



Can national policy blockages accelerate the development of polycentric governance? Evidence from climate change policy in the United Kingdom



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ABSTRACT

Many factors can conspire to limit the scope for policy development at the national level. In this paper, we consider whether blockages in national policy processes – resulting for example from austerity or small state political philosophies – might be overcome by the development of more polycentric governance arrangements. Drawing on evidence from three stakeholder workshops and fifteen interviews, we address this question by exploring the United Kingdom's recent retrenchment in the area of climate change policy, and the ways in which its policy community have responded. We identify two broad strategies based on polycentric principles: 'working with gatekeepers' to unlock political capital and 'collaborate to innovate' to develop policy outputs. We then empirically examine the advantages that these actions bring, analysing coordination across overlapping sites of authority, such as those associated with international regimes, devolved administrations and civic and private initiatives that operate in conjunction with, and sometimes independently of, the state. Despite constraining political and economic factors, which are by no means unique to the UK, we find that a polycentric climate policy network can create opportunities for overcoming central government blockages. However, we also argue that the ambiguous role of the state in empowering but also in constraining such a network will determine whether a polycentric approach to climate policy and governance is genuinely additional and innovative, or whether it is merely a temporary 'sticking plaster' for the retreat of the state and policy retrenchment during austere times.

1. Introduction

In theory, nation states can be attuned to accommodate the demands of long-term inter-woven social and material challenges such as anthropogenic climate change e.g. by building non-partisan coalitions, ensuring independent monitoring and fostering a reflexive policy process (Giddens, 2009; Grin et al., 2010; Latour, 2009; Voß et al., 2009). For example, Barry and Eckersley (2005) provide empirical evidence of effective state-based environmental stewardship such as strong collaboration beyond territorial boundaries, decision-making based on environmental objectives, and integrated environmental impact assessments. In the right circumstances, entrepreneurial individuals can work with(in) governments to promote innovative policies and help institutionalise state leadership (Kingdon, 1984; Lovell, 2009; Mazzucato, 2015). Accordingly, there have been high hopes for, and some empirical evidence of, such leadership in the area of climate change; especially because state governments have several rationales to act e.g. to protect vulnerable communities and infrastructure, promote inter-generational justice and drive economic competitiveness (Boasson and

Wettestad, 2014; Giddens, 2009; Lorenzoni and Benson, 2014; Jordan and Huitema, 2014).

However, policy progress can also be slow and inconsistent in democratic governments for many reasons, including the veto power of senior decision-makers and risk aversion of politicians, whose jobs depend on re-election. This is especially true when high levels of uncertainty and delayed or diffused benefits are involved, which is clearly the case with regards to climate change (Howlett, 2014; Rickards et al., 2014; Russel and Benson, 2014). Further exacerbating this inertia is the constant battle for political saliency at a time when many different issues are competing for a limited amount of public and political attention. Most theories of public policy treat this political agenda setting as a zero-sum game because of policymakers' bounded rationality and governments' limited capacity, and this often results in contradictory and insecure policy trajectories (Sabatier, 2007). For instance, longitudinal studies have shown that reactionary rollback due to a political swing and gradual retrenchment due to resource constraints are constant threats to policy progress (Patashnik, 2014; Pierson, 2004).

The recurring theme of de-centralisation is another factor effecting

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states' governing capacities and the feasibility of certain policies (Treisman, 2007). It is especially relevant for environmental policy where locally sensitive, or 'bottom-up', and 'polycentric' forms of governance are often claimed to be most effective (Andersson and Ostrom, 2008; Ostrom, 2010). Here, scholars highlight the efficacy and cost-saving virtues of delivering environmental policy through civic, private or public partnership forms and across multiple levels and scales (Bäckstrand, 2010; Bulkeley and Newell, 2010; Bulkeley et al., 2012; Lemos and Agrawal, 2006; Newell et al., 2012). It is suggested that these additional opportunities for experimentation, learning, and trust building should be particularly appealing to governments when they face political and economic barriers to unilateral action (Cole, 2015), a claim that this article seeks to test.

At the international level, the polycentric approach (sometimes described as a 'fragmentation') is increasingly evident in political institutions and governance arrangements (Abbott, 2012; Zelli, 2011). For example, the European Union's (EU) principle of 'subsidiarity' – that 'rules out Union intervention when an issue can be dealt with effectively by Member States at central, regional or local level' (Chateau, 2016, 2) – can encourage self-governance and autonomy. It also characterises the 2015 UNFCCC Paris Agreement, which replaced earlier top-down targets with a bottom-up agreement based on 'nationally determined contributions'.

At the national level, the rise of non-state and hybrid forms of governance has involved community projects, private sector voluntary agreements and a variety of market-based mechanisms. They have forced governments to think beyond traditional state-centric policies (Jordan, 2008; Lemos and Agrawal, 2006). The hierarchy and authority of national governments is thus directly challenged by new initiatives spanning multiple scales and territories (Bäckstrand, 2008; Bulkeley, 2005; Termeer et al., 2010). Whether this empowers non-state actors or hollows out the state's responsibilities is an ongoing debate within the governance literature.

