publics at an early stage in policy-making. Eventually, 'public engagement' was enlarged to comprise all activities targeted towards non-specialist publics, whatever their objectives were. The questionnaire had to leave enough room in the definition of 'public engagement' for all members of the steering groups, and, more generally, of the WPN to participate in the questionnaire study, and thus be recognized as active players in the field of public engagement in nanotechnology.

As the initial questionnaire considered the ultimate objective of public engagement as given, it did not propose to describe in many details the type of mechanisms being used, but proposed rather to discuss the extent to which lay publics had been involved in regulatory or policy decisions. As the questionnaire was refined, many other questions were added, some related to the publics being targeted (were they students, children, lay publics, scientists . . . ?) and others to the type of initiatives being organized.

As processed through devices such as description tables and examples provided to help delegates fill up the questionnaire, 'public engagement in nanotechnology' could then appear as a collection of 'activities' characterized by target publics, various modalities of planning, and expected outcomes. When the questionnaire was finally completed, it was designed as an operation meant to list various 'activities' that would connect nanotechnology and various 'audiences', for undefined objectives. This framing would later be further developed in the final report. It allowed the WPN to make the questionnaire (and, more generally, the whole public engagement project) acceptable by national delegations. Indeed, problematizing public

engagement in nanotechnology as a matter of designing the right 'activity' for the right 'audience' had the advantage of identifying an area of expertise about public engagement that could be neatly distinguished from issues related to policy-making expected to be undertaken at the national level.

Whatever the objectives were (whether to convince the public of nanotechnology's benefits or involve them in the regulation of its safety risks), national policy-makers could both be part in the reflection about public engagement and, in a later stage, use an international expertise providing lists of available 'activities'. The boundary between international expertise and national policy choices served twice then. During the production of its expertise, the OECD had to show that its working process did not cross the domain of sovereign action (which it would have done if it had posed that 'public engagement' should ultimately be about opening policy-making to citizens). After international expertise was produced, then the boundary ensured that national governments could use it as a reservoir of available facts distinguished from their own particular choices.

This boundary separated the production of international expertise about public engagement and national policy choices about the objectives and means of public engagement. As it appears from the making of the WPN questionnaire, 'policy expertise' is not supposed to cross the separation between international expertise and national sovereignty decisions, since 'international cooperation' also meant that countries with very different democratic organizations cooperate. Focusing on 'activities' allowed the WPN to produce knowledge about 'public engagement' that did not threaten to evaluate the effectiveness of this or that national approach. It made it possible to stabilize a dual boundary, which separated international and national interventions as well as expertise and politics.

Writing the points for consideration

The second step of the process that would lead to the 2012 report was the writing of guidelines about public engagement in nanotechnology. This was the outcome of later developments, which comprised a semi-public workshop held in Delft, the Netherlands, in March 2008, and collective work with the secretariat of the WPN and a subset of national delegates involved in the public engagement project. In this later stage, the objectives of public engagement appeared to be 'about the publics' and only them, as the definitions of successive 'points' focused on the practical organization of 'activities'. These objectives were framed around the definition of public engagement as a process being 'deliberative', 'inclusive', 'substantive', and 'consequential'. This definition, initially meant to target initiatives contributing to 'upstream public engagement', eventually proved useful as it could encompass the whole range of activities identified during the questionnaire phase.

Writing the 'points for consideration' followed directly from the questionnaire. Once the main issue had been defined as that of listing and describing

various 'activities', then the writing process was considerably facilitated. During the close session of the Delft workshop, members used data gathered through the questionnaire and presentations made during the public part of the workshop in order to list activities and their components (including their 'audiences', 'objectives', and 'outcomes'). The framing of the WPN expertise about public engagement in terms of activities distinguished from the particularities of nanotechnology made the process quite simple. Participants would simply list activities without attempting to classify them. These lists were produced through a process of informal collection of bits of expert advice from the first day workshop, information gathered from questionnaires, the personal experience of country delegates, and interventions from the Secretariat. They were crafted in such a way that they could be applied to different understandings of what public engagement in nanotechnology could be, be it a public perception study, a science fair, or a process of consultation with NGOs.

Eventually, the two-step process that led to the 2012 report presenting the *Points for Consideration* resulted in the stabilization of two boundaries. To the boundary distinguishing international expertise and decisions related to national choices (i.e. national choices pertaining to 'politics') that was at stake when crafting the questionnaire was added another one, separating 'activities' from the content of nanotechnology issues (be they the risks of technical objects or the future perspective of a scientific programmes).

These boundaries were seen as conditions for international cooperation to be realized. The objective of international cooperation at the WPN is indeed to gather information about publics, and to explore the ways in which national publics can be engaged in nanotechnology development. Therefore, the role of the WPN is not to promote one version of democratic organization rather than others. Separating an expertise on technologies of democracy from national choices is a way of answering a call of international cooperation in nanotechnology that seeks to use it as an engine for the development of the nanotechnology market. And developing this promising market requires that no variation across national acceptance compromise the circulation of economic goods.

The problem was especially acute for American science officials. During an OECD roundtable on international cooperation in nanotechnology, the chair of the 'Global issues in nanotechnology working group' of the US National Nanotechnology Initiative explained why 'harmonized policies and constructive interactions between nations' were important. As 'previous technologies have seen public acceptance or rejection begin in one country and migrate to others', it was necessary, for him, to ensure that the acceptance of nanotechnology would not follow the (alleged) path of GMOs.[3] This intervention frames in an explicit way what the concerns were at the WPN, namely, *not* about whether or not public engagement will end up involving lay citizens in public decision-makings, or whether or not they will be

educated in nanotechnology, but about the production of relevant solutions for countries to use in order to ensure the acceptance of nanotechnology. Hence the interests of the framing of public engagement as a set of activities separated from the content of nanotechnology. This choice allows the OECD to maintain both the diversity of national choices about democratic ordering (countries may decide to involve their citizens in the making of science policy) and a common global objective of market extension through the construction of public acceptance. The reasoning here is based on a version of international cooperation whereby what is shared is the development of technology and market across variations understood as 'political' in that they define what democratic societies are or should be in terms of how to govern publics.

Analysing the ways in which the boundaries on which this reasoning relies offers a path to understand that such a reasoning is not neutral. It makes it impossible to conceive alternative problematizations of public engagement (and more generally technological development and democratic legitimacy). I examine this latter point in the next section, through the analysis of situations where boundaries at the WPN were questioned, because internal procedures of evaluation or initiatives of national delegations cross them.

Purifying

Demarcating between (policy) expertise and normative judgement

The previous section showed that the OECD expertise needs to demarcate its international expertise from the national initiatives and choices. Hence, distinguishing between 'policy expertise' and 'normative statement' was a key concern throughout the work of the WPN. While the former was indeed the core of the WPN activity, the latter was clearly beyond the scope of its mandate. As the WPN was developing its guidelines on public engagement, a permanent concern of the secretariat was to 'not be judgemental' about what the country delegates might propose – even if their contributions might have contradicted the overall definitions agreed. Stabilizing the boundary between WPN 'policy expertise' and 'normative statements' about what countries ought to do regarding public engagement made it difficult to deal with the issue of the evaluation of public engagement activities. The evaluation to be done was that of the *Points for Consideration*, that is, the methodology, and not that of the engagement mechanisms themselves. Keeping the evaluation of public engagement at bay was a way of considering, as it was repeatedly said in meetings and written in reports, that 'there was no right answer'. Thus, the expertise of the WPN could not pretend to propose definite statements about how to do public engagement in nanotechnology. The WPN was to be 'objective' in that it should not favour one (national) definition of public engagement over another one. The 'objectivity' at stake here is that of the international organization: it is not supposed to adopt one

E. Select the activity **The examples of questions helped me...**	Ranking				
	1	2	3	4	5
Identify possible activities					
Select between activities					
Decide on the activity					
Other (please state)					

Figure 10.1 Questionnaire template example

national viewpoint about the government of publics rather than others, and, as a consequence, abstains from judging national situations – which could be considered as attempts to interfere with countries' sovereignty.

This did not prevent the evaluation issue from regularly popping up in discussions among delegates, in emails and written reports.[4] Yet each time the issue of evaluation surfaced, the Secretariat was attentive to make it clear that it was 'not the main point of WPN work'. In providing these precisions, the Secretariat made use of a 'template' (Figure 10.1) meant to evaluate the 'usefulness of the Points for Consideration', and not, 'the engagement methodologies themselves'.

The 'template' was constructed as a device aimed to ensure that the demarcation between policy expertise and 'normative statements' was maintained. It shifted the objective of the Public Engagement Project from an initial 'how best to engage the public?' to a more complex 'what are the questions to ask in order to plan a mechanism that aims to engage the public, whatever that mechanism might be?'. The last expression is the product of my own effort to render explicit the position of the Public Engagement Project at its testing stage. This was not a position that delegates understood clearly, yet whereas the Secretariat never attempted to discriminate among ways to do 'public engagement', it did react to perturbations introduced by delegates to make sure the demarcations of WPN expertise were maintained. Therefore, the Secretariat could ensure that WPN expertise would not interfere with national policy-making. In doing so, it demarcated the policy expertise of the international organization and the normative evaluation performed by potential users of this expertise, and, ultimately, restabilized the boundary between international expertise and 'political' judgement that the process leading to the report had relied on.

Demarcating policy expertise and technical expertise

In the case of the evaluation of member countries' initiatives, new issues raised from within the WPN (as, for instance, delegates question the ways in which the guidelines should be evaluated) restabilized the boundary between policy expertise and statements considered as 'political'. But restabilization was also needed when initiatives from national delegations threatened to destabilize the boundary between the 'policy' expertise about public

engagement techniques and the issues on which these techniques were meant to be applied. As seen above, the 2012 report of the WPN problematized public engagement in nanotechnology as a matter of technologies of democracy, independent from the particularities of nanotechnology itself. This demarcation had been stabilized in the questionnaire described in the previous section, but was regularly questioned. A relevant example of such situations is an initiative launched in November 2008 at the WPN by one of the national delegations. During a plenary meeting, a delegate proposed to organize a roundtable devoted to nanotechnology's 'governance frameworks'. For him, it was a way of pursuing the public engagement project by other means, in order to discuss innovative modes of public management of technology – such as collaborative 'safety by design' (cf. Kelty 2009) or participatory technology assessment. Other delegations saw the initiative as an opportunity to make visible their own national attempts at governing nanotechnology. For instance, the French delegation was very much supportive of the 'governance roundtable', as it was preparing for future participatory interventions and regulatory experiments with nanomaterials (France would later become the first country to organize a national public debate about nanotechnology and a mandatory declaration of nanomaterials).

Accordingly, the discussions that followed the initial proposal for the roundtable suggested that policy-making in uncertainty was to be especially examined. Propositions were made to do so through the discussions of mechanisms such as codes of conduct for private companies and research institutions, as well as participatory mechanisms targeting lay publics. At the time, the European Commission had released a Code of Conduct meant to be used by European researchers (EC 2008), and participatory experiments were under way in various European countries. The roundtable planned to discuss the questions raised by the difficulty of evaluating the risks of nanomaterials, and, for that matter, the difficulty of crafting definition criteria for 'nano-ness' altogether, in order to explore what this situation entailed for the identification of nanotechnology's public and for the crafting of precautionary instruments able to deal with such an uncertain situation. The mechanisms then connected governance questions (how to find the appropriate procedures for decision-making? How to identify the relevant concerned groups?) and technical ones (how to characterize the situation of uncertainties? How to grasp the elusiveness of nanomaterials?). Throughout these discussions, international cooperation and the production of expertise at the OECD appeared as an issue of determining both social expectations and the technical characteristics of nanotechnology objects.

Before being officially accepted during a plenary meeting, this proposition had to be reworked by the WPN secretariat, so that it could be circulated as a proposition endorsed by the whole Working Party. It is at this stage that the initial proposal was redefined. The OECD staff members in charge of the WPN were not satisfied by the initial version of the roundtable agenda.

That they were reluctant to accept the proposition as it stood at the time was explained by a senior official at the CSTP (to which the WPN belonged). This official considered that the proposed roundtable was problematic because it ignored the allocation of work between the WPN, in charge of policy expertise about nanotechnology, and the Working Party on Manufactured Nanomaterials (WPMN), which was in charge of examining the safety issues of nanomaterials. According to him, the initiative considered 'risks and not the benefits' and 'mixed science and policy', whereas the mandate of WPN was limited to policy. By contrast, 'WPMN did technical works'.

One could identify here the effect of organizational structures on modes of reasoning and work practices. But, and perhaps more importantly, this organization is also a way of making it possible to deal with a complex problem, understood in various manners across the member countries. It reflects the overall objective of the construction of a global market in ways that treat separately the action on the supply side on the one hand (nanotechnology products expected to be safe, and dealt with through regulatory frameworks do not result in de facto trade barriers), and the action on the demand side on the other hand (publics expected to be engaged enough in nanotechnology that they accept its products). Yet what the governance roundtable proposed to do suggested that technical examination itself could well be 'political' and that risk evaluations could differ across member countries, and that modes of engagement could have consequences on the technical knowledge being produced. As initially framed, the roundtable did not fit with the OECD reasoning that proposed to describe and act on national variations about how to govern publics (and not more) for the sake of a global objective of acceptance of technologies.

Purification processes

At the OECD, boundaries have to be drawn not only between the international expertise and the sovereign decisions of member countries, but also between a 'policy expertise' and a 'technical expertise'. This way of dividing up a complex problem into separate dimensions expected to be well distinguished from each other results in the purification of messy issues – that of nanotechnology. 'Purification' is a term that can characterize the operations ensuring that categories meant to be separated are indeed distinguished. It results in the stabilization of boundaries (between 'technical' and 'policy' expertise, between 'expertise' and 'normative judgement'). Purification occurs in all the micro-processes that ensure that reports are written as they are supposed to, that questions are answered the right way, and that projects are presented appropriately during plenary meetings. It is performed mostly by the Secretariat of the WPN, as it answers propositions from national delegations and makes sure that they are processed into acceptable initiatives within the international arena. Questions raised by the national delegations about the evaluation 'template' or propositions mixing what should

be separated are trials for the international organization. They force to reproduce the boundaries on which the international expertise relies, and make explicit the way of doing so. As such, they offer empirical lenses into processes of international ordering. Echoing works in science studies that have shown its importance in political ordering (Latour 1993), the description of purification processes at the WPN displays the operations through which international order is maintained.

