



**Can national policy blockages
accelerate the development of
polycentric governance?
Evidence from recent developments in
UK climate policy**

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TABLE OF CONTENTS

Abstract	4
About the Authors	5
1. Introduction	6
2. Theory	9
3. Methodological Considerations	15
4. Analysis	16
5. Discussion	31
6. Conclusion	34
References	36

ABSTRACT

Many factors can conspire to limit the scope for policy development at the national scale. In this paper, we consider whether blockages in national policy processes – resulting for example from austerity or ‘small state’ political philosophies – might accelerate the development of more polycentric governance arrangements. Recognising that this issue is of widespread relevance, we address this question by exploring the causes of the UK’s recent retrenchment in the area of climate change policy, and the ways in which policymakers and other stakeholders have responded. We start by using the Policy Dismantling Framework to identify key structure-agency dynamics within government and thus identify the scope and rationales for pursuing innovations through alternative forms of governance. We then examine the potential for advances in policy and governance via 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 the constraining influence of various structural factors, we find that a wide climate policy network can create opportunities for overcoming central government blockages by engaging in polycentric governance arrangements. 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 or retrenchment of the state during austere times.

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1. Introduction

In theory, states can be attuned to accommodate the demands of long-term inter-woven social and material processes 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). Barry and Eckersley (2005) provide empirical examples 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 promote innovative policies and help institutionalise governmental leadership (Kingdon, 1984; Lovell, 2009; Mazzucato, 2015). There have been high hopes for, and some empirical evidence of, such leadership in the area of climate change, wherein states have several rationales to act such as the protection of vulnerable communities and infrastructure, inter-generational justice and economic competitiveness (Boasson and Wettestad, 2014; Giddens, 2009; Lorenzoni and Benson, 2014; Jordan and Huiteima, 2014).

However, policy progress can 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 and diffused benefits are involved, which is the case with climate change (Howlett, 2014; Rickards et al., 2014; Russel and Benson, 2014). Further exacerbating this inertia is the constant battle for political saliency. Most theories of public policy assume that political agenda setting is a zero-sum game because of

policymakers' bounded rationality and governments' limited capacity, and that 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 progress (Patashnik, 2014; Pierson, 2004).

The recurring theme of de-centralisation is another factor effecting states' capacities and the political 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). Governance 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). Increased opportunities for experimentation, learning, and trust building should also appeal to governmental actors when they face political and economic barriers to unilateral action (Cole, 2015).

At the international level, the polycentric approach has sometimes been described as a 'fragmentation' of 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) – encourages self-governance and autonomy. It also characterises the 2015 UNFCCC Paris Agreement, which replaced earlier top-down targets with bottom-up '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 active debate within the governance literature (see Swyngedouw, 2005).

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 common problems that any policy community could face when pursuing long-term goals through the central state. Then we describe key concepts that can elucidate these problems (policy dismantling/expansion) and provide potential solutions (polycentricity), before applying them to the UK case study in order to understand 1) what policy communities do when faced with blockages in national policy processes and 2) to what extent non-central government sites of authority can provide remedies to these blockages.

2. Theory

Climate change and the constraints of government

Despite a widespread retreat of the state and retrenchment in many policy areas, hastened by an increased preference for market-based mechanisms driven by neoliberal ideology (Harvey, 2005; Cashore, 2002; Okereke, 2007), government policies remain an important source of innovation and a promising area of research 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 recorded 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). There are leaders and pioneers among these countries whose high outward ambitions depend to a large extent on their inward performance and consistency (Lieverink 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). These macro-economic factors created the conditions for significant policy changes but required action from entrepreneurial individuals (Bauer et al., 2012; Kingdon, 1984). For instance, early opportunities for re-orienting socio-economic systems towards sustainability were recognised but not achieved because of entrenched interests and biases blocking innovation (Geels, 2013).

The Policy Dismantling Framework is useful for understanding how policy changes come about during periods of economic austerity through analysis of governmental structure-agency dynamics (Bauer and Knill, 2012). It provides the conceptual tools for observing structural factors at play and the way they constrain or enable policymakers' agency. *External factors* cover the prevailing macro-conditions such as economic stability, technological change and political saliency. *Institutional factors* cover democratic structures and processes such as elections, political parties, legislatures, decision-making, and veto players. *Situational factors* are context dependent and contingent factors that increase the sensitivity of decision makers to the costs and benefits of policy changes (Bauer and Knill, 2012).