Following these reflections, we start from a view that national government leadership on complex long-term issues such as climate change is likely to encounter difficulties due to the vagaries of political and economic trends. Therefore, we set out to explore whether government engagement with other actors and levels could strengthen a policy area and help overcome blockages in central state institutions. To explore this argument, we first introduce the common conceptualisation of the state as an autonomous unitary actor and the structuralist understandings of its capacities that this gives rise to. Then we describe a more relational understanding based on polycentric governance before empirically exploring its key tenets in the UK case study. The findings advance our understanding of 1) what policy communities can do when faced with blockages in national policy processes and 2) to what extent non-central government sites of authority can provide effective remedies to these blockages.

2. Theory

2.1. Climate change and the constraints of state-based governing

Throughout the wide-ranging and long tradition of writings on the nation state, there is a common tendency to conflate the state apparatus with broader, non-governmental, social structures and processes (for an overview see: Chernilo, 2008). Although this ontological expedience has produced some important analyses, e.g. political economy critiques of capitalist states (Jessop, 1990) and various comparative typologies, it has also steered research towards structuralist theories of statecraft at the expense of more agency-oriented readings. Since Giddens (1984) proposed a 'third way' to view structure and agency as a dualism and the forces of globalisation diversified the governance landscape, more relational and deterritorialised theories of the state have gained ground (Brenner et al., 2008; Holton, 2011; Jessop, 2016; Latour, 2009; cf. Davies, 2011).

Yet, despite a widespread retreat of the state from certain issues and policy retrenchment in many areas – hastened by a preference for market-based mechanisms driven by neoliberal ideology (Harvey, 2005; Cashore, 2002; Okereke, 2007) – national government policies remain an important source of innovation and a promising area of research, especially for climate change (Boasson, 2014; Jänicke, 2005; Fankhauser et al., 2015; Jordan and Huitema, 2014; Townshend et al., 2013). In 2014, a total of 804 national climate laws and policies were in existence in the highest emitting industrialised countries (Nachmany et al., 2014). Many of these countries have decreased their emissions from the 1990 baseline (UNFCCC, 2015), although some of this may have happened because of the offshoring of production to industrialising countries (Peters and Hertwich, 2008). Inevitably there are leaders and pioneers, as well as laggards, among these countries whose high outward ambitions depend to a large extent on their inward policy performance and consistency (Lieberink and Wurzel, 2016).

The ability of the leading European countries to advance domestic climate policies and deploy low-carbon investment has been stymied by the financial crisis of 2008 and the slow recovery of national economies (Geels, 2013; Skovgaard, 2014). Such moments of crisis and disruption can lead to significant policy change by prompting critical reflection on the status quo and heightening the demand for a proactive response i.e. creating a window of opportunity for entrepreneurial individuals working within government (Bauer et al., 2012; Kingdon, 1984). Broadly speaking, early opportunities for re-orienting socio-economic systems towards sustainability as a response to the crisis were recognised by many in the climate policy community but ultimately were not achieved because of resistance from vested interests and entrenched economic biases blocking such innovation (Geels, 2013).

Marxist and political economic critiques of capitalist states and societies have long pointed to the fundamental constraints of governing within, or through, the structures of liberal-capitalist democracies (Jessop, 1990). These analyses pay close attention to power imbalances, but in doing so they often posit the state as a unitary actor vis-à-vis non-state actors. This distinction is useful as a purely descriptive tool – and indeed will be used as such in this article – but it is less helpful as an analytical tool for understanding the dynamic power relations and social processes that take place beyond the confines of central government institutions. These interactions still shape, and are shaped by, public policy and governance. In practice 'the state' is not a distinct actor but rather an assemblage of multiple arenas for governing collective action (DeLanda, 2006; Paavola, 2011). What matters for theory and for practice is the number and type of arenas that are engaged in a given policy area i.e. its degree of polycentricity.

Starting from an empirical observation that monocentric forms of climate governance (such as unilateral state action) are fraught with structural biases and impediments to effective policy development, proponents of polycentricity have highlighted the benefits of pursuing an alternative, more pluralistic, approach (Cole, 2011; Harris, 2013; Jordan et al., 2015; Ostrom, 2010, 2012). In essence, they claim that the potential costs of having multiple, often overlapping, domains of governance are outweighed by the benefits of experimentation, learning, trust building and context sensitivity (Cole, 2015).

Experimentation and learning have been argued to be able to improve policy; especially in areas of high uncertainty and complexity such as climate change (Pahl-Wostl, 2009; Ostrom, 2010). This flexibility, or adaptive capacity, within a governance arrangement is vital for responding to rapid or unexpected changes in the natural environment (Pahl-Wostl, 2009) as well as in the social, political and economic environment (Voß et al., 2009). Perhaps most relevant for our focus on policy blockages and climate transitions is the claim that trial-and-error development of policies at multiple governance levels can lead to innovation and improved outcomes, especially if it is accompanied by close monitoring and information sharing between actors (Cole, 2015; De Búrca et al., 2014). Put simply, a polycentric policy arena allows for

experimentation with new ideas, whose successes can be used to develop action at multiple levels and in other contexts.

Another anticipated positive effect of increased connectivity and learning interactions is to build the levels of trust and co-operation needed to overcome politically entrenched blockages. Resisting criticisms of fragmentation and atomisation, a central tenet of polycentric governance is that the multiple sites of authority remain connected and inter-dependent. Talk does not always lead to action, so systems of reciprocity, reputation and mutual benefit are needed to produce greater levels of actual co-operation; something which has been regularly proven in collective action research (McGinnis, 2011; Ostrom and Walker, 2003). Importantly, this principle applies not just to official party politics and bureaucracies, but to the plethora of ways governance actors communicate about, and through, their policies, actions and beliefs beyond the state (Hajer, 2009). Put simply, a polycentric policy arena encourages greater levels of communication and trust, capable of overcoming stand-offs between different actors.