International ordering at the OECD, for that matter, relies on both the purification of governance expertise and that of technical expertise. This dual process has important effects. Processes that would construct nanotechnology markets by considering that the production of supply and demand is a single process are not easily accounted for, since they need to get purified in either 'policy' or 'technical' expertise. A first effect of purification at the OECD is that it makes the politics of technical expertise unseen. Yet the production of technical expertise about nanomaterials at the WPMN is based on the selection of reference materials used to develop tests and according to which the hazards of other materials will be assessed in the future. The choice of reference materials is thus strategic – whether companies want their products to be used in order to sell them as 'reference' necessary for all future tests, or plan *not* to be associated with a potential hazard (Laurent 2011b, 246–251). The complex negotiations involving national delegations and companies providing materials and/or conducting tests, albeit necessary to deal with this strategic choice, are back-staged in order to make technical expertise acceptable (cf. Hilgartner 2000). Reciprocally, what is made invisible at the WPN through purification is the potential redefinition of governance practices because of the uncertainties surrounding both the publics and the objects of nanotechnology. The technology of democracy format is indeed a way of *not* entering complex discussions such as whether or not current public regulation has to be redefined. Thus, purification allows the OECD to render invisible both the politics of technical expertise and the potential redefinitions of governance practices with emerging technologies.

Conclusion

In 2002, the US strategic plan for nanotechnology referred to the need to 'increase international engagement to facilitate the responsible and sustainable commercialization, technology transfer, innovation, and trade related to nanotechnology-enabled products and processes' (NNI strategic plan, 27). In this document, international collaboration was seen as a condition for the 'development of a vibrant and safe global marketplace for nanomaterials and nanotechnology-enabled products'. Thus, 'international cooperation' in the responsible development of nanotechnology in general, and in public engagement in particular, is not just a matter of peaceful agreements among countries interested in the safety and acceptability of technological

innovation. It is also a strategic matter of governments and private companies eager to ensure their market share in the developing nanotechnology market.

This means that the international expertise about public engagement has to contribute to the making of the global market of nanotechnology, in ways that render the production of international consensus acceptable. Public engagement is then a central component of international cooperation since it should participate in the harmonization of the future global market for nanotechnology. The production of expertise about public engagement is an international concern, as the development of international markets is supposed to be threatened by differences in public acceptability of technical products or, more broadly, areas of research and development. It is situated within an objective targeting the construction of a global market, and is as such directly related to initiatives targeting products expected to circulate without trade barrier hindrances.

Making public engagement a problem of designing activities targeting audiences is a way of contributing to this objective. It sustains a reasoning articulating a global objective of market development and an understanding of national variations in ways of governing publics. It requires that solid boundaries are maintained, between the international expertise and national policy choices on the one hand and between policy expertise and technical expertise on the other hand. This implies that purification processes are always under way, for these boundaries to get stabilized. This organization forces to eliminate propositions (about the role of publics or the definition of technical objects) that could potentially displace the repartition of work with the international cooperation framework. Thus, boundary-making appears as a central operation in the making of international governance knowledge, and an operation that ensures the stability of international order.

While public engagement in science is becoming the reference to organize the relationships between science and the public, it is important to reflect on the political construction that the expertise about public engagement enacts, and more generally, on the role of governance knowledge in the stabilization of social order. The analysis of boundary-making processes is a particularly fruitful avenue for the examination of both the ways of producing expert knowledge and the constitutional organization it results into.

Notes

1 The empirical material used in this chapter is based on a direct involvement in the secretariat of the WPN in 2009–2010, the consultation of private archives of a former member of the secretariat, and interviews with this person and with members of the French delegation to the WPN. The quotes in the text are either excerpts from interviews or notes I took while attending meetings.

2 This does not mean that science policy is not a long-term concern of the OECD. As Benoît Godin has shown, the OECD was central in the construction of such science

policy notions as 'national innovation systems' or, more recently, the 'knowledge-based economy' (Godin 2006). The recent programmes for emerging technologies have initiated new initiatives about public engagement within the OECD.

3 This narrative is not to be taken at face value though (cf. Rip 2006).

4 For example, the following email, sent by a member of the steering group: 'Should the third dot point below include evaluation along with monitoring and benchmarking? [. . .] I like the fact you've clarified that you're seeking to evaluate the method, not the activity, but at the back of my mind there are also all the examples of things that were great policy outcomes at the time – but not so great when finally put into practice (deregulating banks and the loans industry, GMOs, food irradiation . . .)'.

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11

Black-boxing Sustainable Development: Environmental Impact Assessment on the River Uruguay

Nicolas Baya-Laffite

Introduction: black-boxing governance in instruments

Over 40 years of diffusion worldwide, Environmental Impact Assessment (EIA) has acquired an authoritative governance script that says that part of the decision-making process about the licensing or the funding of territorial development projects can be delegated to the instrument. Inscribed in applicable planning and development (hard and soft) law, regulations, and general technical reference documents, EIA affords its use for legitimizing and challenging decisions where a balance between competing environmental and developmental interests is to be struck. Initially associated with information provision for ecologically rational planning, EIAs became enshrined as a means, and ultimately a condition, for the substantiation of sustainable development and participatory governance, whatever these may mean (Cashmore et al. 2007).

Moving beyond debates on procedure and substantive outcomes, EIA is seen in this chapter as constituting a ritualistic device, affording, through a sort of choreography, a legitimate governance process before deciding on development projects with regard to their environmental consequences (cf. Feldman/March 1981; Strathern 2000; Wynne 2010). But exactly because of that, it is suggested, EIA also constrains governance into particular directions, including some degree of de-politicization and, eventually, contained politicization within EIA's governance script.

When put to work, EIA's governance script configures actors (Akrich 1992; Woolgar 1990), creating a structured space around the assessed development project. This is a space where decision-makers, developers, consultants, NGOs, and affected populations, among other concerned actors of diverse nature, are accommodated if they agree to play by the rules of the game, to engage in producing, exchanging, and criticizing scientific and technical information and associated political values about potential social and environmental impacts of decisions. EIA is thought to be in terms of both processes and products. The EIA process results in a series of translations

of heterogeneous elements into inscriptions, including the impact studies produced by the project sponsor, all sorts of documents produced by consulted parties, and the final EIA report produced by the competent authority. All these EIA products are to be considered in the decision. While there is in general no substantive prescription as to what the content of decision should be, EIA, as has been shown (Holder 2006), is not politically and epistemically neutral in terms of the outcomes it favours, as it provides the developer, public or private, a privileged avenue for influencing the decision process through its expertise. Considering EIA's use for the legitimization of often controversial development projects, the question then is to what extent opponents to such projects, who wish to justify their concerns in public debate, are also willing and ultimately able to politically challenge the instrument's fundamental value beyond the specific circumstances of its utilization. This means moving from politicization of projects to politicization of EIA as a knowledge-based governance instrument for the legitimate conciliation between development and sustainability.

In this light, EIA is analysed here as a political technology, where the politics have to do with black-boxing of governance arrangements – de-politicization as a governance move – and counter-moves that cause re-politicization. Drawn from Science and Technology Studies (STS) (Callon 2001), the concept of black-boxing refers to an elementary form of reified power and social ordering. In the STS field, Actor-Network Theory (ANT) has used the concept in explaining, often through case studies, the processes by which facts and artefacts are made, how their validity and efficacy are established, how they diffuse, and how they resist challenges. ANT stories of black-boxing deal with trajectories of discovery and innovation, path dependence and deployment, and closure of socio-technical controversies (Bijker/Law 1992). They show how strong multi-actor-network stabilization in the process of nature/society construction results in the black-boxing of heterogeneous elements into standardized forms which ensure manipulation, mobility, and legibility of reality. Inside the black boxes, out of sight, there are arrangements and crystallized power relations that hold heterogeneous elements together. This allows actors to rely on the black boxes and use them as a resource for effective action, without having to continuously renegotiate everything. The result is temporary de-politicization of black-boxed parts of reality. Temporary, because black boxes have fissures, can be challenged in specific contexts and can eventually break, with some of their elements being exposed to partial re-politicization in controversy, before being black-boxed again (Callon/Latour 1981).

Black-boxing of parts of reality and associated processes of de-politicization and re-politicization can be observed in environmental governance through the production, diffusion, and use of policy instruments (cf. Lascoumes/Galès 2005). This is the case with the EIA, a policy instrument which has so far escaped STS scholarship on co-production sites and processes (cf. Jasanoff

2004); only recently has some EIA scholarship drawn on STS approaches to develop EIA theory (cf. Cashmore et al. 2010). In keeping with this recent literature on the socio-political development of EIA, this chapter focuses on EIA struggles – this is controversy about projects in which EIA's use is at stake – as valuable sites for learning about the black-boxed governance at work, as the knowledge that has been inscribed in EIA is tested and debated, at least partially. The following sections of the chapter first trace the trajectory of diffusion and evolution of meaning in EIA's black box of knowing governance arrangements, highlighting the construction of a vast actor-network enabling the instrument to work. Then, a rich case study about the EIA of pulp mills in Uruguay, on the boundary river with Argentina, allows examination of how the EIA's script operates as an obligatory passage point to legitimizing as well as challenging the contested industrial investment projects, structures collective action, and constrains its own partial politicization in debates about what meaningful EIA of projects for sustainable development is. Finally, some lessons on the effects of the EIA's way of absorbing politicization are drawn.

Black-boxing and diffusing EIA's governance script for sustainable development

Today, EIA is an essential moment in the governance of territorial development projects. More than 120 countries worldwide, many international environmental agreements, and the main development assistance organizations, have established some form of EIA requirement prior to licensing or funding decisions being made. EIA's current status, its standard procedural template, and its overall purpose are the result of a long trajectory of black-boxing and diffusion in the context of economic globalization. In what follows, this trajectory is retraced so as to characterize the EIA's standard procedural form, as it appears through and beyond the specific forms EIA takes in national, international, and transnational instruments.

EIA's diffusion from US NEPA to transnational finance soft law

The first EIA legal template was designed in the United States within a vast movement of policy rationalization. Driven by key figures of the American environmental movement and its representatives in Congress (Milazzo 2006), EIA was put forward as an innovative science- and technology-based instrumental response to the emergence of the environment as a political object. Its so-called father, at least formally, was political scientist Lynton Caldwell, one of the main designers of the National Environmental Policy Act (NEPA), adopted in 1970. EIA was introduced in NEPA as an action-forcing requirement, namely, that federal agencies conduct an *environmental assessment* and disclose an *environmental impact statement* prior to deciding on projects, plans, and programmes, as a means to incorporating

integrated environmental protection in decision-making. Since the landmark Calvert Cliffs case (Calvert Cliffs Coordinating Committee, Inc. v. Atomic Energy Commission), NEPA litigation has provided environmentalists a key tool for temporarily blocking and sometimes modifying decisions on controversial projects. Thus, entrepreneurs, agencies, and environmental groups were given both an instrument and an arena for engaging in environmental struggles. The result was a learning and disciplining process leading to the naturalization of EIA as an unavoidable step in development decision-making.

International diffusion beyond NEPA began with the United Nations Conference on the Human Environment, held in Stockholm in 1972, where the idea of incorporating EIA in legislation raised much enthusiasm. With its aura of scientific and technical rationality, EIA was promoted as a universalizable instrument for implementation of the Stockholm principles at the project level, namely, preventive action based on science and technology and integrated rational environmental planning and management. Effective diffusion supported massive investments in normalization and institutionalization to create the material conditions for such global adoption. UN agencies and programmes, institutions of multilateral economic cooperation and development assistance, and some large NGOs (Hironaka 2002) have been the key, specific places where EIA knowledge and techniques were produced and transferred. Success has been remarkable. In the 1970s, EIA legal requirements were incorporated in about 20 industrialized and some developing countries. Many others would follow over the next few decades.

Since then, the legislative framework in the first EIA systems, especially in Europe with the adoption of the EIA directive in 1985, has undergone considerable revision, and its scope of application has been much extended in a process of governance learning and experimentation. Particularly, EIA incorporated sustainable development and public participation in its governance script of informing decisions. Calling for a balance among goals of social equity, environmental quality, economic efficiency, and (the nevermentioned goal of) political governability, the sustainable development concept was progressively enshrined and associated with EIA. The World Charter for Nature in 1982, the Brundtland Commission (World Commission on Environment and Development, WCED) in 1987, and the Rio Earth Summit (United Nations Conference on Environment and Development, UNCED) in 1992 constitute landmarks of such evolution. In 1987 the United Nations Environment Programme (UNEP) recommended in its general goals and principles for EIA that EIA be implemented 'with a view to ensuring environmentally sound and sustainable development'. Principle 17 of the 1992 Rio Declaration confirmed this by prescribing that 'environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority'.

In parallel, international EIA duties were incorporated in international agreements, though with less precision as to their scope and nature in comparison with national EIA. With the governance of transboundary impacts becoming a core concern, practice led to the enshrinement of a customary duty of EIA before environmentally harmful activities with potential effects on other states' territories. Subsequent developments of enforceable international instruments agreed by the UN Economic Commission of Europe (UNECE), namely, the Espoo Convention on EIA in a transboundary context, reinforced and harmonized the normative content of EIA. However, application of these UNECE instruments remains limited to signatory countries. The International Court of Justice (ICJ), among other jurisdictions, contributed substantially to the evolution of EIA in general international law through several judgements. Most of these concerned disputes over sea and watercourse use, an issue that has posed complex problems given its cross-border nature. In each decision the ICJ confirmed EIA as a condition for sustainable development (Segger 2009). However, findings of breaches in EIA obligations have never led to stopping the disputed projects, with international judges always emphasizing monitoring over no-development options. EIA is about ensuring sustained development within certain limits, not stopping it.