The framework also considers the agency of policymakers. Assuming individuals have a relatively stable set of preferences (e.g. re-election, achieving policy goals, acquiring resources), they will reflect on how best to pursue them in the current structural conditions and develop strategies for action accordingly. Our analysis of policymakers' strategies differs from the common emphasis on dismantling (Jordan et al., 2013). Instead, we focus on their positive strategies for overcoming blockages. We also link our analysis to concepts from the polycentric governance literature in order to stretch the Policy Dismantling Framework from its state-centricity to explore the potential added value of involving non-state actors in collaborative efforts to govern during austerity.

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 this alternative approach (Cole, 2011; Harris, 2013; Jordan et al., 2015; Ostrom, 2012). They claim that the potential costs of 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, whilst increased connectivity can build the levels of trust needed to overcome politically entrenched blockages. This applies not just to party politics, but to the way governments communicate with various actors about, and through, their policies (Hajer, 2009).

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. 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).

Table 1: Systemic barriers to polycentric governance and the strategies for, and benefits of, overcoming them (McGinnis, 2016: 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	Reminds analysts and participants of the continued legitimacy of multiple goals

We will test these potential remedies to systemic policy blockages in our case study, while at the same time 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 change action in the UK.

The promise and limitations of UK climate policy

Prior to 2008, the UK Government's climate change objectives – the reduction of greenhouse gas emissions and the identification of, and preparation for, climate risks – were pursued incrementally and without effective coordination across government departments (Carter and Jacobs, 2014). 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 2050¹. 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 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

¹ A more stringent 'net zero' target was promised in 2016 and, at the time of writing, is in the process of being evaluated and legislated.

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, doubts were raised about the cost effectiveness of these ambitions and the limited influence of the climate policy community (Lockwood, 2013; Pielke Jr, 2009). The waning influence, interest and commitment (see also Carter, 2014) are reminders that flagship policies like the CCA are not enough alone, they need to be followed up with consistent policy development 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- 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 limited their capacity to develop policy. This inertia was compounded by a general drive for deregulation and lack of Parliamentary time for debating anything other than immigration and public finances.

3. Methodological considerations

The growing tension between ambitious policy targets and constrained political and economic circumstances informed our case study selection. The UK economy has been slow to recover from the financial crisis of 2008/9. Successive governments have delivered austerity and promoted deregulation whilst paradoxically pursuing policy goals that require increased spending and government intervention. During austerity this is characteristic of many policy areas and many other European countries, so our case study findings are of wide relevance.

We consider that the UK climate policy community – policymakers and non-government stakeholders with a vested interest in achieving climate policy goals – have been actively searching for innovative solutions to overcome the challenges faced by the central state. The UK climate policy area can be described and analysed as polycentric: the national government is not a ‘monolithic actor’ but provides a ‘set of arenas and instruments for collective action’ (Paavola, 2011: 418). 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. In particular, the UK’s membership of the EU (prior to 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.

Our analysis is primarily based on 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 Rule² (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. Complementary semi-structured interviews were 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 qualitative accounts.

4. Analysis

Structural challenges and strategic responses

In this section we analyse the structural factors affecting UK climate policymakers' capacity, and strategies for action. The overall picture is one of blockage: austerity foreclosed policy options and snubbed efforts to mainstream climate goals within government, whilst political and public attention faded due to competing priorities and complacency. Climate policymakers responded by appealing to multiple (non-environmental) interests to build a stronger narrative and to develop innovations in technology and governance.

² 'When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.'

External factors: ‘we are all in it together’

The most commonly cited external factor was economic austerity and its impact on public finances. It became difficult to gather support for policies with immediate costs and delayed benefits (e.g. more ambitious energy efficiency standards for new houses and piloting carbon capture and storage technology). 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 this view among politicians and the public (Government and communications interviewees). This position was already discursively institutionalised in the UK as ‘The Treasury View’, which stipulates that government spending would have no net benefit to GDP during a recession. Though not completely hegemonic, alternative arguments about long-term or non-fiscal benefits of a green economy just didn’t resonate. One strategic level interviewee captured this succinctly by defining their role as working out ‘how to do more with less’.