Building on this body of theory and many years of practical applications and workshops, McGinnis (2015: 5) offers a three-part definition of polycentric governance consisting of:

‘(1) Multiple centers of decision-making authority with overlapping jurisdictions (2) which interact through a process of mutual adjustment during which they frequently establish new formal collaborations or informal commitments, and (3) their interactions generate a regularized pattern of overarching social order which captures efficiencies of scale at all levels of aggregation, including providing a secure foundation for democratic self-governance.’

The extent to which these structures, processes and outcomes are present will vary from case to case. In fact, it should be noted here that the involvement of multiple (often non-state) actors in policy processes is by no means a novel phenomenon. The point is rather that its prevalence is growing and that its normative claims to greater efficacy need to be examined. To this end, McGinnis postulates a number of systemic issues responsible for policy blockages and the way they might be ameliorated by polycentricity to produce desirable outcomes in a given context (see Table 1).

We will test these potential remedies to systemic policy blockages in our case study, responding to a call from Jordan et al. (2015) for more research into why and how polycentric governance is emerging and the role of states therein. For instance, in the field of climate and energy, Sovacool (2011) has shown that government policymaking and institutions play a key part in the emergence and functioning of these polycentric processes. Our study builds on this work, examining the efforts of a broadly defined policy community to overcome recent blockages to the development of climate policy in the UK.

3. The promise and limitations of UK climate policy

Prior to 2008, the UK Government’s climate change policies were

faltering and being pursued without effective coordination across government departments and sectors (Carter and Jacobs, 2014). However, this was not for want of initiatives. Local government, civic and private sector climate governance initiatives were plentiful and have continued to proliferate, sometimes in concert and sometimes in tension with government (Bulkeley and Kern, 2006; Giddens, 2009). To illustrate, the Nottingham Declaration in 2000 saw local governments and cities make climate change integral to their decision-making and strategies (now with 392 signatories accounting for 90% of British councils). Low-carbon communities and grassroots projects also have a relatively long, if somewhat uncertain, history in the UK (see: Walker, 2011), and the country’s economy has achieved an average annual reduction in carbon intensity of 3.5% between 2000 and 2015 (the highest in Europe) (PWC, 2016). However, the extent to which this activity has been acknowledged, supported or hindered by central government has fluctuated over time.

Bringing together key actors and discourses from these numerous sectors, a period of civil society campaigning, private sector endorsements and political competition between 2006 and 2008 led to the passing of the Climate Change Act (CCA) (Lorenzoni and Benson, 2014). This innovative policy enshrined in legislation a target of an 80% emission reduction from 1990 level by 2050. It also established five-yearly ‘carbon budgets’ that would be proposed and monitored by a semi-independent Committee on Climate Change (CCC). A newly created Department for Energy and Climate Change (DECC) ensured that there would be ministers and policy teams dedicated to achieving a low carbon transition in social and energy systems. The Department for Environment, Food and Rural Affairs (DEFRA) remained responsible for climate risk assessments and adaptation, being given new powers to demand reports on progress from certain sectors.

This high level of government activity and political salience continued for some time, despite the onset of the global financial crisis and the failure of the UNFCCC negotiations at Copenhagen in 2009. The first three carbon budgets were passed into law, DECC produced a comprehensive strategy for transforming the energy sector (HM Government, 2009) and DEFRA began compiling a comprehensive Climate Change Risk Assessment (DEFRA, 2012). At this time, incumbent politicians and those seeking election portrayed themselves, and the UK, as leading the fight against climate change. The Conservative-Liberal Coalition elected in 2010 promised to be ‘the greenest government ever’ (Cameron, 2010). However, early doubts were raised about the cost effectiveness of these policies and the limited influence of the climate policy community (Lockwood, 2013; Pielke Jr, 2009). The waning influence, interest and commitment (see also Carter and Jacobs, 2014) are reminders that flagship strategic policies like the CCA are not enough alone, they need to be followed up with consistent policy development and implementation in multiple sectors in order to deliver the required emissions reductions.

Some of these concerns materialised during the 2010–2015 Conservative-Liberal Coalition and intensified at the start of the 2015–

Table 1
Systemic barriers to polycentric governance and the strategies for, and benefits of, overcoming them (based on McGinnis, 2015, 28).