The adoption of EIA in most developing countries took place mainly during the 1990s, often through their first environmental law(s), even if practices of EIA date back to the 1980s or even 1970s in some countries. Such development was not endogenous, but top-down: it resulted from the need to comply with requirements of international and national development assistance agencies (Modak/Biswas 1999). Formalizing the early practices, OECD recommendations issued in the mid-1980s that international donors require borrowers to undertake EIA for projects entailing significant impacts consolidated the trend. EIA was progressively inscribed in soft law standards governing the transnational level: operational policies, guidelines, principles and codes of conduct for bi- and multilateral development agencies, investment banks, and multinational companies.

The World Bank has played a key role, even if the formal incorporation of EIA in its funding procedures came about only in the 1990s, in the aftermath of major controversial projects such as the Narmada Dam in India. The crisis this project entailed marked a turning point in the life of the Bank, a turn evidenced by the slogan 'don't get zapped by the Narmada effect, do your EIAs', now used in Bank staff's training seminars (Goldman 2006, 153). Since then, the World Bank requires not only the adoption of EIA by its client countries but also a mandatory internal EIA of its own project financing. Moreover, the establishment of the operational policy on environmental assessment (OP 4.01) in 1998 provided specific points at which potentially affected populations and concerned NGOs could officially participate in the EIA process early on in the project funding cycle. This reform was a major success. A huge transnational consulting industry and network of NGOs has

developed around the EIA practices of the World Bank, and with it, EIA practices and guidance issued by the Bank have now become a global benchmark. This has made the Bank a nearly unchallengeable authority in this respect.

In keeping with this evolution, EIA became a way for private sector governance to reduce economic risk. This flipped the purpose of EIA from environmental protection against business interests to the protection of business against environmental interests. Initially applied to major national infrastructure projects, such as hydroelectric dams, EIA in developing countries increasingly involved large, private, direct foreign investment projects in various sectors. Blamed for their responsibility in the ecological crisis, transnational companies operating in environmentally sensitive sectors reacted with a voluntary commitment to EIA in terms of corporate social and environmental responsibility. This is the private sector's form of sustainable development, as materialized, for example, in adherence to the World Bank's International Finance Corporation (IFC) Equator Principles, a benchmark for the financial industry to manage social and environmental issues in project financing (Lawrence 2009). In this context, EIA provides an arena linking the company's (or its consultants') expertise, public participation, and administrative decision-making, where economic actors seek to impose their own criteria for defining and managing environmental problems. Long considered as a constraint to avoid, EIA now appears to business as a valuable opportunity to control the social environment of (and thus potential challenges to) a project in order to reduce economic risks stemming from both environmental damage and social protest (Gunningham et al. 2004).

EIA's black-boxed script of knowing governance

EIA's successful diffusion was part of the development of a whole new institutional universe, including the creation of ministries in change of the environment, the emergence of specialized NGOs and private consultancies, and the development of a new academic transdisciplinary action-oriented field in university programmes and research, just to name a few elements. Beyond countries and organizations, a global community of practitioners, researchers, and users of EIA in multiple contexts has progressively taken shape. Since 1980 the International Association for Impact Assessment (IAIA) has been the main global forum for such community, with its own conferences, journals, and handbooks. Participants come from fields ranging from environmental sciences and engineering to law and political science. Members of this community hold many positions in a global network, the nodes of which are national and international organizations, public and private, in different realms dealing with EIA (cf. Voß/Simons 2014). This transnational community has played a major role in configuring the standard form of EIA, which can be summarized in a series of sequenced steps to which EIA should ideally conform.

The 'screening' of the project, the first step, answers the question: is a full EIA process necessary prior to deciding on the project? This implies

preliminary judgement of the significance of impacts to determine whether the project should be subject to a full EIA procedure. To avoid controversy about screening, it is common to have lists with categories of projects and standards and thresholds implying mandatory full or partial EIA.

The 'scoping' of the EIA, the second step, addresses the question: which impacts should the EIA consider, and to what temporal and geographical extent? This is where the limits of the application of preventive and precautionary rationales are defined in regard to efficiency criteria (Snell/Cowell 2006). Being of paramount importance to ensuring environmental and political effectiveness of EIA, public consultations at this stage are considered good practice.

The environmental impact study is the third step: what are the specific impacts that result from the project and what is their significance? How can they be prevented and mitigated? Answering implies characterizing both the projects' technical specificities and the baseline conditions of the social and natural environment; predicting the impacts using models and extrapolations; assessing their significance based on expert judgement; proposing reasonable alternatives, mitigation, and compensation measures; and defining monitoring and management plans so as to avoid a significant environmental impact. Multidisciplinary expertise is therefore required. The polluter pays principle demands that the burden of producing the studies be on the developer, public or private; the developer in turn often commissions the studies to specialized private consultancy firms or sometimes university-based consultancy services (Baya-Laffite 2008).

The fourth step is the review of the impact study by the competent authority and by the public. The question here is whether the study has assessed all significant negative impact and whether the project's mitigated environmental impact is acceptable. First, the competent authority must make sure that the impact studies are complete in all relevant aspects before disclosing a public summary, and sometimes the complete studies, for public review. Then, public consultations with affected populations are organized to inform about, and comment upon, the studies. This might include, in the case of transboundary impacts, bilateral consultations with other states and their populations, depending on the applicable legal framework. This is often the first occasion the public has the opportunity to engage in the EIA process and problematize it. However, it is also an occasion to determine which questions are considered legitimate in the public assessment, thereby separating political claims about the project's desirability from technically and scientifically grounded objections to the studies. Finally, the competent authority assesses all the information elicited in the process, including documents submitted in public consultations in order to produce the final EIA report with recommendations for the decision.

The sixth and final step is the decision. Very often, the decision whether to proceed with the project has been already made in prior stages of the

planning process. Thus, the question at this stage is less whether to grant development consent or funding, but rather, under what conditions, based on the conclusions of the EIA process, the development shall proceed.

Two further steps can follow after the decision, if consent is granted, which function as extended EIA review. On the one hand, there is the follow-up to the EIA while the project is implemented and then when it is commissioned. The question here is whether the project has implemented all proposed mitigation measures and whether the impact conforms to predictions and assessments. This is done through a pre-commissioning audit and continuous monitoring. On the other hand, there is the possibility of legal review, if the EIA-based decision process is challenged in courts or via other quasi-jurisdictional grievance mechanisms. The basic general question here is which are the applicable norms and whether the decision-making process was effectively based on a full and meaningful EIA both in its procedural and in its substantive aspects, as required by applicable EIA norms.

Doing EIA means going through these steps that enable functional deployment, each anticipating specific questions and requiring answers based on specific kinds of knowledge and information (Glasson 2008). EIA thereby frames collective action by affording basic framings of how to deal with the issue at hand to produce nature/society orderings. This, in itself, is black-boxed knowing governance for environmental protection and sustained industrial development in a globalized market economy.

EIA's black box at trial on the shores of the River Uruguay

When EIA is done, there are debates about the assessed development project and the environment, which imply debates about scientific and technical knowledge. But there are also sometimes debates about EIA, which imply debates about governance knowledge. Some of these can problematize what meaningful EIA is, and thereby open up some elements of its basic governance script to debate. The case of contested pulp mill projects on the River Uruguay allows us to see the EIA's black box at work with its script structuring the debate in a complex environmental governance multilevel context (for a detailed analysis of the case and references to primary sources see Baya-Laffite 2015). The case is particularly interesting as it offers a view of EIA struggles around contested projects that were subject not to one, but three intertwined EIA processes: a national one in the licensing of the projects, a transnational one in the financing of the projects, and a bilateral, transboundary one within a water treaty binding two riparian states. EIA structured collective action and framed the debate at these three levels of governance/government, leading to specific outcomes. After presenting the context of the case, the EIA of the projects and the resulting de-politicization is examined to see how EIA becomes a matter of concern leading to some politicization.

EIA to protect the installation of pulp mills

Uruguay's EIA regime was institutionalized in 1994. The Ministry of Housing, Land Planning and the Environment and, within it, the National Directorate for the Environment (DINAMA), have been in charge of undertaking EIA of land development projects since that time. The most important test for Uruguayan EIA since its adoption came with the first two foreign investments in pulp mills, totalling 200 million US dollars. In July 2002 ENCE, a Spanish multinational forestry product company, requested an environmental licence from the Uruguayan government to install a pulp mill with a capacity of 500,000 tons of Elementary Chlorine Free (ECF)-bleached Kraft pulp per annum to be exported in the global market. The proposed site for the project was a large *estancia* where the company was already building a port terminal, ten kilometres from the city of Fray Bentos (20,000 inhabitants), on the shores of the River Uruguay, the natural border with Argentina. In October 2003, ENCE received an environmental licence. That month Botnia from Finland proposed a second ECF Kraft pulp mill. With an annual capacity of one million tons, it was to figure among the biggest in the world. The site was situated four kilometres from Fray Bentos and six kilometres from ENCE's site, also on the shores of River Uruguay. Botnia received its environmental licence in February 2005. In compliance with the 1994 EIA regulations both licensing decisions were preceded by the respective EIAs.

Step by step, the choreography of EIA structured the governance of the projects. As required by 'screening' provisions, ENCE and Botnia auto-classified their projects: both in category C for projects with potential significant impacts on the environment. DINAMA affirmed this classification. Therefore, there was no debate about the fact that both projects could have significant negative impacts on the environment and thus required a full EIA procedure, including public consultations prior to development consent.

The temporal scope of the EIA covered the full life of the projects; the geographical scope was limited to a radius of 40 km for ENCE and 60 km for Botnia around the projects sites. The scope excluded long-term and long-distance hypothetical or speculative impacts, as is common practice. DINAMA explicitly demanded that Botnia study the cumulative impact of the two projects (as by then ENCE had already obtained its licence). Regarding transboundary impacts, Uruguay considered that, since the projects were national, in spite of their siting on the River Uruguay, the EIA process should not be a transboundary one. Because of their siting, the projects were, however, subject to the River Uruguay Statute, signed by Uruguay and Argentina in 1975 to ensure the common rational and optimal utilization of the shared resource. The Statute does not mention EIA. However, both parties used EIA to comply with both procedural and substantive obligations, namely, to inform and consult each other about projects through the permanent river commission, and to take measures to ensure that water pollution is avoided.

In this framework, Uruguay considered that the projects were national and its only obligation was to notify the river commission of the national EIA once completed.

To produce the impact studies, ENCE commissioned a consulting firm belonging to its owners; Botnia created its own EIA team and commissioned specific aspects of the studies to its regular consultants. The only significant impacts identified were social and economic, and were presented as highly positive for the Fray Bentos area and Uruguay. As regards siting alternatives, the studies justified not considering other sites on the grounds that Fray Bentos was strategic to the operation's needs: both companies had most of their plantations in the area; the area had the necessary infrastructure for the transportation of materials and products; and the river provided both the process water and the necessary receptor for the effluents, ensuring dispersal of pollution. As regards technological alternatives and mitigation measures, both studies proposed using Best Available Techniques (BAT) as defined by the European Union. Using BAT was presented as an alternative and as a mitigation measure in its own right in comparison to old, polluting bleaching techniques, still employed by local pulp and paper makers in the region. Both studies concluded by proposing operational monitoring and risk management plans.

DINAMA's task of reviewing the studies presented a major challenge, as it had no prior experience with this kind of large industrial projects. However, it sought to prove it was able to accomplish its mission by pointing out important deficiencies in the studies and requesting that ENCE and Botnia fill several information gaps, particularly concerning the techniques to be implemented and the modelling of pollution dispersal. Once these were addressed, DINAMA ordered disclosure of the studies' summaries for public review.

The sponsors organized public consultations in Fray Bentos, providing a first occasion for the developers, their consultants, Uruguayan authorities, and both the Uruguayan and Argentine constituencies to meet and exchange arguments. The fact that the public had been provided with the opportunity to be informed and comment upon the studies allowed the DINAMA to complete the EIA process and move forward. In its final EIA reports DINAMA concluded that the projects used BAT and that modelling showed that pollution concentrations would remain within applicable environmental quality standards. Therefore there would be no significant pollution. The environmental licences, fixing emission limits, and other conditions were based on this conclusion.

The studies produced by the sponsors were also to be reviewed by the International Finance Corporation (IFC). As the arm of the World Bank Group that finances private sector investments in developing countries, the IFC was requested by the two companies not only for funding but also for obtaining a certification that the projects complied with World Bank's environmental standards. Such compliance, in turn, was a condition to legitimize

funding by other private financiers that voluntarily adhere to IFC's Equator principles. In May 2005 IFC disclosed Botnia project's EIA documentation. In July 2005 it did so for the ENCE project. This implied IFC's review was finished, that the EIAs were deemed complete in all relevant aspects, and that the World Bank Directorate could decide on the investment. Works began employing thousands of workers and were to be completed in late 2007 for Botnia and late 2008 for ENCE. Fray Bentos was then to become one of the largest pulp making sites in the world.

EIA struggles on the River Uruguay

So far, our narrative account shows the EIA script functioning smoothly and successfully for the environmental legitimization of the projects. However, in the course of the EIA processes, between 2003 and 2005, debates, political, scientific, and technical, about the projects and the sustainable development of the River Uruguay arose. The result was a major conflict and EIA as the instrument to substantiate sustainable development was at its core. The debate started in Uruguay, where the EIA procedure was roundly criticized by NGOs arguing numerous deficiencies, biases, and flagrant collusion between the companies and the government. The DINAMA, they claimed, acted as a facilitator rather than as a controller of the projects, for it had no capacity to review the EIAs without the companies' expert guidance. This was the first effort to open up EIA's black box of governance. However, opposition in Uruguay remained limited. This was not the case on the Argentine side of the river.