Central government control of policy decisions and climate messages was also a recurring theme. Non-government and media interviewees felt that mainstream politics in the UK had failed to connect to climate change in a meaningful way, treating it as a technocratic rather than democratic issue that could be best solved through markets rather than regulation. The state was seen as an enabler, not a leader: the Conservative Government’s vision of a ‘Big Society’ promoted civic and private sector governance (Cabinet Office, 2010), and the Localism Act (DCLG, 2011) sought to devolve various administrative powers sub-nationally. However, significant budget cuts were also imposed on local governments (HM Treasury, 2015), which undermined

the integrity of the rhetoric and efficacy of the legislation. The prevailing commitment to austerity and neoliberalism combined to legitimise the simultaneous cutting back of government resources for climate policy and turn to market forces for solutions.

Institutional factors: divisions and cuts

Support from key parts of government was reportedly influential but unreliable. Publically senior decision makers were committed to strategic targets and policies, illustrated by the Prime Minister's intervention into a dispute over the 4th carbon budget and the joint pledge signed by party leaders in 2015. Yet, as the political saliency of climate change waned so did their support, often leaving dedicated climate policymakers such as DECC and DEFRA as lone voices that were drowned out or contradicted by more influential departments (Government and communications interviewees).

Some limited efforts were made to mainstream climate goals into the institutionalised practices of government, but these were largely unsuccessful. For example, policy impact assessments included calculations of greenhouse gas emissions, and rigorous evaluation frameworks were designed to facilitate the policy learning that is necessary for achieving long-term targets (Government interviewees). However, emissions assessments were rarely completed effectively, if at all, and were eventually dropped from the requirements.

Fiscal restraints exacerbated a silo mentality: departments focused their resources on core work and marginal adjustments rather than on crosscutting issues or better integration (Government interviewees). There was clear

evidence of this happening in the two departments responsible for climate change: DECC and DEFRA. Between 2010/11 and 2015/16 DEFRA's expenditure limit was cut by 30% (Treasury, 2015). As a result, its climate change adaptation team shrank from 38 to just 6 people. DECC's ability to raise funds for low-carbon energy policies was overseen by a Levy Control Mechanism, which enabled the Treasury to set a cap on spending in this specific policy area (HM Treasury, 2011). Projected overspends and the negotiation of future levy limits continually haunted DECC's plans, resulting in numerous cuts to renewable energy subsidies and policy decisions being forced upon them by the Treasury (Government and academic interviewees). Eventually, in 2016, DECC was subsumed into the Department for Business Innovations and Skills.

Situational factors: timing is everything

Milestone UNFCCC negotiations in Copenhagen (2009) and Paris (2015) presented opportunities to raise the political profile of climate change and to highlight the success and failures of domestic policies. They created a wave of political and public pressure to raise ambition in line with the latest climate science projections. This also occurred at the national level, for example in the form of the recommendations for future carbon budgets and annual progress reports by the CCC (e.g. CCC, 2014). Parliamentary debates scrutinised the costs and benefits of adopting new targets and the policies needed to achieve them. Yet interviewees from all organisations lamented the lack of attention these reports and debates received outside the climate policy community. In contrast, budget statements of the Treasury received much more attention, but they rarely featured climate policies and sometimes

directly undermined them, for example when the Vehicle Excise Duty was de-linked from emission levels (HMRC, 2015).

National elections were also important. First, they either amplified competition to lead on climate change (in 2010) or neutered it because of a consensus on targets that elided disagreements about specific policies (in 2015) (Government and non-government interviewees). Second, election manifesto pledges were biased towards the interests of contemporary voters, effectively tying the hands of incoming policymakers and limiting their options (Government and academic interviewees). This present-bias produced contradictory policy directions even from the same governing party as in the case of the Conservatives undertaking a fundamental reform of the electricity market geared towards decarbonisation followed by a halt to the development of any new on-shore wind farms (Conservative Party, 2010; 2015).

Strategic action: making connections to increase agency

Having identified the various structural factors affecting policymakers' (lack of) ability to develop new ideas and accelerate implementation we discussed the range of responses they had been pursuing. Immediately we found that policymakers were engaging with a wide set of actors and institutions beyond the confines of their specific policy area and central government channels. Examples fell into two broad clusters of strategies, sharing an underlying assumption that overcoming policy blockages would require increasing engagement with other governance actors. Accordingly we turn to the notion of polycentricity to expand our analysis of agency beyond the confines of the state-oriented Policy Dismantling Framework

The first group of strategies involved working with 'gatekeepers and champions' by reframing climate change so that it appealed to centre-right politicians, climate sceptics and disengaged senior strategists, and by developing informal dialogues and joint statements across policy areas when possible. The rationale was to unlock political capital and influence through key individuals. The intention was also to multiply communication channels within government, to build a more inclusive and trust-based narrative and to create shared ownership of, and thus responsibility for, climate policy goals (Government interviewees).