Systemic Tendencies or Biases	Sources and Reasons	Remedies and Potential Benefits
A. Structural Inequities	Different groups face different costs for collective action, and high costs can be imposed by especially successful groups	Continued access to other channels for mobilization outside existing forms of domination
B. Incremental Bias	Multiple veto points restrict range of feasible mutually beneficial adjustments	Can appeal to authorities at other levels to break an impasse at any single level
C. High Complexity	High participation costs can give current experts a big advantage on others	Since no governance system can be complete, new forms of connections may provide alternative paths to participation
D. Deep Structural Fissures	Each policy domain may be dominated by network of incumbents insulated from outside pressure	Interconnectedness between policy domains will change with new technologies and systemic shocks
E. Coordination Failures	Dilemmas of collective action are especially difficult at high levels of aggregation	Gaps or failures in coordination exposed at one level can inspire efforts of other actors at lower levels, or leadership from above
F. Lack of Normative Clarity	No single goal will be consistently pursued by all actors at all levels	Drawing attention to multiple goals encourages open deliberation and builds legitimacy for policy decisions

Conservative majority Government. Previously prominent arguments from the CCC, DECC and DEFRA were drowned out by the politics and discourse of austerity, whilst disagreements between departments and ministers made it difficult to build trust or to send consistent policy signals. Senior politicians sought to reign in the UK's leadership position and make any new targets conditional on parity with other European countries (Gillard, 2016). Under the banner of austerity, DECC and DEFRA suffered significant budget cuts, which also limited their capacity to develop policy.

4. Methodological considerations

The growing tension between ambitious policy targets and constrained political and economic circumstances informed our case study selection. Many European economies have been slow to recover from the financial crisis of 2008, which has had both political and policy effects. Interestingly in this context, some governments – such as the UK – have continued to declare themselves as leaders in investing in a low-carbon economy and intervening to transform the energy system whilst simultaneously prioritising austerity policies and deregulation. By selecting a case study where this tension is particularly pronounced we are able to present findings that advance knowledge through ‘the power of example’ and can inform analyses of other countries and policy areas facing similar challenges (Flyvbjerg, 2006).

We consider that the UK climate policy community – policymakers and non-governmental actors and stakeholders with a vested interest in achieving climate policy goals – have been actively searching for innovative solutions to overcome the challenges encountered in the key departments in central government. The UK climate policy area can be described and analysed as, to a greater or lesser extent, polycentric: inasmuch as the central government is not a ‘monolithic actor’ and the state constitutes a ‘set of arenas and instruments for collective action’ (Paavola, 2011, 418). This climate policy community involves a mixture of state and non-state actors and venues, resisting the temptation towards methodological nationalism (Chernilo, 2008) to pay close attention to the way their inter-relations produce public policy and climate governance initiatives.

The formulation and implementation of climate policy depends on the input of various civic, private and expert actors to e.g. community energy schemes, supply chain resilience and low-carbon technology (Bulkeley and Kern, 2006). For example, the UK's membership of the EU (prior to the process embarked upon following the referendum in June 2016), its devolved authorities (Northern Ireland, Scotland and Wales) and its localism agenda that seeks to empower cities, regions and communities mean there are several venues for decentralised innovation. Many of these venues for climate policy have been active prior to the timeframe that is the focus of this article. As such, it is not our intention to prove a quantifiable step-change towards polycentric policy over time, but to determine the extent to which it provides a solution to the challenges and blockages currently being encountered by policymakers in central government.

Our analysis is primarily based on discussions at three participatory workshops ($n=28, 27, 15$ participants respectively). The participants included government actors from senior, strategic and operational levels, climate change and energy policy experts, consultants, communications specialists and academics. The workshops were carried out under the Chatham House Rule (Chatham House, 2016) to allow participants to contribute freely rather than as representatives of their organisations. Participants co-produced a set of reflections on the barriers to, and opportunities for, climate policy innovations but all interpretation and analysis of these discussions presented in this article are the responsibility of the authors. Semi-structured interviews were also carried out with 15 key members of climate policy community to explore their strategies and rationales for advancing climate policy. Finally, documentary material such as policy documents, and government and non-government reports was used to triangulate these accounts.

5. Analysis

In this section, we briefly present the outcomes of the workshops and interviews that related to the political and economic structural factors affecting UK climate policymakers' capacity for developing their area, as well as their proposed strategic responses. Many of these issues have been raised elsewhere in the literature (Carter and Jacobs, 2014; Gillard, 2016; Lockwood, 2013). Our evidence reconfirms their importance and presents, for the first time, some insights into how policymakers and stakeholders respond during such turbulent times.

We then scrutinise the ways in which polycentricity presents opportunities for policymakers to overcome policy blockages, whilst also considering its limitations. Crucially we see all governance actors as sites of authority in their own right; that is not as pawns in governmental strategies but as co-producers and (relatively) autonomous drivers of climate policy and actions. Their level of authority and agency may be in part determined by their interactions with the state, but it is also drawn from elsewhere and enacted through non-state channels. Therefore our analysis is based on a relational view of agency and power; seeing polycentricity as expressed through socio-political interactions between multiple public (state based), private and civic actors.

First, we demonstrate how international linkages can pull in both directions, advancing ambition and undermining it. Second, devolved authorities such as nations and cities can outpace central government but their capacity to do so is shaped by the limits of their self-rule and how effectively they can work with transnational networks and the private sector. Lastly we show the importance of adopting a collaborative (not prescriptive) approach to working with industry and civil society. These findings are summarised in Table 2.

5.1. Structural challenges and strategic responses

In the six years following the financial crash of 2008, macro-economic trends such as slow growth of Gross Domestic Product (GDP) and high levels of government debt (Office for Budget Responsibility, 2011, 2012) reinforced the view among some politicians and some sectors of the public that new, and existing, climate policies could not be afforded. Though these views were not completely hegemonic, arguments about long-term or non-fiscal benefits of a green economy were often deemed untenable *a priori* by policymakers. One strategic level interviewee captured this succinctly by defining their overarching mandate as working out ‘how to do more with less’.