Across the international bridge General San Martín, 30 km away from the mills' sites, is the city of Gualeguaychú (80,000 inhabitants). Alerted by Uruguayan and Argentine NGOs, Gualeguaychú residents engaged in a struggle to block the projects. Above all, they felt that the mills' projects were undesirable as a development path for the River Uruguay. This rejection was grounded on the following argument. The two projects proposed by European multinationals delocalizing their pollution to the global South would unavoidably produce toxic and noxious emissions. Situated at a very short distance and on a very sensitive area from both the social and environmental point of view, the pulp mills endangered existing uses of the river for leisure, tourism, and fisheries. The projects were, therefore, incompatible with Gualeguaychú's sustainable development. However, this basic argument needed to be technically and scientifically justified. And this is where the problem of challenging projects through the EIA script begins – with the condition to demonstrate 'the truth' about their expected impacts.

Considering they had been excluded from the Uruguayan EIA-based decision-making process, Gualeguaychú residents refused to give social licence to the projects. The opponents deployed a threefold strategy: First, they organized spectacular protests on the international bridge between Argentina and Uruguay to demand that Uruguay stop the installation

process so that the governments of the riparian states could engage in a meaningful EIA process in compliance with the 1975 River Statute procedural obligations. Second, they filed complaints dealing with the quality of the EIAs through different hard and soft law mechanisms. Finally, with support from environmental NGOs and university scientists, they sought to produce a 'people's EIA' (Manorom 2007) as a means to challenge the official EIAs of the projects. EIA appeared thus as the obligatory passage point to scientifically, technically, and legally grounding a fundamentally political opposition to the projects on the river.

The opponents' first march over the bridge, with about 800 participants, took place in October 2003 right before the licensing of ENCE. It put the issue on the bilateral agenda, leading the Argentine government to express its concern about the potential impacts as well as a potential breach of the River Statute. In April 2005 after the licensing of Botnia, a second march attracted 40,000 people. The result, this time, was to definitively enrol the Argentine government as an ally to the cause against the projects in Uruguay. Two EIA arenas opened up in May 2005: one transnational, governed by the IFC's operational policy, and one international (bilateral), governed by the River Uruguay Statute.

At the transnational level, the Argentine government demanded that the World Bank Group's Directorate not make any decision on funding without first studying the cumulative impacts of both projects. IFC was thus obliged to reopen its review process and conduct a cumulative impact study in July 2005. The stated aim was using additional detailed computer modelling to quantify impacts that, when combined, exceeded those impacts of each project considered separately. Scoping included, in principle, the study of impacts on Argentine territory. However, the lead consultant publicly stated that there would be no public consultations in Argentina, noting that the new study was in fact a pure formality, and that the World Bank had already decided to invest in both projects. The IFC did not take long to address the consultant's mistake and announced a change of consultants for the completion of the cumulative impact study. However, the IFC's initial consultants' mistake provided the opponents with a case. In September 2005 the Centre for Human Rights and the Environment (CEDHA), an Argentine NGO representing 40,000 residents of Gualeguaychú, filed a complaint with the Compliance Advisor Ombudsman Office (CAO), an independent body that allows individuals and communities affected by projects in which IFC is involved to bring their complaints directly. The aim was demonstrating the violation of the IFC's operational policy as a means to impede the funding. Acknowledging the plaintiffs' arguments, the IFC's Ombudsman concluded in November 2005 that the EIAs and the review process were not credible, that populations were not being meaningfully consulted, and that there had not been sufficient recognition of the legitimacy of worries and fears of the communities affected. Accordingly, it recommended that specific efforts be

implemented in order to ensure that people who believe that they will be impacted are able to have trust in the process as well as outcome of any additional studies. Along with a series of recommendations for the World Bank on reforms, which could help in enhancing environmental assessment practices, the CAO provided the IFC with clear guidelines to carry out a meaningful final cumulative impact study.

The IFC's answer to CAO's report included engaging a conflict resolution organization to carry out a new consultation process on the cumulative impact study and an independent expert panel to assess the whole information elicited in the process. Two public consultations, organised by a Washington-based conflict resolution organization, took place in February 2006 in Buenos Aires and Montevideo (two other, planned in Gualeguaychú and Fray Bentos, had to be cancelled because of the political tension). The public meetings explicitly excluded all political debate and were framed as exclusively concerned with exchanging views about the accuracy of the draft cumulative impact study, disclosed in December 2005. The draft study concluded that there would be no negative cumulative impact on air and water quality and on tourism in the region, the main concerns of the public. The only negative cumulative impact was traffic congestion on the roads due to the circulation of trucks. All other cumulative impacts were social and economic, and positive. While there were many criticisms of the whole consultation process, some opponents were, nonetheless, willing to submit numerous comments advancing technical arguments, which were then incorporated in the studies' review. To the satisfaction of many of these opponents, the review conducted by a panel of two Canadian experts, confirmed in March 2006 that most of the technical critiques challenging the EIAs and the draft cumulative impact study were relevant and accurate. Particularly it noted that there were not sufficient guarantees that the mills would operate according to BAT. To the frustration of other opponents challenging the projects, however, it dismissed all claims that these deficiencies implied that the mills would have a significant negative impact. The experts concluded with a long list of issues to be addressed in the final cumulative impact study, which was commissioned to another Canadian consulting firm.

In parallel, at the bilateral level, negotiations on EIA were deployed since May 2005, when Argentina proposed to Uruguay that the two countries create a high-level diplomatic and expert group, Grupo Técnico de Alto Nivel (GTAN). The formal objective was to engage a bilateral EIA of the projects on the basis of the information provided by Uruguay. Though this information was considered too limited by Argentina, there were 12 meetings where Argentine and Uruguayan experts discussed the technical aspects of the projects, the baseline conditions, the modelling of pollution dispersion, and the assessment of the significance of impacts. However, the most controversial aspect was the analysis of alternative sites. For Uruguay, the decision about the siting of the mills on the shores of the river was sovereign and

not subject to negotiation. As works progressed, political tensions over the purpose of such an EIA became evident. This led GTAN to be disbanded in February 2006.

The River Statute provides that controversies unresolved through negotiation are to be taken before the International Court of Justice (ICJ, or the Court). In May 2006 Argentina instituted proceedings against Uruguay. Argentina's claim was that Uruguay had violated the River Statute because the projects had been authorized without following the mandatory bilateral procedure. This implied a meaningful EIA that took into consideration the transboundary environment. The question was, what determines the form, content, and scope of a meaningful EIA that complies with the Statute's procedural and substantial obligations? To avoid the fait accompli, Argentina requested provisional measures to stop the construction of mills. After hearing the arguments of the parties, the Court issued an order in July 2006 rejecting the request. The Court found that there was no proof of the imminence of the risk, that the impact studies ensured the sustainability of the projects, and that the alleged harm could not be deemed irreparable. With this decision, the opponents had to wait four years to obtain a ruling on the merits.

In September 2006, while opponents begun systematically blocking the international bridge across the River Uruguay as a means of protest, the conflict came to a decisive point. On the one hand, IFC's consultants' final cumulative impact study was released and reviewed. All relevant issues highlighted in the first review, the two Canadian experts concluded, had been duly taken into consideration. This gave a green light to the funding of both projects; the Directorate of the World Bank decided that IFC should provide the requested funding. The opponents' efforts to interrupt the financing for the construction of the mills had failed. The result was not the expected halt of the projects' funding, but an opportunity for the IFC to correct the errors in compliance with its own operational policy. In sum, the legitimacy of the IFC's decision was the result of a cumulative impact study, the robustness of which was to a large extent the product of challenges. However, on the other hand, in favour of the opponents, ENCE announced unexpectedly at the same time that it had decided to relocate its plant. This was a major success for the opponents and was celebrated by those defending environmental protection interests. The company claimed, however, that the decision had no link whatsoever with the conflict or with pollution, but was due to the negative impact on the transport system, a conclusion stemming from the cumulative impact study.

The ICJ's decision on the merits of the case came out only on 20 April 2010 – that is, more than two years after Botnia's mill was commissioned, in November 2007. In its judgement, the ICJ (voting 13 to 1) said that Uruguay had violated procedural obligations under the River Statute, thereby impeding bilateral EIA. The Court enshrined the customary EIA procedural obligation, saying that a full EIA should have been available to Argentina before

Uruguay issued the licences. However, it also considered that the obligation to inform and negotiate on the basis of a bilateral EIA did not pre-suppose an obligation to come to an agreement and, therefore, Uruguay was allowed to proceed with the projects while the Court examined the case. On the other hand it also concluded, 11 to 3, that there were no substantive breaches, as there was no proof that the mill had breached environmental quality standards and national emission limits. All Argentina's claims about the inadequacy of Uruguay's EIAs were rejected. The Court said the scope of what the EIA Uruguay had to produce was determined by its internal EIA regulations, and not by international special instruments, which were not applicable. The Court found that there was no legal obligation to consult Argentine citizens, who had had the opportunity to express themselves when attending the meetings in Uruguay. Finally, the Court found that the predictions of the EIA were ex post facto correct, confirming thereby that mills complied with BAT. The fact that IFC and its experts validated the EIAs helped end the debate over the EIAs' quality. Considering that procedural breaches do not entail automatically substantive breaches, the Court concluded that ordering the dismantling of the Botnia mill was not necessary. Giving a special weight to proof resulting from the IFC's EIA review and post-operational monitoring, the Court refused to overturn the sovereign development decision of a party on a purely procedural basis. The Court ultimately confirmed the World Bank, through the IFC and hired experts, as an authority in defining sustainable development and how to achieve it though EIA. The Court's judgement, in April 2010, led to the restoration of bilateral relations with a joint monitoring plan of Botnia's mill on the River Uruguay in compliance with the River Statute. If there was pacification through a legal ruling, tensions persisted on the ground, as Botnia's pulp mill plans to expand its production made protests resurge and the controversy reemerged.

Conclusion

Far from being an obstacle to development, the deployment of EIA is a key condition of legitimating controversial investment decisions within a given, hegemonic development rationale. The naturalization of its script worldwide suggests that EIA is now part of globalized contemporary governmentality infrastructures. EIA has gained the ability to suggest and frame its use in a given situation beyond the intended purpose assigned to it by its designers or in its mode of use. Still, its workings and outcomes vary from one context to another. Variations depend on the assemblages in which it works. The EIA choreography is realized each time between contingencies and constraints. Project by project, the public avowal by the developer and the competent authority of the damage potentially caused, and the possibility of comment and revision, enables a balance between development and sustainability through the promise of technical mastery and monitoring.

The account of EIA struggles in the pulp mills case allows a view of how the EIA functions as a black box of knowing governance for sustainable development, which can be partially opened in case of any controversy. In this case, there was no debate at all about the fact that EIA was required. But the debate and controversy over the projects gave place to a debate and controversy over EIA's implementation and purpose, and thereby to a debate about good environmental governance and the meaning of sustainable development in a complex multilevel and multi-actor context.

To open the pulp mills projects' black box, opponents were constrained to engage in a debate within the EIA process led by actors they did not trust: the companies and their consultants, the Uruguayan authorities, the IFC and their consultants, and even the Argentine government which was supporting them. Even if some elements of the governance script contained in EIA as the necessary instrument to ensure sustainability were partly problematized in different spaces and the ENCE project was ultimately relocated, the outcome was still somewhat tragic for the opponents. Their engagement with EIA to support their rejection of the projects led (and in a sense trapped) them to a de-politicization of the issues they raised. Moreover, opposing NGOs actually contributed to the technical improvement of the Botnia project through their critique of EIA (as regards scoping of EIA, the prediction of impacts, assessments of significance, identification of alternatives, and participation), while their original aim was to have it stopped. Participating, even reluctantly and sceptically, in formal consultation processes controlled by the project sponsors thus led to frustration of those aiming to challenge the projects on strict political grounds and furthered action through other means, namely, blocking the international bridge. Frustration has much to do with EIA generally limiting participation to commenting upon the study submitted by the developer. But it also has to do with EIA's capacity to absorb technical critiques, within certain limits set by the experts as to what is and what is not reasonable in terms of alternatives. There is also an overall tension resulting from the fact that this EIA debate came when many decisions, namely, the choice of the site and the technologies, had already been taken without public scrutiny and debate and with construction started. Debate took place in the shadow of growing irreversibility. If many of the technical critiques by opponents appeared to be relevant and accurate in the experts' view, these did not lead to a halt of the industrial projects, but instead helped to create an improved EIA process, which achieved a technically very robust result, legitimizing the projects as sustainable development. In this EIA space, the political debate about the development trajectories, their risks, and their governance in a transboundary context ended up being completely eclipsed by technical controversies that where the only ones recognized as legitimate. And the sponsors, through their experts, ultimately managed to address these.

While engaging with the EIA in an attempt to halt the investment projects, the legal action that the opponents took targeted, among other issues,

what they viewed as the inadequacy of the EIAs. The path of problematizing what meaningful EIA is, particularly in courts of justice or through soft law mechanisms, allowed opponents to re-politicize EIA. We see that the question of the conditions of realization and purpose of public and bilateral consultations within the EIA are central to this re-politicization. This kind of action, however, did not undermine the status of the instrument and how it absorbs politicization of implementation. Thus, EIA's black box may be opened, as in this case, giving rise to a debate on the sustainability of the industrial development project, though without questioning the fact that an EIA is the proper way to govern. Thus the learning that can occur when the black box of the instrument is opened up (or 'fractured') in controversy is limited to what is possible within the governance script of the present EIA, with its script being ultimately restored or renewed.

This leads to two key concluding points. The first is that there is a subtler de-politicization that occurs even when the black box of EIA is opened. There is de-politicization through black-boxing of governance in instruments and delegation to EIA's authoritative script. In the EIA struggles there is invited partial re-politicization. But there is a subtler de-politicization, where the first-round politicization is absorbed because of how the politics played out is scripted. The second key point is about learning about EIA governance. There is strong path dependency in the learning. This is because the governance script is also shaping the learning, which thus remains within the frame of the EIA rationale. But there could be another kind of more reflexive learning in knowing governance, where the actual value of EIA for its original or presently rephrased purposes is considered. This implies that in the life of governance instruments a reflexive moment should be built in to reflect on whether the structure and authority it has achieved are still appropriate. This may not be easy to do in the real world. It requires subtle politicization, rather than contestation about immediate sustainability and development issues.