The second group of strategies can be summarised as the injunction to 'collaborate to innovate'. Engagement with non-government actors was considered vital for building policy legitimacy and efficacy. This included consultation before decisions were made (e.g. when the CCC gathers evidence for its reports) as well as drawing on *ex post* analysis and expert evidence (e.g. from parliamentary select committees and pressure groups who scrutinise policies). Localised climate messages were also encouraged to discuss context-sensitive policies and opportunities with actors from devolved nations, city regions and communities. Collaborations were also developed with private sector organisations, using joint funding mechanisms and applied research and development schemes to pursue innovations in low-carbon technology and supply chain resilience.

The first set of strategies represent a continuation of previously successful efforts to raise the profile of climate change and to win support for policies through cross-party and cross-sector endorsement. However, this time, the commitments sought were not for a vote-winning flagship target (as in 2008),

but for specific and highly contestable policies. This may in part explain the increased importance attributed to non-central government avenues for advancing climate policy and building new governance arrangements. However, our aim is not to prove that UK climate policy has become more polycentric but to evaluate the potential of such an approach for overcoming blockages and the role of government actors in bringing this about i.e. whether more sites of authority equates to more agency in the face of structural barriers.

Engaging with multiple sites of authority

In this section we scrutinise the ways in which polycentricity presents opportunities for policymakers to overcome blockages, whilst also considering its limitations. Crucially we see non-central government actors as sites of authority in their own right; that is not as pawns in governmental strategies. Their legitimacy and agency may be in part determined by the state but it is also drawn from elsewhere and enacted independently. Therefore, we adopt a relational view of agency, seeing the potential of polycentricity as embodied in its interactions (e.g. between state and non-state actors) as opposed to in a static distribution of resources (e.g. executive decision-making power).

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 explained in more detail below and summarised in table 2.

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	Private sector actors and cities seized the initiative with certain policy ideas;

	departments produced mixed messages and uncertainty.	international and transnational 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 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 international position as a leader has been an important part of the story. This position was premised on the perceived success of its domestic legislation, which underpinned diplomacy and policy diffusion efforts (Government interviewee). 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 (Government and expert interviewees).

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 degrees Celsius prompted UK

policymakers to promise a new domestic 'net zero' target³. Yet the CCC chose not to revise its existing interim targets, which already cover the period up to 2025, despite concerted pressure from environmental campaigners.

Similarly, efforts to feed international commitments into adjacent policy areas such as raising public awareness and climate change education have been very limited (expert interviewee); representing a missed opportunity for improving policy integration and polycentricity. Despite these shortcomings most policymakers and non-government organisations remained optimistic about the political value of maintaining a leadership position internationally and the pressure it exerts on domestic action.

For those seeking global agreements on climate change the UK's relationship with the EU has moved in a 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 (Government and academic interviewees). The 2016 referendum result has now potentially undone 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). Furthermore,

³ In Parliament the Energy minister promised legislation to make the new target 'net zero' emissions – i.e. emitting no more greenhouse gases than can be absorbed – pending advice from the CCC (see <http://www.publications.parliament.uk/pa/cm201516/cmhansrd/cm160314/debtext/160314-0003.htm>)

the referendum result undermined the ability of the UK devolved authorities (Scotland, Wales and Northern Ireland) and cities to benefit from EU membership.

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

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, 2016). 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); the UK Parliament rejected such an approach by narrowly voting against an explicit power sector decarbonisation target.

The higher ambition in devolved authorities filters into specific policy decisions, which often stand in contrast to central government. For instance, onshore wind continued to be a priority in Scotland whereas the UK Government has 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 sub-national policies may act as pilots of innovation, to be adopted later by national government, as was the case when Scotland and Wales introduced a plastic bag levy that was later adopted in England. Another example emerged in our workshops as policymakers sought to draw lessons from Greener Scotland's environment and climate change communication strategy⁴. However, no formal channels for facilitating such learning within the climate policy area were mentioned by our participants.

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 projects⁵ and adaptation initiatives in coastal communities⁶. 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 overcome or sidestep the entrenched power relations and impasses of central state policymaking.