Significant budget cuts were imposed on government departments (notably DECC and DEFRA) and on local governments (HM Treasury, 2015), which had a negative impact on climate policymaking. Fiscal restraints also exacerbated a silo mentality: departments focused their resources on core work and marginal adjustments rather than on crosscutting issues like climate change. DECC's plans were constrained by a cap on spending (HM Treasury, 2011), resulting in cuts to renewable energy subsidies and policy decisions being forced upon them by the Treasury. Eventually, in 2016, they were subsumed into the Department for Business Innovations and Skills.

Perhaps unsurprisingly, we found that policymakers were seeking to increase their engagement with a wider set of actors and institutions beyond central government. Actions fell into two broad strategies, explicitly based on the assumption that overcoming policy blockages would require a polycentric approach. The strategy of ‘working with gatekeepers and champions’ was intended to unlock political capital by developing dialogues and commitments across policy areas and by reframing climate change so that it appealed to centre-right political preferences, climate sceptics and disengaged senior strategists. The strategy of ‘collaborate to innovate’ included more consultations prior to decisions, drawing on *ex post* analysis and expert evidence, localised climate messages to discuss context-sensitive policies, and utilising joint-funding and more applied research and development schemes in

Table 2
examples of barriers to, and opportunities for, the realisation of polycentric ideals in UK climate policy.

Systemic Tendencies or Biases	Sources and Reasons	Remedies and Potential Benefits
A. Structural Inequities	Homogenous groups with a small focus such as campaigns against wind farms or heavy industry against carbon taxes were more successful at influencing specific policies than heterogeneous groups such as ‘environmentalists’ who may have differing views on the details of how to achieve broad goals.	Environment and climate coalitions were able to reach beyond site-specific interests to mobilise support from various interest groups and influence from multiple institutions.
B. Incremental Bias	Powerful and numerous veto points within central government such as the Treasury and Cabinet Ministers made radical climate policy decisions unlikely.	Devolved authorities and cities set more ambitious targets and pioneer innovative policies in sectors they have control over.
C. High Complexity	Local governance initiatives such as community energy or low carbon businesses struggled to compete with more established and dominant firms.	City Deals, Local Enterprise Partnerships and trans-national networks all opened up avenues for accessing policy support and new markets.
D. Deep Structural Fissures	Climate policymakers found it difficult to connect with some other policy sectors and departments e.g. education and DCLG.	Communications specialists and think tanks helped connect climate change to other issue areas and centre-right ideologies.
E. Coordination Failures	Lack of coordination between Coalition parties, Cabinet Ministers and central government departments produced mixed messages and uncertainty.	Private sector actors and cities seized the initiative with certain policy ideas; international and trans-national actors pushed for more ambitious targets.
F. Lack of Normative Clarity	The rationale and methods for pursuing of a low-carbon lifestyle differs between community groups and government actors.	Voices from the private and civic sector were sought by policymakers to help develop a shared narrative about the low-carbon transition.

the private sector. Many elements of these strategies have been a part of the UK climate policy area for some time, but there was an explicit acknowledgment that increasing these activities was necessary for overcoming current and future constraints, especially as targets and policy decisions become more challenging over time.

5.2. Engaging with multiple sites of authority

5.2.1. The international climate regime and the European Union

Many interviewees had a positive view of international climate politics, despite sharing reservations about the efficacy of dealing with climate change at such a high level. As shown above, the UK’s position as an international leader has been an important part of the story. This position was based on the perceived success of its domestic legislation, which underpinned diplomacy and policy diffusion efforts. The Minister for Energy and Climate Change (Amber Rudd) and DECC’s Director of International Climate Change (Peter Betts) demonstrated this leverage in Paris in 2015 by steering the final agreement towards a model that resembles the UK’s framework of a long-term target broken down into five-yearly monitoring periods.

Such mutually reinforcing overlaps between national and international governance create pressure on national policy, but their effects are neither immediate nor guaranteed. For instance, the Paris Agreement on a more stringent target limiting global warming to 1.5 ° Celsius prompted UK policymakers to promise a new domestic ‘net zero’ emissions target. Yet the CCC chose not to revise its proposed target, despite concerted pressure from environmental campaigners, on the grounds that it would suffice as an absolute minimum for the UK’s contribution to the global target and that domestic policy was already falling short of this (CCC, 2016a). This illustrates the limitation of the CCC’s purely advisory mandate and represents a missed opportunity for building reciprocity between policymakers at the two levels.

Similarly, efforts to feed commitments and ideas from the international level into adjacent policy areas such as raising public awareness and climate change education have been very limited; representing another missed opportunity for establishing new connections across sectors and generations. Despite these shortcomings and the failure of potential polycentric benefits to be secured, most policymakers and non-government organisations remained optimistic about the political value of maintaining a leadership position internationally and the institutional pressure it exerts on domestic actors.

For those seeking global agreements on climate change, the UK’s relationship with the EU has moved in an even less positive direction. Negotiating at the UNFCCC as a member of the EU, the UK has

traditionally been seen as a leader within the bloc; pushing for stronger targets and monitoring frameworks. This situation was unsettled by a referendum on the UK’s membership of the EU. After a series of successful negotiations in 2014 to align climate and renewable energy targets, this work was ‘largely seen as done’ by some policymakers.