The aim of this chapter was to show how instruments, in this case EIA, emerge, evolve, and stabilize, and then, as they are black-boxed, script actions. Opening up the black-boxing is a strategy for actors who wish to criticize projects for what their impacts might be. But they may still remain captured by the EIA governance script, so the black-boxing is only partially opened up. Maybe that is the best that is possible in current instrument-based knowing governance politics.

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Part V

Reflexive Knowing: Doing Knowledge Politics

12

Knowing Doing Governing: Realizing Heterodyne Democracies

Andrew Stirling

Imperatives for transformation

Global politics is blighted by frustrated needs for transformation (Scoones et al. 2015), but it is also invigorated by the associated hopes. Either way, the many widely acknowledged (but persistently neglected) imperatives centre around poverty and oppression, inequality and injustice, climate change, ecological destruction, toxic pollution, nuclear risks and all the obscenity and waste of war (UNESCO/ICSU 2009; UNEP 2012; Griggs et al. 2013; UN 2013; UNDP 2013). Despite the formidable material drivers, every one of these scourges is socially constituted. And – although progress remains painfully slow at best – history shows all to be politically remediable. So, each imperative presents a defining challenge, spanning all the multivalent aspirations and possibilities for what might count as 'human progress'. What then could be more compelling as focal priorities – equally in the knowing and the doing of 'governance'?

To some, stating such commitments so baldly may seem overly normative for an academic account. But if this is so, it is not normativity itself that gives this impression. What may grate is rather the form of the normativity and the candour with which it is acknowledged. In fact, knowledge of all kinds is necessarily value-laden – not least in the knowing of governance. For instance, academic disciplines are typically quite parochial about their empirical foci, theoretical paradigms and methodological styles. So, whether declared or not, the production, constituting and interpreting of knowledge is always deeply pervaded by values. The question is therefore not about whether any given effort at knowing governance is normative, but what this normativity is – and in what ways this is explicitly accountable. For the above focal priorities in the knowing and doing of governance, then, key accountabilities rest not on any particular disciplinary framework or academic mission, but on the extent to which associated knowledges are judged to aid or impede those kinds of progressive global transformations.

Nor, despite the particularities, need such an explicitly normative starting point be seen as politically partisan in any more general sense. If the current high-level international policy discourse is taken at face value, aspirations to progressive global transformations in the above dimensions constitute widespread common ground. The listed imperatives are, after all, recognised (albeit inadequately) in longstanding, carefully negotiated, globally adopted governance instruments like 'Millennium' (UN 2014b) and 'Sustainable Development Goals' (UN 2014a). Ambitions for transformative (rather than merely incremental), social (and thence political) change are likewise increasingly widely voiced even in sober academic accounts (Skolnikoff 1993; Jacobsson/Lauber 2006; Weizsacker et al. 2009; Bingham/Conner 2010; Olsson et al. 2014). And to affirm such ends, says nothing about specific political means. So, all the above-mentioned imperatives and their responses are conceivable in radically contrasting forms. The aim of global progressive transformation is, therefore, arguably less partisan than the more restricted disciplinary normativities that otherwise typically frame academic understandings of governance.

Yet, despite the worldwide commotion – and sincere and inspiring efforts of many kinds – global progress on the above imperatives remains perennially disappointing. Key challenges persist, if not intensify. Advance in one area (e.g. poverty) is needlessly attended by regress in another (e.g. inequality) (Kerry et al. 2010; Piketty 2014). On issues like climate change, political rhetorics far exceed policy action (Newell/Paterson 2010). And there remain persistent contradictions, striking hypocrisies and ubiquitous special pleading. For instance, despite the many cases of genuinely progressive commitment to scientific and policy agendas around sustainability and development, it remains the case that the single largest area for global research and innovation lies in preparations for organised projection of mass violence (OECD 2013). So, whilst nominally highlighted aims of 'governance' are progressive and humanitarian, global efforts and resources actually concentrate disproportionately around war. It would therefore be difficult to view as rational, objective or robust any analysis of governance that neglects this manifest dissonance between discursively declared understandings and aspirations, and more material patterns and priorities of realised action. However viewed, real-world governance is evidently pretty different from how it is seen, still less aspired.

Governing knowing

Political divides are therefore intense, not only around the means to stated shared ends in governance, nor just concerning what any particular declared intent might imply in any detail. Substantive general questions also emerge about the credibility, sincerity and the very meaning of existing governance understandings and discourses themselves. Indeed, fundamental queries

arise not only about the modalities and instantiations of *governance* as an objective focus, but about what kind of phenomenon the *knowing* of governance as a subjective process actually is. For instance, how literally should the *knowing* be taken as a separate process from the *doing* of governance? Are – as is conventionally portrayed – practices ostensibly concerned with the knowing of governance, a prior factor informing subsequent intentions and actions? Or are understandings themselves better understood as functions of already-realised practices and interests? Perhaps it is this that helps explain the dissonance noted above?

To cut straight to the chase, serious questions might be asked over the entire performance of 'governance' as a field for supposedly disinterested academic or policy analysis. Under such a view, all the stories, models and methods of governance discussed in this book, for instance, would not (as the title suggests) really be about *shaping political reality* at all. Nor would such a shaping role be true, in general, of the very concept of governance itself. Any efforts in this domain ostensibly intended to *inform* political action might more reasonably be seen as themselves (if unconsciously) *conditioned* by it. And it does not require that this concern be accepted wholesale for queries to be entertained over the resulting pictures of explicit (or implicit) motivations, rational (or irrational) deliberations and various orderly (or disorderly) patterns. The dilemma is whether these should be taken at face value. Or are all such objectifying images better seen as a category mistake – invoking linearly sequential orderings of individual cognition, followed by aggregative deliberation, followed by governance action, that are – at best – romantic?

Such questions apply even where understandings of governance are intended to be reflexive or critical. Even if inadvertent in the context of the immediately associated actors, governance knowledges may still conceivably be conditioned by encompassing political environments. After all, instrumental pressures for justification need not indicate some kind of deliberate conspiracy. As iron filings align in a magnetic field, such pressures can arise as distributed social cognitions and emergent intentionalities in encompassing flows and gradients of power. So, even the strongest of intended criticism in explicit argument can be instrumentalising in its implicit categories.

For instance, a framing that aspirationally discusses progressive aims as if these are comprehensively shared (by an apocryphal 'we', as if uncontestable), may yield unintended effects in its uncompromising assertiveness. Despite its progressive intent, such a presumptive approach can inadvertently reinforce an overarching hegemony, which tends to privilege those regressive perspectives better able to subsume other interests into a singular societal 'we'. And this framing may also reinforce a more generally regressive category mistake under which political acquiescence is taken as societal consensus. So, irrespective of the potency of a particular critique, simplistically rationalist framings can obscure and legitimise much more material drivers and far less choate relations between normativity, cognition and action. Albeit only

implicitly, inadvertently and emergently, then, even just the idea of something called 'governance' involving coalesced deliberate social intentionality can help reinforce incumbencies by obscuring actualities, obfuscating accountabilities and dissipating dissent.

Seeing like power

Despite the immanence of such questions, however, much academic and policy literatures in this field takes at face value those values, priorities and processes that are declared to shape the various understandings of governance. In short, even where there might be a progressive aim of challenging incumbent power, the perspective taken is still that termed by Gyawali as the *eagle-eye view*, as if looking down on processes of governance from a privileged incumbent position (Allouche et al. 2014). Akin to James Scott's notoriously more-specific and situated phenomenon (Scott 1998), then, there is a general conceit presumptively to *see like power*. As a result, the primary dynamics of governance are implicitly taken less critically, as being about a notionally singular aggregated social agency driven by deliberate intentionality. Whether viewed as concentrated or distributed, covert or explicit, authoritarian or democratic, stochastic or mechanistic, governance is held to be about some kind of 'control'. A progressive challenge may be conceded around orientation or legitimacy, but the focus remains essentially on control. Here, practical difficulties may be acknowledged to be formidable, but criticism and prescription alike tend to be constituted by deterministic causality, located intentionality and singular deliberate agency.

But what if these constituting notions are expedient myths? What if discrete deterministic causes are better conceived as distributed fields and flows of dispositions? What if located intentionality is more about emergent social cognition? What if deliberate agency reflects collectively unconscious orientation? What if notionally material power to control Macmillan's reputedly lamented '*events, dear boy, events*' (Knowles 2006), is better understood as relational privilege in discursively surfing what are actually far more recalcitrant currents of consequences? What – in short – if Gyawali's real-world *toad-eye view* is more salient than the eagle-eye view of idealised governance (Allouche et al. 2014)? To ask such questions, is not to urge wholesale abandonment of conventional models of governance. Even if incomplete or misleading, focal concepts of intentionality, deliberation, agency and control may still be valued – if only for purposes of accountability as '*civilising effects of hypocrisy*' (Elster 2011). And these notions still hold salience in more qualified, plural, distributed – and allegorical – forms (Jessop 2003). But for such values to be realised, deeper critical questions also need to be raised. To always *see like power* and take such governance-talk too much at face value risks ironically suppressing the very processes it propounds.

In the vertical 'eagle eye', 'face-value' account of governance, the focus is on the dispositions, motivations, capacities, relations, (mis)conceptions,

(un)certainties and (in)tractabilities constituting actors and processes forming the *objects* of understanding. Similar key challenges are neglected around the *subjects* of understanding. In other words, the focus of attention remains 'within the page' of governance accounts, not on processes of attention themselves. This is how it is possible, for example, to become preoccupied with questions (or laden with assumptions) over whether variously defined instances of governance might be (supposedly self-evidently) 'better' or 'worse', 'bottom-up' or 'top-down' (as if not co-constituting), state-led or market-driven (ignoring mixes and alternatives) or restricted simply to instrumental design (privileging means over ends). In all these ways and many more, wranglings between instrumental legitimisation and substantive legitimacy are not just axes of enquiry about some specific focal form of governance, but constitute the conditions of enquiry itself.

This is where the normative commitments concerning progressive global political transformations declared above come to the fore. Transcending disciplinary doctrines and expediencies, deeper responsibilities arise to challenge regressively concentrated power not only among the objects of governance understandings but in the subjects. 'Knowings of governance' can be challenged not just as specific instances but as a general field. Perhaps most importantly, there arise clear implications in recognising normativity as being as much about the conditioning of knowledge as the other way around. It becomes unreasonable to assert a separation between the knowing and doing of governance. In this horizontal *toad-eye view*, ways of knowing governance come into focus as being among the most important governance practices in their own right. And the doings of governance by variously powerful and divergently oriented interests carry profound implications for shaping diverse wider knowings. This is why this chapter avoids addressing one in the voice of the other but entitles both explicitly together as *knowing doing governing*.

Knowing power

It follows from this discussion, that knowing governing means governing knowing. As well as being implemented in action, governance knowledge is, generally, motivated by action, produced by action, constituted by action, communicated by action and interpreted by action. So, it is distributions in dispositions for all these kinds of action that shape the resulting fabrics of knowledge. And this also defines a central role for various kinds, modes and media of power. The more apparently authoritatively 'scientific', or disinterestedly 'academic', or politically 'neutral' the aspired or asserted understanding, the more (rather than less) this is true.

As Francis Bacon momentously observed when pioneering the archetypally objectivist view of the constituting practises of natural science: '*knowledge itself is power*' (McGovern 2005). The implications for the knowing of governance extend far beyond the many challenges of '*speaking truth to power*'

(Price 1965; Wildavsky 1987). Indeed, perhaps the deepest significance of Bacon's insight lies in the reverse ways in which '*power inscribes knowledge*' (Stirling 2015). And this is arguably nowhere more true than in the knowing of governance, when so much of the object of knowledge are the complex multidimensional processes of power itself. So, where there are progressive aspirations concerning the imperatives at the opening of this chapter, one of the most obviously practical responses is clear. More than seeking to *speak truth to power*, those engaged in 'knowing governance' should *speak about power* – and especially about the imprints of power in what is seemingly true.

Of course, this efficacy of power-in-knowledge is not manifest primarily as the mechanical propagation of explicit consciousness in deliberately conspiring individuals. The intentionalities in play are irreducibly societal not atomistically psychological. Power is plural (not singular) in its forms, emergent (not located) in its drivers, ambiguous (not determinate) in its dynamics, contextually situated (not universal) in its meanings, fractal (not separately scaled) in its structures and multivalent (not self-evident) in its outcomes and normative implications (Gramsci 1971; Simon 1991; Luhmann 1995; Bourdieu 1998; Sen 2000; Lukes 2005; VeneKlasen/Miller 2006). It is about diversely distributed, chaotically layered, recursively entangling relational processes more than specifically located or neatly structured categories of capabilities or resources.

But even in this complex picture of dynamic multidimensional manifolds of cross-cutting fields and interlocking networks in many-layered flows (spanning both the subjective and objective conditions of knowledge), a focal notion of 'power' does nonetheless retain some crucial practical traction for progressive interests. Seen in terms of one strand of classical social theory, for instance, all these features constitute different ways in which variously construed kinds of agency are asymmetric in their relations with whatever is held to be the relevant actors and structures. In these terms, despite the diversities, complexities and indeterminacies, the simple central idea of power reflects the ubiquitous actuality that agency is both asymmetrically structured and asymmetrically structuring (Stirling 2014b). This is equally so in the formative origins and the onward potentialities of all kinds and contexts for social intentionality. And, under unchallenged conditions, these asymmetries are themselves dynamically self-reinforcing. So, it is in this sense that power remains a coherently meaningful phenomenon, as *asymmetrically structuring agency*. And this is why (unlike so much else in social science) notions of power are so clear, accessible and potent in colloquial discourse. Despite recognition being expediently suppressed by incumbent interests and self-indulgently obscured in disciplinary complexifications, power is, quite simply, the single most important social fact.

