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Research Grants PROPOSAL

Document Status: With Council

ESRC Reference: XXXXXXXXXX

New Investigator

Organisation where the Grant would be held

Organisation	The University of Manchester	Research Organisation Reference:	1234
Division or Department	Social Sciences		

Project Title [up to 150 chars]

Polycentric pioneers? Explaining variations in governance models and their impacts on local climate change policy

Start Date and Duration

a. Proposed start date

01 October 2019

b. Duration of the grant (months)

36

Applicants

Role	Name	Organisation	Division or Department	How many hours a week will the investigator work on the project?
Principal Investigator	Dr Paul Tobin	The University of Manchester	Social Sciences	XXXX

Classification

International in nature?

Yes

Please give details

This project is international in nature at each stage of the research process. The advisory board comprises scholars based in Germany (Professor Jale Tosun, Heidelberg University), Sweden (Professor Andreas Duit, Stockholm University) and Belgium (Professor Sebastian Oberthür, Vrije Universiteit Brussel). I will be a Visiting Scholar at each of their respective institutions, for thirty days each, to build contacts with research interviewees, learn new methods, co-author research, and present initial findings to their departments. In addition, these colleagues will attend my two-day research workshop in the UK, alongside other scholars from across Europe (this research workshop will be co-funded by my departmental research budget).

As part of my methods training, I will attend an ECPR summer and winter school, of which either or both will take place outside the UK. I have also budgeted to participate in language courses to achieve business-level spoken German and Swedish, which will facilitate data collection and Knowledge Exchange.

The six city regions under exploration in the project are located in Germany, Sweden and the UK, and research interviews will be conducted in these states, as well as in Brussels, Belgium. As such, the data collection, analysis and policy guidance of the project extend beyond the UK.

I will present my research findings at three overseas academic conferences: the American Political Science Association annual conference, which will take place in the USA; two University Association for Contemporary European Studies conferences (of which one will be based outside the UK); and a European Consortium for Political Research conference, which will also take place outside the UK.

Finally, once the research is completed, I will return to Belgium, Germany and Sweden, as well as London, to feed into parliamentary select committees to shape policy-making decisions. The policy guidance resulting from this project will be targeted at policy-makers throughout Western Europe, and will also have acute relevance for policy-makers based in other developed states outside this region.

Objectives

List the main objectives of the proposed research [up to 4000 chars]

1. To establish myself as a future research leader in the fields of European and environmental politics, by analysing how governance models can influence climate policy ambition. This objective will be achieved by making novel theoretical and empirical contributions that explain the development of local climate policies in six carefully-selected West European city-regions.
2. To explain how and why nascent, multi-actor, 'polycentric' climate networks are created. Achieving this goal will require extensive primary data collection, and will involve interviewing 80 policy-makers and employing a range of novel network analysis methods.
3. To analyse the impact of these different types of governance models on local climate policy, by conducting extensive document and policy analysis across a range of local actors, including businesses, NGOs and local government.
4. To feed directly into the design of local governance models and climate policies by exchanging knowledge with key practitioners. This goal will be achieved with support from the project's practitioner partner, the Manchester Climate Change Agency, as well as by submitting evidence to decision-making bodies and holding three policy events for practitioners.
5. To engage with and empower the public regarding their roles in mitigating climate change, by building upon my multi-award-winning teaching skills to participate in a variety of targeted public engagement initiatives.

Summary

Describe the proposed research in simple terms in a way that could be publicised to a general audience [up to 4000 chars]

The science behind climate change has been established, and now the mitigation of climate change has become a political puzzle. We need to act quickly to mitigate the worst impacts of climate change, and so this project is designed to find and then share effective policy solutions that can be used across society.

Until very recently, attempted solutions for climate change were 'top down': for example, the United Nations organised annual conferences, and those countries responsible for producing the most greenhouse gases dominated these negotiations. However, this approach for dealing with climate change has failed to generate effective change quickly enough, and academics are looking for new governance solutions for this most pressing and significant of issues.

Increasingly, scholars argue that we need to be improving policy-making the local level, and empowering a wide range of people take a lead in responding to climate change. In particular, they argue we need 'polycentric governance'. Polycentric governance involves businesses, NGOs and government agencies working independently of each other, while also overlapping and coordinating with one another, as part of complex, multi-level networks. The outcome should be that no individual group or organisation is solely responsible for mitigating climate change, and so every 'node' in the network is encouraged to fulfil its part without fearing being exploited by others.

Yet, despite growing support amongst academics for polycentric governance, there is limited research into how these networks can be created, or whether they even have a positive impact in mitigating climate change. This research project seeks to address that lack of knowledge by pursuing two research objectives.