The 2016 referendum result has now potentially undone much of the benefits from this work. By voting to leave the EU the UK closed a significant source of policies (e.g. renewable energy targets) and financing (worth 3.5bn Euros during the period 2014–2020) for climate and energy schemes (Froggatt et al., 2016). Most pertinently from the polycentric perspective, the impending loss of the influence of EU regulations and legal oversight represents a significant decrease in the number of mechanisms for monitoring – and thereby encouraging – cooperation on climate goals. Furthermore, the referendum result represents the loss of a vital multi-level governance connection for the UK’s devolved authorities (Scotland, Wales and Northern Ireland) and cities that previously benefitted greatly from EU policies, finance and networks.

5.2.2. Ambition, constraints and bottom-up innovation in devolved authorities and cities

The UK’s devolved nations offer clear examples of non-central government actors looking for ways to develop a faltering policy area and encourage experimentation. The Scottish Government’s equivalent of the CCA incorporated emissions reductions beyond its share for achieving the UK target, and at a quicker pace (Scottish Parliament, 2009; CCC, 2016b). In Wales a 3% annual emission reduction target enables a more comprehensive and explicit application to different sectors than the UK’s aggregate targets (Welsh Assembly Government, 2010a). Scotland and Wales have also legislated on targets and strategies for meeting all of their electricity and energy needs with renewable and low-carbon sources by 2020 and 2050 respectively (Scottish Government, 2011; Welsh Assembly Government, 2010b); whereas the UK Parliament rejected such an approach by narrowly voting against an explicit power sector decarbonisation target.

The higher ambition in devolved authorities does filter into specific policy decisions at other levels, sometimes standing in direct contrast to central government. For instance, onshore wind continued to be a priority in Scotland whereas the UK Government halted it in England and Wales. The Welsh Government has less control over large energy infrastructure decisions but has developed plans for a world-first tidal lagoon project in Swansea. It also has a more generous and consistent record of supporting micro-generation energy projects.

Such ambitious and experimental sub-national policies may act as

pilots of innovation, to be learnt from and even adopted later by national government. This was the case when Scotland and Wales introduced a plastic bag levy that was later adopted in England after its positive impacts were monitored and evaluated (Welsh Government, 2016; Zero Waste Scotland, 2015). Another example emerged from our workshop discussions, as policymakers sought to draw lessons from the perceived success of Greener Scotland's environment and climate change communication strategy. This was primarily driven by individuals who were part of wider policymaking networks because no formal channels for facilitating such learning within the climate policy area were identified as successful. Confirming the 'more connections, more innovation' hypothesis of polycentric governance, this suggests that learning lessons from experimentation is a valuable addition, but that it may be quicker and more effective when formally supported rather than simply as a by-product of pioneers leading by example.

Sub-national actors may also seek to circumvent their national governments. Scotland has 25% of Europe's offshore wind and tidal potential and has attracted tens of millions of Euros from the EU for renewable energy projects (European Commission, 2014). Wales also drew a financial net benefit from the EU in 2014 (Ifan et al., 2016), much of which has been spent on innovative tidal energy projects and adaptation initiatives in coastal communities. Scotland and Wales are also active in transnational networks of devolved authorities that engage in climate governance initiatives such as the Climate Group's States and Regions Alliance. Recourse to these other levels and channels can help to sidestep the entrenched power relations and impasses of central government policymaking, offering new sources of information, funding and policy.

In England, legislation was introduced to accelerate the devolution of power, giving 'new freedoms and flexibilities to local government' and 'new rights and powers for communities and individuals' (DCLG, 2011, 3). This included provisions giving local government and city councils specific powers such as control over prioritisation of economic sectors and public spending. Interestingly, these 26 'City Deals' were guided by principles akin to those of polycentricity: creating another site of authority, encouraging collaboration between public and private actors, and seeking efficiencies of scale (HM Government, 2011, 20). The use of such policy discourse suggests the potential virtues of a polycentric approach are being recognised and legitimised, although it does not yet reveal the underlying rationale for their adoption or the details of their enactment.

Several interviewees saw the City Deals as a good idea in principle but underperforming in practice. This was largely attributed to the fact that they were overseen by two departments who were overtly uninterested in climate change, and partly because they came at a time when local government budgets were being heavily cut. City level interviewees corroborated this, reporting difficulties in finding central government support for climate change related initiatives, even when the business case was strong and the social benefits were clear (e.g. energy efficiency investment to reduce emissions and fuel poverty). Devolving responsibilities can thus be described as a move towards self-governance and autonomy but, in the context of a 51% cut to the Department for Communities and Local Government between 2010 and 2015 (HM Treasury, 2015), it can also be described as passing the buck.

Several city level actors also underlined that working with central policymakers is not the only option. They highlighted the importance of transnational networks like C40 and the Compact of Mayors in promoting the influence of cities, sharing knowledge, and collaborating on mitigation and adaptation governance. Within the UK, the Core Cities group is one such example, being a successful collaboration between the 10 biggest city economies outside of London. For example, in conjunction with the capital city and private sector energy companies they developed an innovative retrofitting scheme to reduce emissions from public buildings without needing additional up-front public finance; a clear example of experimental governance succeeding in a policy area blighted by underfunding and inertia.