So, retaining this pragmatic focus on the challenges discussed at the start of this chapter, the most crucial questions concern the kinds of action that offer the most consistently progressive ways to respond to these specifically

categorically complex but relationally generally simple dynamics of power. In order to overcome the established regressive structures implicated in all the above kinds of imperative, transformative progressive action will require multiple kinds and settings for careful collective structuring of distributed agency. Here, it is not necessarily the particular agencies or structures that are regressive in *asymmetrically structuring agency*, but the asymmetries. So, it is not just the specific orientations, but the concentration of power itself that is a central part of the problem. And this is all the more so, because power has such a dynamic propensity to self-reinforcement. History repeatedly shows how asymmetries of agency initially justified in progressive struggle can go on to acquire their own regressively self-stabilising dynamic. Indeed, it is arguably this dilemma that is most responsible for the repeated failures mentioned at the beginning of this chapter – and poses perhaps the greatest challenges in achieving progressive social transformations (Stirling 2014a).

From sustainability to control

One way to approach these challenges is to reflect on a concrete example of how such dilemmas play out. Arguably the principal instance of this arises in the global governance agenda around 'sustainable development' (Leach et al. 2010) discussed at the start of this chapter. The ascent of this momentous body of knowledge and practise in international politics emerged only as a result of decades of emancipatory collective action. It arose from hard-fought struggles by diverse social movements in various causes around peace, development, social justice and environment. From these converging political streams, there formed the three canonical commitments of the Brundtland Report around values of social equity, ecological integrity and human wellbeing (Brundtland 1987). And these in turn were codified and implemented with varying degrees of success in the multiplicity of instruments, strategies and institutions around the Rio Convention (Mintzer/Leonard 1994), Agenda 21 (UNCED 1992), Millennium Development Goals (UN 2014b) and Sustainable Development Goals (UN 2014a).

As this process unfolded, the early emancipatory aspects of Sustainability causes were undergoing some striking transformations. What began as grassroots collective action was (and is) increasingly appropriated by elite concerns with social control. For instance, it was social movements that first identified and championed the social and environmental problems towards which high-level governance interventions – like injustice, climate change, war and pollution – are ostensibly oriented. In each area, progressive aims were vigorously contested or strongly dismissed by precisely the established governmental, business and academic cultures whose current organisational missions these imperatives now increasingly shape. And a similar picture applies for many of the key innovations, practices and strategies that policy now strives to 'scale up' as 'solutions' – like renewable energy, ecological

farming and closed cycle production. These were also themselves pioneered in civil society in the face of oppressive attempts at exclusion by governments, businesses and academia. As with science itself many centuries before, it seems sustainability practices are historically highly socially mobile.

The very forms of unruly distributed collective action that defined both initial knowings of problems and early enactings of responses, then, are increasingly marginalised in current moves towards more orderly and concentrated forms of 'sound scientific' methods, 'risk-based' analysis, 'evidence-based policy' and 'pro-innovation' strategy. Early diverse subaltern struggles for different kinds of open-ended, hope-driven political transformations are increasingly replaced by more-specific expert-mediated, fear-driven, technically managed transitions (Stirling 2014a). As this occurs, the extensive potentialities of collective action are substituted by restrictive 'planetary boundaries' defining the '*control variables of the Earth*' (Rockström et al. 2009). And language of revolution is also nowadays shunned in polite political discourse – and mocked when raised as if self-evidently irresponsible (Brand 2014). Yet breathless 'revolutionary' polemics remain ubiquitous at an organisational level (Weick 2009) – and especially in the fields of science and technology (Drexler et al. 1991; Fukuyama 2002; Oyelaran-Oyeyinka/Rasiah 2009; Adamsky 2010; Kamal 2010; Rifkin 2012). It seems open discussion of revolutionary social changes can only be tolerated where institutional structures can align these with incumbent interests.

In a series of instrumental compressions, public discourse over contending general political ends is replaced by expert negotiation over specific technical means. As governance is depoliticised, space for democracy constricts and humilities of care are replaced by hubris of control. The advent of '*Earth systems management*' (Steffen et al. 2011) invokes with '*absolutely no uncertainty*' and brooking '*no compromise*' '*the non-negotiable planetary preconditions that humanity needs to respect*' (Rockström 2010). So emerges the supposedly undifferentiated '*we*' (Lövbrand et al. 2009) of '*humanity as a self-conscious control force that has conquered the planet*' (Schellnhuber 1999), pursuing the destiny of '*taking control of Nature's realm*' (Crutzen/Schwagerl 2011). It is in these scientistic and technocratic forms that ostensibly progressive forms of 'Sustainability governance' are in increasing danger of subverting their own defining roots, aims and values.

Further ironies and paradoxes

The predicament described above, resolves a striking irony concerning the role of intentionality in governance. It might be thought that the more deliberate and ambitious the change, the greater the role for more clear-cut notions of intentionality. Yet, in many ways the opposite is true. The greater the focus on wider, more socially deliberated transformation (rather than automatically conservative continuity), the more necessarily hazy become

the associated notions of social agency. A sign of this is the fact that the more ambitiously progressive the normative aims (like the original visions for Sustainability), the greater becomes the need to harness a diversity of misaligned forms of interest. Recognition of this is a key factor in increasing moves in normative policy analysis away from emphases on narrow concepts of government and towards wider notions of governance (Jessop 2003; Hendriks/Grin 2006; Voß et al. 2006; Voß/Bornemann 2011).

Governance extends attention beyond government actors, to business, civil society and even wider culture (Stoker 1998; Bevir/Rhodes 2006; Sørensen/Torfing 2006; Bevir 2010; Boyd/Folke 2012). A diversity of organisational, legal, economic, institutional, cultural, discursive and cognitive structures and processes come to the fore – variously co-ordinating socio-political orders and influencing directions for historical change. These in turn involve tacit ways of knowing, valuing and imagining as much as codified rules, norms and procedures. Indeed, 'government', 'business' and 'civil society' move from separate Platonic silos to pervasive styles of relation. And the dynamism and complexity of these more variously oriented gradients of agency make it tricky to condense out the many liquid currents of commitment into seeming solid moments of 'decision' or 'choice' (Wynne 1997). Just as experimental neuroscience is raising similar predicaments for notions of individual intentionality (Baumeister et al. 2010), so does a governance focus tend to render the more important kinds of social agency ever more elusive, distributed and volatile.

But when the focus is on 'government', even knowledge itself takes a more 'domesticated' form. A more categorical and deterministic approach is taken in representing the focal institutional procedures. Even if radically critical in their orientation, understandings tend to be more explicit, homogeneous, codified and contained: prescribing more organisationally instrumentalised 'missions'. When the focus is on 'governance', on the other hand, knowledges themselves tend to be 'wilder'. More relational and indeterminate approaches are taken to the social processes in question. Understandings are more implicit, plural, contending and unbounded. Prescriptions centre not on policy missions, but more around culturally constituted (political) 'causes'. Yet the greater the aspiration to transformative change, the more likely it is that associated knowledges will implicate governance in general, rather than just government. So, the more intense and ambitiously transformative the challenge for social agency, the more amorphous and distributed this concept itself seems to become.

This then leads to a further more-specific irony in relation to progressive understandings of democracy. This is a fraught and complex field, to which it is not possible to do justice here. But the above general definition of power, as *asymmetrically structuring agency*, does – despite all the diversities, complexities and context-dependencies – offer a useful pivot for a general working understanding. In these broadest of progressive terms,

any democracy with serious progressive aims in relation to power must in some way be about '*access by the least powerful, to the capacities for challenging power*' (Stirling 2014b). And it is in this overarching sense that the above irony is compounded. If social agency itself grows more amorphous in the face of further ambitiously progressive aspirations to transformation, then it becomes correspondingly more difficult to identify – and so challenge – contexts in which social agency is *more* or *less* asymmetrically structured. One practical implication of this, for instance, is the diminishing tractability of accountabilities. To compound the earlier dilemmas around the self-stabilising dynamics of power, it is in such ways that there forms an apparent tension between transformation as a progressive end and democracy as a progressive means.

Heterodyne democracies

How then to resolve this paradox? Taking a cue from the above discussion, what seem needed are ways to understand and enact democracies in less 'domesticated' – agency concentrating – ways. Tight organisationally mediated attempts at accountability, notionally concerned with wider control over centralised missions, can actually have the perverse effects described above of consolidating new forms of concentrated interest. 'Wilder' enactments of democracies, by contrast, are constituted not so much by vertical control over institutional missions, but by horizontal associations between political causes. Instead of indirectly structured chains of rigidly codified rules, norms and procedures, this involves more direct co-ordination among ambiguously apprehended pluralities of knowing, valuing and imagining.

Fields of democratic struggle thus extend outwards from the confined space of merely alternative understandings, normativities and actions within a notionally shared, objectively singular domain of governance. Instead, democratic struggle 'comes out of the page', to encompass contending knowledges and practices that also constitute the understandings of what governance itself might be. Among subjects as well as objects of governance knowledge, then, the scope moves from means to ends. What is at stake is not simply how to govern, but what governing itself even connotes. Crucially, this move addresses the dual valences of power discussed above, because asymmetrically structuring agency is recognised to be as formative of subjective processes of knowing governance as of the objectively material actions that implement it.

Instead of idealised, discretely speciated procedural determinisms of cause, effect and control, then, democracies can be understood and practised in more messy and dynamically relational 'ecological' ways. Celebrating the resulting radical plurality of movements and diversity of orientations made possible by this escape from procedural structures, the 'wilder' results might be called *heterodyne democracies*. Whatever the terminology, though, there

arise a range of quite practical implications. Before turning to specific kinds of action and understanding, a summary of some of the main distinguishing features shared by this diversity of deeper possible capacities for challenging power asymmetries, made possible in heterodyne democracies, is presented in Illustration 12.1.

What this conveys, is that the implications of heterodyne democracies extend beyond the implementation of particular institutional trajectories in specific domains according to singular notions of 'the public good', no matter how 'tolerated', 'accepted', 'trusted' or 'accountable' these might be held to be. Instead of notionally singular 'sound scientific', 'evidence-based' aggregations of knowledge, values, ethics or concepts of 'shared interest', the qualities of heterodyne democracies described above sustain pluralities of ontologies concerning ways of being in the world and enacting processes of collective governance themselves. In the lower left of Figure 12.1, then, it can be seen that understandings of what constitute the 'social choices' in any given domain are correspondingly *broadened out*. This involves explicit deliberation over a wider array of options, issues, contexts, uncertainties and perspectives across a greater diversity of institutions concerned with the appraisal of social choice and the informing of wider political discourse.

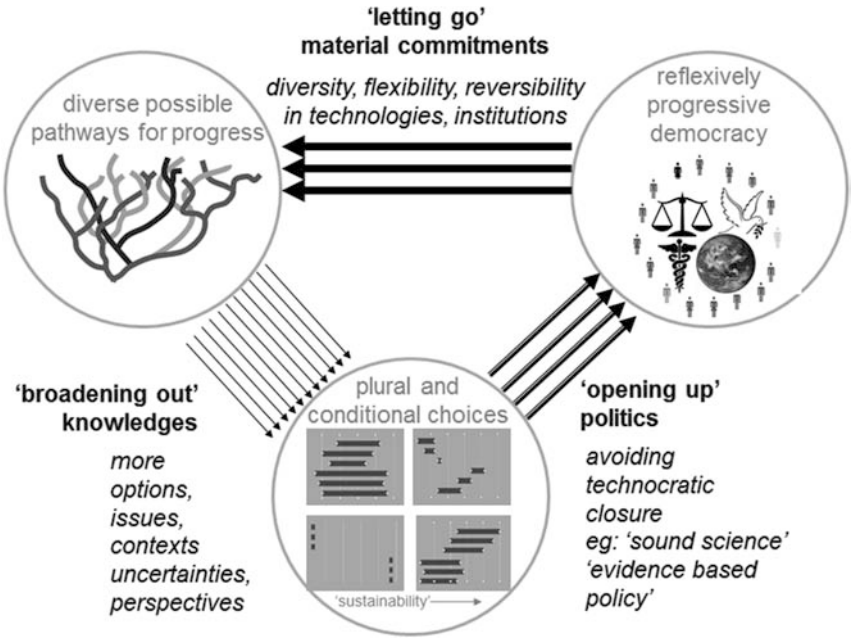

Figure 12.1 'Broadening out', 'opening up', and 'letting go' – enabling more heterodyne democracies

So far, however, this simply describes the kind of broad-based integrative understanding that is sometimes already explicitly aspired to in conventional governance, for instance, in more ambitious forms of integrated assessment. Yet, it has already been described for the field of Sustainability how the diversity and scope of the values and interests in play are typically restrictively 'closed down' by political pressures for justification (Stirling 2008). An example lies in the move from the original emancipatory pluralities of collective action, to more technical social control agendas around planetary boundaries and transition management. In this respect, heterodyne democracies are also distinctive not just in broadening out the methods and practices for appraising knowledges and values in specialist institutions and areas, they are also distinguished by the ways they *open up* the space for general political discourse and the associated struggles this sustains. This is illustrated in the lower right of Figure 12.1, which shows the notion of governance itself to be enacted and realised in more plural and conditional ways – recognising incommensurability and appreciating qualifying conditions for closure.

Finally, at the top of Figure 12.1, it is illustrated how heterodyne democracies are characterised not only by greater ontological, epistemic and normative diversities in the ways described above, but also by 'letting go' of more material pluralities and plural materialities. Qualities of *plural materiality* involve greater space for institutions and strategies constituted around plurality – focused on qualities like socio-technical flexibility, resilience and reversibility. Qualities of *material plurality* involve greater degrees of diversity in the concrete forms of technologies, infrastructures and institutions that are realised. This involves deliberate resisting of mechanisms like lock-in, autonomy and entrapment variously analysed in governance literatures concerned with path dependencies in institutional trajectories.