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

⁴ See: <http://www.greenerscotland.org/>

⁵ For example: http://www.tidalenergyltd.com/?page_id=650

⁶ Through a European Commission Interregional Cooperation project with Ireland: http://ec.europa.eu/regional_policy/en/newsroom/news/2015/02/ireland-and-wales-to-benefit-from-eu-investments-of-more-than-eur79-million-for-interregional-cooperation-projects

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 reveal the rationale for their adoption or the details of their enactment.

Several policymakers and experts saw the City Deals as a missed opportunity, partly because two departments who were uninterested in climate change oversaw them and partly because they came at a time when local government budgets were 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 seen 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 2010-2015 (HM Treasury, 2015) it can also be seen 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 Mayors' Compact 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. 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 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 ‘Big Society’ agenda for example – and that it had already proven successful in the political build up to the CCA and the UNFCCC conference in Paris (Jacobs, 2016). It was acknowledged that no single goal would be prioritised by everyone, but that this lack of normative 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 interventions and also putting pressure on central government to send consistent and coherent messages – 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’⁷ 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.

⁷ <https://www.gov.uk/guidance/open-policy-making-toolkit/getting-started-with-open-policy-making>

Policymaking collaborations between the state and the private sector have been 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 Accelerator⁸ 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. when using internal carbon pricing to guide their investment strategies and pledging to become powered entirely by renewable energy⁹. Private sector interviewees felt that there were many such success stories in the UK and even a critical mass of actors committed to tackling climate change. As an example of this they cited as an example the World Economic Forum's open letter to government leaders urging stronger climate action¹⁰ whilst acknowledging that more needs to be done to prepare and promote the messages in conjunction with the government. Whereas private sector voluntary agreements are often used to stave off regulation, they also indicate a willingness to go beyond lagging policies and an opportunity to innovate when public finances and political capital are limited.

⁸ <https://www.carbontrust.com/our-clients/o/offshore-wind-accelerator/>

⁹ <https://www.theclimategroup.org/RE100>

¹⁰ <https://www.weforum.org/agenda/2015/11/open-letter-from-ceos-to-world-leaders-urging-climate-action>

Government 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 state intervention is often key to 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 may be counterproductive to the aims and functioning of community projects (for UK examples see: Aiken, 2016; Markantoni, 2016).

The high costs of competing in a liberalised energy market or monitoring and evaluating individual behaviour change may limit the ability of these civic/state initiatives to scale up their impact, but several of our interviewees and workshop participants saw their increasing prevalence as a positive influence. Their popularity, cost-efficiency, co-benefits and localised governance structures were all lauded, putting pressure on policymakers to provide more reliable support and to see them as essential for an inclusive and pluralistic low-carbon transition.

5. Discussion: polycentricity and the ambiguous role of government

As austerity took hold across Europe, governments preferring to reduce regulation and public spending were able to implement severe cuts. The UK 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), climate change was de-prioritised by central government. Our findings resonate with other policy areas and contexts marked by state retreat or retrenchment, and they will certainly be of interest in the UK where limited policymaking resources continue to be cut (e.g. DECC being subsumed into BIS) and are 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? The UK climate policy community responded to the above challenges by pursuing two groups of strategies: appealing to influential individuals and 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 strategic (inter)actions play out such as international institutions, transnational networks, devolved authorities, cities, and private enterprise and community groups.

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 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. This may be in part due to the perceived success of the CCA framework; enabling actors to direct otherwise strained resources towards complementary forms of governance (Cao and Ward, 2016). Thus we argue that a polycentric approach should be additional to, but not a replacement for, strong central government leadership.

Does all of this polycentric activity achieve tangible results beyond the existing state-based policies such as the CCA and its carbon budgets? Although 'additionality' and 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 the 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).

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 issues, especially regarding the ambiguous role of government and claims of scalar efficiency. On the latter point, proving an 'economic dividend' would certainly strengthen the case for greater polycentricity in fiscally constrained countries and policy areas (Pike et al., 2012).

Our findings suggest that many 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 (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 targets, rather than drivers, of social change (Aiken, 2016; Lever, 2005).

6. Conclusion

Long-term policy development 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 forecasting 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 emissions reductions. However, economic downturns and changes in political priorities can cause domestic progress to slow and an implementation gap between to emerge. Such blockages may also limit the scope for policy innovation and state-based leadership, raising important questions about agency and momentum.

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 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: the state 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 self-governance by multiple sites of authority there will be more room for experimentation, economies of scale and the development of an inclusive low-carbon transition.

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