5.2.3. A problem shared is a problem halved: working with private enterprise and civil society to build a low-carbon coalition

In workshop discussions and interviews, policymakers expressed a desire to create a sense of 'shared ownership' of the problem of climate change. It was felt that this resonated with the broader neoliberal approach to small-state governance – exemplified by the Government's 'Big Society' agenda (Cabinet Office, 2010) – and that it had already proven successful in building co-operation in the run up to the passing of the CCA and the UNFCCC conference in Paris (Jacobs, 2016). Yet, it was acknowledged that 'no single goal would be prioritised by everyone', and that this potential lack of clarity was not something for government to try to control. Rather, it was hoped that by bringing a range of leading voices together a shared narrative would emerge. Thereby increasing the legitimacy and acceptability of future climate policies and governance arrangements, and also putting pressure on central government to send consistent messages of support – even during periods of austerity and low prioritisation of climate change.

Importantly this was not seen solely as an issue of public relations, but one of democratic participation. Many policymakers cited the Government's Open Policymaking initiative as a benchmark, which had provided the tools for including a broad range of expertise and feedback during all stages of the policy process. If successful, this sort of governance arrangement can provide a forum for increased communication and learning between stakeholders without requiring significant additional expenditure or legislation at a time when government is disinclined towards either.

Policymaking collaborations between the state and the private sector have been increasingly popular in the UK and other countries with liberalised markets. Mobilising private capital to produce social and environmental benefits can be effective during times of limited public finances. For example, the Carbon Trust's five-year Offshore Wind Accelerator project combined public finance with considerable investment and expertise of nine offshore wind companies to reduce costs, furthering the competitiveness of this form of renewable energy.

Companies seeking first-mover advantages have also acted independently, drawing on the latest climate science and policy trajectories e.g. using internal carbon pricing to guide their investment strategies and pledging to become powered entirely by renewable energy. Interviewees felt that there were many such success stories in the UK and even a critical mass of actors committed to tackling climate change even when governments and markets were less assured. As an example of this sentiment, they cited the World Economic Forum's open letter to government leaders in 2015 urging stronger climate action. This stemmed from the recognition that more needs to be done to prepare and promote low-carbon business messages in conjunction with governments to overcome apparent contradictions in interest and preferences. Private sector voluntary agreements are often used to preemptively stave off government regulation, but they also indicate a willingness to go beyond lagging policies and thus are an opportunity to innovate when public finances and political capital are limited.

The state also plays an important but ambiguous role in shaping civil society climate actions such as community energy and behaviour change schemes. These schemes often focus on energy efficiency measures, renewable energy development and low consumption lifestyles. Public policy and top-down intervention may enhance their success (e.g. by establishing feed-in-tariffs for renewable energy, setting up knowledge sharing networks and providing frameworks for measuring impact) but they are not always dependable revenue streams and their governance rules may even be counterproductive to the aims and functioning of community projects (for UK examples see: Aiken, 2016; Markantoni, 2016; Walker, 2011). The many examples of failed or faltering community level low-carbon energy schemes serve as a reminder that favourable conditions for polycentric experimentation need to be maintained, and that governments have a continued role to play in this.

More broadly, the high costs of competing in a liberalised market and of meeting regulatory requirements may limit the ability of these

civic initiatives to scale up their impact, but several of our interviewees and workshop participants saw their increasing prevalence as a positive sign. Their popularity, cost-efficiency, co-benefits and localised governance structures were all lauded, but policymakers need to provide more reliable support and to see them as co-producers of an inclusive and pluralistic low-carbon transition, not merely expendable experiments.

6. Discussion: polycentricity and the ambiguous role of government

As austerity took hold across Europe in the wake of the 2008 financial crisis, governments inclined to reduce regulation and public spending were able to justify implementing severe cuts. As a result, in the UK, the climate policy community faced significant blockages to policy development (confirming the theoretical and empirical hypotheses of Bauer et al., 2012; Lockwood, 2013; Gillard, 2016). Despite independent progress reports stressing the need to maintain ambition and to increase policy development to meet future targets (CCC, 2014, 2016a), climate change was effectively de-prioritised by central government. Our findings should resonate with other countries and policy areas marked by state retreat or policy retrenchment, and they will certainly be of interest within the UK where limited policymaking resources continue to be cut (e.g. DECC being subsumed into BIS) or are being focused on other priorities (e.g. negotiating an exit from the EU).

What can policymakers do when faced with such a predicament and what is their rationale for acting? The UK climate policy community responded to the above challenges by pursuing two broad strategies: 1) appealing to influential individuals and 2) seeking out new collaborations. The assumption that leadership could not come from government alone underpinned these strategies. Another key assumption was that policy innovations would require linking top-down influence with bottom-up creativity. Interviewees reported numerous sites where these strategies play out, such as international institutions, transnational networks, devolved authorities, cities, and private enterprise and community groups. It is in the interactions between these multiple sites of authority that issues of relational power and policy development can be seen.

Our case study provides examples of a positive contribution of a broad network of actors to climate policy, which at least partially fulfilled the definition and promises of polycentric governance as laid out by McGinnis (2015), Cole (2015) and Jordan et al. (2015). The network helped produce new formal governance arrangements and informal commitments for tackling climate change across multiple levels, institutions and sectors (e.g. nationally determined contributions, renewable energy targets, voluntary actions among businesses, and pledges between cities and communities). In cases of public-private financing, City Deals, and community energy they also produced efficiencies of scale and self-governance.