So far, however, all that has been sketched are the overarching characteristics of heterodyne democracies, and how these are distinct from (albeit related to) many currently extant forms and notions of governance. It remains to discuss the particular ways in which these characteristics might be realised. But for present purposes, the argument can be summarised that imperatives for transformation do not – as is often assumed – necessarily compel concentrated power, definitive assertions, unyielding structures or determining control. Indeed, when it is appreciated how power exerts an imprint on the knowing of governance itself, these can be recognised as expedient fictions that can aid incumbent interests in the impeding of progressive change. The prospect instead lies in knowings and doings of progressive transformation that engage the inherently unruly, distributed and incommensurable natures of social agency.

But this in turn presents a further challenge: How is it possible to realise these more radical forms of plurality and diversity in understanding and action at the same time as seeking to achieve unprecedented progress in relation to demanding hitherto unresolved imperatives for social

transformation? In short, how is it possible to be so reflexive and so committed at the same time? It is to this challenge that the discussion will now turn.

Reflexively committed transformation

One aspect of this challenge of addressing reflexivity concerns the difficulty in accounting for the emergent coalescing of commitment from plurality, without the exercise of controlling forms of power (as asymmetrically structuring agency). Here, it may help that debates over governance are not the only domain in which there arise practical reasons to take reflexivity more seriously. And it is interesting that this can apply even when the systems in question are ontologically remote from social systems and their essentialised human attributes – for instance, with recursive interconnectivities in chemistry, biology, neurology and ecology. Interestingly, there arise under such conditions spontaneous processes of 'teleogenesis' in which phenomena acquire immanent qualities resembling 'purpose', 'function' and 'meaning' (Porra 2010). So, without in any way implicating analogues to the deliberate exercise of societal power – or indeed any conscious intentionality at all (Ziv et al. 2011) – means and ends can arise as simple corollaries of recursively constituted evolutionary process (Tuomela 2002). With processes of distributed, emergent teleogenesis so evident in the physical world, why not also in governance (Lichtenstein/McKelvey 2011)?

To see this one needs to look behind expedient fictions of the kind described above, as if 'knowledges' and 'intentions' are separable and necessarily prior to action. Instead, we have seen how the social dynamics of agency – as in all complex evolutionary processes – involve restless webs of multivalent, recursively nested configurations. And even simply taken on their own, such relational ontologies (involving multiple 'turnings back') of themselves yield cross-cutting dances of path-dependence and transformation. To this is then added the inherently polythetic nature of social phenomena (like institutions, practices, networks, structures or agency), in the sense that whatever are held to be the salient dimensions and properties in any given context will only be a subset of those that constitute the phenomenon (Ritzer 2000). So, the turning back of recursive ontologies involving particular attributes present crucial opportunities for associated characteristics that are more entrenched in their own trajectories, to nonetheless become transformed. Resolving the conundrum of simultaneous reflexivity and commitment need not invoke any special pleading or romantic aspirations on behalf of transcendent virtues in intentionality or qualities of agency. The co-constituting duality of reflexivity and commitment is quite simply inherent in any ontology of polythetically multidimensional phenomena entangled in contrasting recursive flows in different dimensions. In other words, whether nurtured – or even acknowledged – or not, reflexivity is a fact of social life.

Just as any turning needs a fulcrum, then, so too does reflexivity need commitment. The two are not paradoxically contradictory, but mutually co-constituting qualities arising out of contrasting properties in complementary dimensions of polythetic wholes. And realising this is as challenging for conventional notions of reflexivity (as a situated quality) as the above critical discussion might be for instrumental notions of power. A cherished privilege of self-consciously critical sensibilities is to lay claim to reflexivity as a transcendent-but-located virtue (Lynch 2000). Seen in these terms, reflexivity is (ironically like the objectivity against which it is often counterposed) autonomous, self-conscious and situated distinctly and independently of the governance processes over which it supposedly presides. What is underscored here is that such a view is an oxymoron.

So, as with the discussion of power, taking reflexivity seriously in governance also demands that attention 'comes out of the page'. Reflexivity is not so much a quality situated *within* any given body of governance knowledge, but *about* it. Accepting the emergent implications of pervasive recursivity in diversely viewed multidimensionality also breaks the hard distinction between subjects and objects of governance. The dimensionalities of pivoting and turning, after all, are constituted both subjectively and objectively. More practically, this shows how it can be that incumbent power (though, by definition, committed) can also sometimes prove highly reflexive in its apprehension of contending interests. It is a failure to realise this and romanticise the faculties of subaltern critical sensibilities that can sometimes render progressive causes especially vulnerable. Progressive criticism holds no monopoly on reflexivity.

Beyond this salutary point, however, there is nothing about recognition of these complex dynamics of reflexivity and commitment that is in any way inconsistent with practical progressive action. That constitutive processes of governance are not tractable, determinate or even knowable does not mean they are unresponsive to action. Just as neural activity is constituted in physical phenomena, so it is arguably only through embedded patterns in material social practices that governance may come to 'know' anything at all. It is in this sense that recognising that knowing and acting are inseparable and co-constituting is far more than an intellectual commitment. By showing how reflexivity can co-exist with commitment, a highly practical fulcrum emerges for transformative political hope. Radical pluralism is entirely consistent with a commitment to ambitiously progressive transformation.

This leads to a further point concerning the mutual implications of the present understanding and enacting of social reflexivity, with and for the variously construed roles of 'civil society'. In short, diverse concepts of 'civil society' might in many ways be addressed as crude recognitions for the reflexive 'sub-politics' described here (Beck 1994). This hinges on the generally polythetic character of the social actors, structures and processes discussed above. Any given ordering of relations between instances

of any of these phenomena will implicate only a subset of salient attributes. In other intimately associated dimensions, rhizomic connections will entangle outwards such as to transcend any reduced or generalised representation of social order (Deleuze/Guattari 1987).

Rather than being a discrete domain involving particular kinds of social institution, practice or relation, then, civil society (like 'the market' or 'the state') is not a categorical silo containing 'types' of actors or sociality. It is an irreducibly plural, pervasive and omni-accessible manifold of relations. Unlike market and state relations, however, civil society is typically less comprehensively monolithically structured. For all their diversity, after all, market processes tend to be more coherently ordered by relatively narrow economic metrics, structures and practices. And state structures likewise tend generally to display more restrictively orderly articulations of identities, responsibilities and accountabilities. Of course, individual civil society organisations or networks will display localised orientations and hierarchical structures of just these explicit kinds. But it is a distinguishing feature of civil society as a whole that overarching knowledges, normativities and relational orders are all less monolithically structured across this field of relations as a whole. It is in socially implicit, relationally juxtaposed incommensurabilities, then, that civil society constitutes an especially pervasive medium for wider social reflexivity. It helps build the connected juxtapositions of disparities that constitute the distributed nature of social reflexivity.

This said, there arise a series of crucial, more practical questions. If the imperatives with which we began are to be responded to in genuinely progressive and transformative ways: What to do? How to know? How to realise in practise greater progressive political traction in the kinds of 'broadening out', 'opening up' and 'letting go' described above? None of the qualities, sensibilities or dynamics discussed so far are self-evident in their instantiation. In medium as in message, they offer only invitations and pivots for less visible dancing partners. As ever, the strongest hopes for genuine transformation lie not in directly linear extrapolations, but in recursively more nested turnings back. On the same theme in minor chord, it is to these final finer-grain ironies of social agency that we will now turn.

Barriers to reflexive transformation

A basic predicament of subaltern agency is that the quality of incumbency on the part of concentrated power itself forces expressions of contending agency onto a reactive back foot – taking primarily critical and negative forms. What begin as hopes for different worlds get translated into fear and anger about the ones that persist. Before turning to suggestions for practical positive actions, then, we will first criticise four quite specific impediments to progressively committed reflexivity of the kind discussed above. As syndromes to avoid, these are equally practical in their implications for action

and knowledge alike. And they are as perilous for minor incumbencies in critical and progressive movements, as they are in more major concentrations of political, economic and cultural power.

The first is *misplaced concreteness* about the world and its dynamics. This refers to the error of reifying what is abstract and malleable, as if it were fixed and definitive. Such fallacies are endemic throughout governance discourse, where singular assertions suppress scope for dissent over what counts as 'evidence', 'science', 'Sustainability', 'innovation', 'risk' or 'knowledge' – as well (as we have seen) as 'power', 'progress' and 'reflexivity'. Prominent examples of this syndrome in mainstream governance discourse include notions of progress as a one-track race, rather than many branching counterfactual paths. Also reified are notions of 'salient actors' – typically self-fulfillingly privileging incumbents' own networks.

The second syndrome is *presumed normativity* about the emergent consequences of incumbency. It is by this means that incumbent trajectories are taken as paradigmatic of 'progress': not only as necessary and inevitable, but as somehow intrinsically positive. Cumulatively, this leads to Panglossian judgements that whatever is contingently shaped by extant power gradients is self-evidently 'for the best' (Midgley 1985). Structured by the same categories and axes, scholarly pretensions to eschew such normativity simply by positioning somehow 'in the middle' are no less related to prevailing gradients and so all the more deceptive in any claims to independence or objectivity.

A third syndrome is the *suppression of agency* in the apprehension of social phenomena in general. Heroic individuality is often emphasised at key moments in affirming set-piece policy 'decisions' or 'choices'. But these are generally instrumentalised to concern the means for implementing committed socio-technical trajectories, rather than constituting the ends of the trajectories themselves. At this level, far more deterministic assumptions prevail, with social agency effectively deleted. For instance, ideas of 'systems' or 'ecosystems' in innovation treat structuring system ontologies as given, thereby occluding roles for distributed social agency.

The fourth and final syndrome is the *fallacy of control*. This arises from the expedient failure to acknowledge the complex indeterminate social realities discussed so far. Forgetting Macmillan's lament over the challenge of *events* to power, they misportray as control, actions that are really more about response. Social processes are seen as constituted by linear chains of discretely determinate causes and consequences. Just as particular privileged individual ancestors can be plucked for strategic purposes of inheritance claims from a far more open-ended genealogical web, so individual causes and actions can be associated with specific impacts. Such fallacies help sustain existing incumbent patterns of socio-culturally situated privilege, as if these were justified by political–economic capacities to control.

Together, misplaced concreteness, presumed normativity, suppressed agency and the fallacy of control compound many of the other 'expedient

fictions' discussed so far. They assume that social categories are more fixed than is really the case, that agency is more determinate, that subjects' knowledge is more sufficient, that normativities are more aligned, that objects are more tractable to action and that subjects and objects are more separable. It is on the basis of combinations of such fallacies, for instance, that the open-ended emancipatory collective action around Sustainability can be converted into instrumental agendas of social control around the '*management of planetary control variables*' (Rockström et al. 2009).

Together, these hegemonic features of worldwide high-level political discourse are self-stabilising, both by their own individual expediencies and their mutually reinforcing dynamics as resources for instrumental justifications of power. And – as has been noted at several points – these syndromes do not only exercise their regressive effects through assertions by incumbents. Some of the most potent implications arise from their unconscious assimilation by critics. Nothing is more impeding of progressive transformation, then, than when subaltern understandings and actions themselves assert misplaced concreteness, presumed normativity, suppressed agency or fallacies of control. As we have seen, this can be a tendency even among ostensibly progressive interests, which drop the realities of the *toad-eye view* and aspire instead to the *eagle-eye view* in an idealised condition of *seeing like power*. And so are enacted the perverse effects, in which overtly progressively critical understandings may, through their constituting categories and structures, act inadvertently to reinforce the deepest of the hegemonic power concentrations they seek to challenge. So, it is in these instrumental warpings of notions of governance themselves that incumbency asserts its greatest defence.

Knowing doings

So much, then, for what *not* to do. The interests, obstacles and pressures militating against progressive social action are certainly formidable. And the complexities and associated reflexivities make the challenge all the more daunting. But what can be said about what *to* do, in order to best help realise progressive transformation.

A response here follows quite straightforwardly from the discussion so far. Action and knowledge are not separate and sequential (as the instrumental fiction has it), but mutually co-constituting. Social agency is also more distributed and unruly than suggested by the expediencies of power. And the crucial quality of reflexivity is also less individual, contained and coherent than supposed. What all this suggests is that interventions aiming at ambitiously progressive transformations are not best addressed in the usual hierarchical choreography typically favoured (for reasons explained in the above discussion of fallacies) by incumbent imaginations.

In the conventional model fostered by exactly these syndromes, the first steps are often assigned to idealised elite visionaries who first conceive of

the 'game changing' possibilities. The next stage is to undertake sophisticated formal analysis, usually by very particular, restrictively accredited elite actors (like researchers). This is followed by carefully codified design – again by dedicated professionals – of particular kinds of action intended directly and deterministically to engineer the intended vision. Crucial here is also the role of heroically individual social and business entrepreneurs, who forge the networks necessary for successfully realised interventions. These are then in turn evaluated by another distinct cadre of practitioners and institutions in supposedly synoptically rational (sometimes also elaborately legitimated) processes. Finally (and typically widely separated across time and space), successful instances are 'scaled-up' and 'rolled out' in massively concentrated ways.

This entire process is notionally organised into highly ordered action programmes overseen by large, massively resourced networks of incumbent 'stakeholders', which they serve to justify. Credit is also typically appropriated by those elite actors among these claiming the strongest and most prestigious institutional associations and cultural entitlements. The whole business is rigidly orchestrated by assertive 'theories of change', neatly partitioned into 'implementation phases' according to precisely defined 'policy cycles' operating across starkly differentiated 'organisational levels'. This is what the managing of a 'technological transition' looks like in conventional governance accounts that seek to *see like power*.

The message of the present discussion and historical experience alike is very different. Here, effective radically progressive transformations are best achieved instead by far more diverse, emergent, distributed, ambiguous, disorderly and situated small-scale interventions. These variously combine in microcosm many of the functions and features of the above stages – intimately articulating practises of understanding and learning with material and symbolic actions in ways that might most clearly be summarised as a multiplicity of *knowing doings*.