These successes may be in part due to the specifics of the UK case, but broad lessons can still be drawn from these and explored in other contexts of policy blockage. For instance, the relatively long history of non-state climate action in the UK showed the importance of being able to draw on past experience and existing relationships when developing innovations. Further, the widely perceived success of the CCA enabled policymakers to re-direct limited resources towards complementary forms of governance, showing the importance of maintaining political and public support for national level strategies (Cao and Ward, 2016). Extending these arguments, we contend that a polycentric approach will be most effective when it is additional to, not a replacement for, strong central government leadership. Without this overt shared commitment and reciprocity there is a danger that progress will be halted in times of crisis or that contrary policy decisions may appear to have no political cost.

Does all of this polycentric activity achieve tangible results beyond the existing state-based policies such as the CCA and its carbon

budgets? Although such policy outcomes are difficult to calculate at the aggregate level of emissions reductions (Hertin et al., 2009), it is possible to argue for three significant advantages for policy processes and outputs. First, by coordinating with other (sometimes more receptive) levels and sectors the wider climate policy community was able to put pressure on central government, or even to circumvent it entirely. Second, these channels also provided extra opportunities for experimentation, learning and diffusion (Loorbach, 2010; Voß et al., 2009), e.g. when devolved authorities outpaced the national level and businesses trialled higher carbon prices. Third, the increased connections between the state and other actors and levels offered the necessary scope to begin to build a shared narrative for fostering trust and social buy-in necessary to implement ambitious and broadly supported climate policies (Stirling, 2011). Each of these illustrates the potential value of relational forms of power and influence within, and beyond, the structures of the nation state.

Although our case study aligned with McGinnis' (2015) tripartite definition of a polycentric system of governance, the exact contours of the UK climate policy area were left deliberately open. Future analyses could examine more tightly defined policy areas or sub-systems of climate policy (e.g. the renewable energy sector or local adaptation) to provide more comparative evidence and clarify certain theoretical and applied issues e.g. the ambiguous role of government and claims of scalar efficiency. On the latter point, proving such an 'economic dividend' would certainly strengthen the case for pursuing greater polycentricity in other fiscally constrained countries and policy areas (Pike et al., 2012).

The ability of other countries and policy communities to replicate the same positive effects seen in the UK case is not necessarily assured. This will likely be affected by many context specific variables e.g. the level of decentralisation, pre-existing actor networks, institutionalised power relations, styles of policymaking, legislative context, and activeness of civic and private sectors. However, it certainly seems plausible that increasing polycentricity is a desirable, and effective, strategy for overcoming national level blockages e.g. recently in the USA, Congress has blocked climate policies but at the state level there are prominent leaders (California) and collaborations (Compact of Mayors).

Our findings showed that policymakers actively tried to enhance their engagement with other sites of authority. At the time, this fit well with the government's 'Big Society' rhetoric, deregulation agenda, and public spending cuts; raising concerns about the potential 'Janus-face' of neoliberal governance as a response to constrained public finances (Davies, 2011; Swyngedouw, 2005). In other words, the turn to non-state actors should not be considered a *de facto* solution to central state inaction (Paavola et al., 2009). Our case study chimes with other critical research that has raised this issue. For instance, devolution of resources to sub-national actors can be insufficient to match their new responsibilities, and the new relationship to the state that it produces can be deliberately managed to favour other (more central) priorities or to spread the blame for policy failures (Muinzer, 2016; Royles and McEwen, 2016). Similarly, civil society initiatives and local enterprise partnerships are at risk of being instrumentalised by the state, i.e. turned into the subjects, rather than curators, of social change (Aiken, 2016; Davies, 2011; Lever, 2005).

7. Conclusion

Long-term policy development and state-based governance may be hampered by multiple factors such as economic and political cycles, as well as by the tendency towards silo thinking and entrenched power relations of central government structures. This is especially true for policy areas marked by uncertainty, vested interests, and complex economic or scientific forecasting that is open to multiple interpretations and priorities.

As we have shown in the case of UK climate change policy, state leadership through targets and policy frameworks is vital to raise

ambition and monitor progress. However, it requires consistent policy development to maintain the trajectory and to deliver tangible interim achievements (e.g. annual emissions reductions). However, economic downturns and changes in political priorities can cause domestic progress to slow and an implementation gap to emerge. Such blockages may also limit the scope for policy innovation and leadership from other actors, raising important questions about governmental constraints on the agency of non-state actors or governance arrangements.

At such times policymakers may turn to other sites of authority that offer alternative channels of influence and innovation, as well as the potential for achieving efficiencies of scale. Countries with more devolved power structures, and politically engaged private and civic sectors, are well placed to cultivate such polycentric networks. However, our final contention is that the underlying rationale for governments' interactions with these other sites of authority – and the relational power through which this is enacted – is a key determinant of their success. Where other actors are seen as passive recipients of policy decisions they will be given less scope (materially and idealistically) for bottom-up innovation: governments will effectively shift responsibility and blame rather than share ownership and accountability. Where governments invite other actors into the policymaking process at all stages and encourage autonomy in multiple sites of authority there will be more room for experimentation, economies of scale and, ultimately, the progression of an inclusive low-carbon transition.

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