The salient metaphors here are very different. Instead of comprehensive frameworks for action conceived in rigidly structured Cartesian co-ordinates on a map, knowing doings work not through externally imposing gridlines but internally expressive compasses. Resulting alignments in gradients of interlinked normativity and action are more like multiple interacting magnets and their co-conditioning fields, than like the hierarchically marshalled mechanisms of an engine or manoeuvres of an army. The overall dynamics resemble more the exquisitely coordinated murmurations of flocking behaviours in birds (and other animals). These demonstrate quite graphically how the most agile, rapid and comprehensively transformative of reorientations are achievable only by distributed horizontal – rather than concentrated vertical – co-ordination. And it is telling that a term for what is arguably one of the most precise forms of co-ordination – murmuration – should also hold a meaning of dissent.

That a picture of horizontally co-ordinated murmurations may be more salient and accurate as a metaphor for radically progressive social transformation certainly seems the clear general message derived from the cumulative worldwide history of emancipatory struggle (Stirling 2014a). This is the repeated pattern, for instance, in unfinished progress in reducing slavery, ameliorating colonialism, enfranchising citizens, establishing unions, liberating women, challenging racism, asserting sexual rights, respecting animals and protecting environments. Although each cause is formidably complex and defiant of simplification, none of these were primarily driven by hierarchical control. All were initially clearly shaped and driven in their formative dynamics, by distributed pressures from multiple, diverse, emergent, disorderly, ambiguous and situated interventions. These integrated multifarious forms of locally positioned co-constituting knowings and doings, in ways that might be characterised as 'knowing doings'.

Of course, each of these radically different kinds of transformation involved intricately reflexive dances with various kinds of incumbent order. As in the more general discussion of the dynamics of reflexivity, traction for distributed agency often required very explicit pivoting around highly particular structures (both in action and in knowledge). In every case, enlightened elites, hierarchical organisations and structured forms of practice and understanding fulfilled essential roles at particular moments. And the rhizomic interconnectedness of civil society relations also meant that the distinctions between these different aspects of change are artificial – since each works to co-constitute the other. But the point is that none of these historical progressive transformations were achieved in the fashion typically emphasised in idealised programmes of sustainability governance involving evidence-based action aiming at pre-envisioned transitions.

Perhaps most crucially for an academic study of governance, both the present argument and the weight of historical lessons go beyond the dichotomised sequencing of knowledge before action. As has been discussed, the bigger the transformation, the more that action *is* knowledge (in the sense of constituting both understanding and learning). Progressive political agency works not just antagonistically against concentrated power, but seeking reflexively to subsume, subvert and redirect it. And here again, reflexivity and commitment are not separate but co-constituting. As we have seen, situated commitments in some dimensions are not only reconcilable with, but essential to, collective reflexivity in encompassing dimensionalities.

What might be said, then, about these knowing doings? In some ways, governance literatures are full of them. Often characterised in terms such as '*war of the flea*' (Taber 2002) or '*weapons of the weak*' (Scott 1987), they are typically discussed most clearly in relation to the conditions for subaltern action. But recognition of the fallacies of power discussed earlier, mean that these modalities for conditioning transformation are also typically far more relevant to incumbent actors than is often conceded. Albeit

highly privileged (and often capable of enacting massive collateral social implications), elite agency is, as discussed earlier in relation to Macmillan's 'events', still forced by intractability to be incapable of exerting such fine grain control as is often romantically supposed (and claimed). So, the point is not that the exertion of agency through knowing doings is an exclusive preserve of marginal interests. Rather, it is the ubiquity of this inherently less controlling mode of understanding and acting that offers such a progressive opportunity for marginalised critical interests.

As to what such progressive knowing doings might look like in detail, or in any systematic terms, this is a challenge that lies beyond the scope of the present chapter. All that can be attempted at this stage is the impressionistic illustration in Table 12.1. In ways that are highly perspective- and context-dependent, it itemises 21 indicative examples of candidate knowing doings of kinds that address some of the characteristics of progressive social dynamics and transformative change discussed in the preceding account. Each is labelled with a phrase intended to address the central thrust and accompanied by a tightly space-constrained gloss and a hint at an illustrative context or example. Their formative effects emerge not in their individual or additive potency, but in the prospect of massively resonating synergies. As Josef Stalin is reputed to have said, *quantity has a quality all of its own*. And this arises not so much in any deliberate 'scaling up' as in the rhizomic cross-scale connectivities mediated, for instance, in the many media, dimensions and channels of civil society and wider culture.

Two instances might be slightly elaborated to underscore the general idea. *Political judo*, for instance, might refer to 'David and Goliath' moves made in the green movements of the 1980s, effecting the ending of ocean nuclear dumping or tactical nuclear weapons deployments by the US Navy. In both cases, it was the very entrenchment of incumbent power and its political conspicuousness that offered the pivotal vulnerability (Parmentier 1999). Each target presented a 'weakest link' in wider networks and structures constituting the incumbency. Responding to contingent opportunity, the requisite pressure at the right moment on the appropriate point – with some vital luck – helped condition a radically progressive change.

Likewise, the case of *Trojan horse* moves, involve non-linear cross-scale relational dynamics in polythetic phenomena of the kinds mentioned above. Here, a minor example might lie in the 'multicriteria mapping' method, whose quantitative idiom allows a policy exercise to be expressed in the genre of an ostensibly instrumental quantitative decision analysis and so look safe at first sight to incumbent interests (Stirling 2010). Only when the detailed features of the method unfold, however, does it emerge that salient effects have been exercised in an entirely different way. Instead of 'closing down' around an expediently singular policy justification, the method 'opens up' a space of equally valid alternative interpretations. With luck, exogenous dynamics can use this opportunity to destabilise the host structures in a

Table 12.1 An indicative, incomplete, experiential summary of illustrative examples of 'knowing doings'

Knowing doings	**Horizontal moves to exert distributed agency in both knowledge and action towards progressive transformation (i.e. against deliberate incumbency or contingent inertia)**	
Name and label	**Specific description**	**General rationale or example**
1: Balance needs bias *'neutrality' and 'fairness' require direct action to counter power*	Deliberately privilege direct engagement of most marginalised interests in analysis and action.	As with the Rawls Criterion, this asserts social justice and helps ensure equity is not diminished.
2: Challenge incumbency *progressive action should subvert (not build) power concentrations*	Focus scepticism and challenge most intensely on the overall most privileged and powerful interests.	Poor if focal power is progressively oriented. But resists subversion and helps enable space for self-correction.
3: Talk about power *it is progressive just to render power visible: in knowledge and action*	Likely suppressive reactions to this reveal – and make more vulnerable – a target incumbency.	Counters the primary regressive tendency, under which power excludes even discussion of itself.
4: There are always alternatives *simply showing more than one path, in itself destabilises incumbency*	Extends attention to radically different pathways, exposes unjustified conservatism.	Regressive if highlighted options are less progressive. But deliberate choice helps make this self-correcting.
5: Ends matter more than means *to challenge power, escape the focus on means, to interrogate ends*	Disrupt circumscribed focus on specific technical means by highlighting alternative ends.	It is inherently subversive of power to show that favoured means are conditional rather than self-evident
6: Keep it complex *subvert justification with indirect, interactive, cumulative uncertainties*	Extend attention of policy practice to greater diversity of variously defined implications and unknowns.	Counterproductive if distracts from a progressive focus, but resists a key general kind of exclusion.
7: Plurality is progressive *giving room even for reactionary dissent makes crucial political space*	Pressure politics to recognise institutionally that knowledge is inherently plural and conditional.	Backfires if marginal knowledge is regressive, but general space counters power-driven closure.
8: Be 'toad' not 'bird' *horizontal understandings help forestall vertical fictions and actions*	Enact processes, categories and relations as lateral / empathetic, not vertical / superordinate.	An opposite vertical 'bird eye view' understanding affirms particular kinds of action and relation.

(*continued*)

Table 12.1 (Continued)

Knowing doings	**Horizontal moves to exert distributed agency in both knowledge and action towards progressive transformation (i.e. against deliberate incumbency or contingent inertia)**	
Name and label	**Specific description**	**General rationale or example**
9: Pivot shocks *'never let a crisis go to waste' is most true for the least powerful*	If agency is too small directly to exert change, some contingent kind of shock can reduce inertia.	Even if under-determining of immediate outcomes, disruption can free space for onward action.
10: Harness stress *if subaltern agency is insufficient, ratchet with contingent pressures*	Help effect under-supported change by linking to unrelated trends with parallel orientations.	Climate change favours politically decentralised energy, which is also more widely progressive.
11: Trust the people *expectations embedded in actions help prefigure realised conditions*	Interventions predicated on cooperative responses will contribute to creating these.	Regressive power is generally most strongly asserted when subaltern interests are fragmented by contention.
12: Treat risk with fairness *address vulnerability: prioritising equality is a response to any risk*	Shifting relative distribution more onto privileged groups will in itself accelerate addressing of risk.	Inequality is key to vulnerability. Move from regressive narrow fears to progressive broad solidarities.
13: Tug the emperor's clothes *exposing hidden conditionalities breaks hegemonic narratives*	Incumbent commitments typically rest on expedient assumptions, often prejudicing other interests.	Establishing how it could be different helps empower subjugated narratives.
14: Let many flowers bloom *reflect at system level, on pros and cons of plural repertoires of actions*	Restriction of attention to any single kind of action typically reinforces associated interests.	Normalising parallel pursuit of a diversity of actions affords space to what is otherwise neglected.
15: Play the ball not the player *positive interpersonal relations can offer progressive strategic traction*	Multivalent personal relations can help transcend and subvert dimensions of political interests.	Avoid the ad hominem, tactically enacting commonality can offer strategic progressive traction.
16: Humility can be assertive *self-irony and deprecation can help bridge stark strategic divides*	Arenas contain multiple axes of contention. So humility on any one of these can earn surprising allies.	Noting qualifications, uncertainties and conditionalities can be strengthening, not weakening of a position.

17: Use Trojan horses *superficially instrumental methods can mask (so aid) radical critique*	Effective methods do not have to wear hearts on sleeves. Apparent instrumentality can be subversive.	Subversive quantitative 'opening up' can exert greater critical force than overtly qualitative critique.
18: Practice political judo *deft targeting can find that power itself is its own greatest vulnerability*	Rather than set-piece frontal challenge, strengths of incumbents can be their greatest weaknesses.	Incumbency attracts diverse strong antagonisms, allowing subaltern orchestration to amplify impacts.
19: Try for 'edge balls' *restrictions by power can be relaxed by repeatedly precise careful testing*	Constraints can be destabilised by ostensibly respecting them, but in repeated micro-transgressions.	Such incremental subversions are different to the challenging of limits by pushing them to breaking point.
20: The radical roots in the familiar *paralysingly distant aims are more tractable in serial proximate steps*	What is dauntingly transformative for a long straight plan can be easier in many little turning moves.	By analogy and tiny connections, everyday contexts can offer strong levers in challenging interventions.
21: Seek emergence not control *real progressive transformation is achieved despite, not due to power*	To deploy concentrated power can subvert in other ways the same progressive ends at which it aims.	Global control regimes against climate change can be key in enabling climate geoengineering.

fashion that aids progressive transformation. Other examples might include metrics of diversity, quantitative techniques that do not aggregate or perhaps even (in a very small way) the construction of an elaborate academic analysis like the present chapter – as a means to help legitimate and normalise subaltern 'Trojan horse' interventions in the governance of progressive transformation.

Knowing doing governing

In conclusion, it is easy to restate the main message of this chapter. Ways of knowing governance are themselves a crucial factor in the doing of governance. An array of incentives pressure understandings of governance to take particular forms that tend generally to favour the interests of incumbent power. Knowledge and action are represented as separate and sequential. Categories are asserted in unduly concrete ways. Normative orientations are simply assumed. Capacities for incumbent control are exaggerated. The roles of other kinds of agency are suppressed. Elaborate but unrealistic frameworks are asserted that privilege elite and disciplinary interests, but suppress the prospects for subaltern action. The overall effect is one of *seeing like power* – with an example lying in the increasing moves in global Sustainability governance away from distributed political causes shaped by collective action, towards centralised technical missions driven by social control (Meadowcroft 2009; Leach et al. 2010).

As a result of such moves, progress is further impeded towards the addressing of urgent politically remediable global imperatives like poverty and oppression; inequality and injustice; climate change, ecological destruction, toxic pollution, nuclear risks and war. A progressive response lies in directly addressing the realities that power not only drives action, but also shapes knowledge – including knowledges of governance itself. Deliberate efforts are therefore required to engage more directly with power-in-knowledge and to counter the resulting expedient biases. More horizontal and situated interventions are needed – and need to be emphasised – that more explicitly combine the knowing and the doing of governance.

What this enables is: the 'broadening out' of social appreciations for the potentialities for progressive social transformation; the 'opening up' of associated political spaces; and the 'letting go' of greater diversity and flexibility in the strategies, practices, institutions and technologies that actually materialise. Recognising that reflexivity and commitment are not antagonistic but co-constituting in turn helps nurture the benefits of distributed reflexivity, without losing the energy of progressive commitments. If a term is needed, the result might be called *heterodyne democracies* – highlighting more vibrant, dynamic and multivalent forms of distributed contestation and challenge. Crucially, these transcend the reified separations of understanding and action, combining them into myriad small-scale 'knowing doings'.

Similar lessons can arguably be learned from centuries of transformative collective action against other forms of oppression and injustice. And the analogy of flocking behaviours in Nature shows how radically agile and exquisitely choreographed reorientations are possible in other complex dynamic systems, without relying on apparatus for deterministic control. Prospects for radical progress do not therefore necessarily lie in greater social control. Even when ostensibly aimed at progressive ends, this can foster new forms of regressive concentration. Rather than efforts at vertical control, progressive hopes lie more instead in the horizontal culturing of change. The emphasis here rests in more intimate and less choate civil society relations that pervade all social actors. It is by such means that diverse, distributed and ambiguous knowing doings can surge (when emergent conditions are right) in waves of closely aligned murmurations. This is how real progressive transformation emerges.

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