First, the project will explain how and why polycentric models are developed, by analysing three key factors: the role of the European Union; the impact of a country's national governance model, such as the presence of federalism; and a city's status as a country's capital or not. To do so, the project will map out the interconnecting networks of different groups and individuals within six city regions in Germany, Sweden and the UK. These three countries were similarly ambitious towards climate change in the early 2010s, and the six city regions have been carefully selected to be as similar as possible, while also showing differences in the three key factors under exploration.

Second, the project will then determine how and why these different city regions' polycentric practices affect the creation of ambitious climate change policies. This goal will be achieved by analysing the climate policy documents of a wide range of actors within each city region, as well as interviewing key individuals. Here, a useful extra outcome of the research will be the ability to explore how changes in the UK's political landscape during the Brexit negotiations have influenced local climate change policy too.

Having then analysed how and why different governance models shape the ambitiousness of local climate policy, guidance will be created for policy-makers across Western Europe. This advice will inform policy-makers about which types of governance initiatives are most effective for helping to create more ambitious climate policy. The advice will seek to improve climate policy at the local level, and it will be designed with multiple audiences in mind, depending on whether policy-makers and practitioners work at the local, national or European level. As a result, this project aims to help every level of governance to be more effective at mitigating climate change.

Finally, this project will also seek to inform and empower citizens about how they can effect change themselves, by sharing the results of the study via a wide range of media outlets, pitching a TV programme on the topic, and by giving several public lectures.

Academic Beneficiaries

Describe who will benefit from the research [up to 4000 chars].

The core academic benefits of this project are to explain the creation and development of polycentric governance practices, and to ascertain how variations in these practices influence climate policy ambition. Both of these research areas are burgeoning and currently lack exploration. As van der Heijden (2018: 93) notes, "the evidence base to support claims about the opportunities and constraints of (polycentric) urban climate governance is thin at best - and at worse may be imbued with a great deal of wishful thinking." As such, while the project is of direct benefit to policy-makers and the wider public, it also offers important contributions to researchers of polycentric governance and environmental politics, as well as European Studies and comparative public policy, as outlined below.

Polycentricity

Researchers do not yet know the factors that explain the creation of polycentric practices, let alone how these change over time (Jordan et al. 2018b). By analysing the roles of the European Union (Rayner & Jordan 2013), national governance model (Ostrom 1999) and capital city status in shaping polycentric practices, the findings of this project will be of utmost utility to all scholars researching polycentric governance, in addition to those specialising in climate policy (see Green 2007; Meijers et al. 2017). Eighty research interviews will be conducted and made available following the completion of the research project through the UK Data Service, enabling other scholars to analyse in new depth the development of nascent polycentric practices.

Environmental politics

The literature seeking to explain variations in climate policy ambition is an emerging field (Bernauer & Böhmelt 2013; Jänicke 2005; Lachapelle & Paterson 2013; Liefferink et al. 2009; Liefferink & Wurzel 2018). The field is increasingly turning its attention to local climate policy ambition (Bulkeley & Kern 2006; Eckersley 2016; McEwan & Bomberg 2014; Schreurs 2008), but comparative analysis of polycentricity across multiple states has yet to be conducted extensively (see van der Heijden 2016). Due to the large number of potential variables that could influence climate policy ambition (Christoff & Eckersley 2011), it is imperative that cases are selected robustly, and so the detailed case selection process underpinning this project will enable new causal factors for climate policy ambition to be identified than has been the case in previous, individual case study analyses, thus acting as a springboard for future research on the topic.

European Studies

By comparing six city regions across Europe, the project will analyse the role of the EU in shaping local governance

initiatives (Knill & Liefferink 2013) and also the diffusion processes of policy ideas between European city regions (Tosun 2018). The role of the EU has already been a source of debate in both polycentricity studies and climate policy studies (Falkner 2016; Jordan et al 2018b; Lenschow & Sprungk, 2010). In addition, of particular interest to European Studies scholars will be the exploration of how the UK's governance landscape has changed since 2012 and its attendant impacts on local climate policy-making (Fankhauser & Carvalho 2016; Farstad et al. 2018; Hepburn & Teytelboym 2017).

Comparative public policy

Finally, as this project seeks to map out highly complex networks of actors in multiple city regions across three levels (European, national and local), the findings of the project will be of acute relevance both to comparative public policy scholars (e.g. Acuto & Rayner 2017; Engeli & Rothmayer Allison 2014; Peters 2015) and those employing network analysis methods (Paterson et al. 2014; Rinscheid 2015). The combination of using both Social Network Analysis to determine links between actors, and Discourse Network Analysis to determine the similarity of resulting policy documents, is especially novel, as the latter technique is new (Leifeld 2013).

Staff Duties

Summarise the roles and responsibilities of each post for which funding is sought [up to 2000 characters]

Principal Investigator (PI) - [REDACTED]

The PI will lead on all aspects of the research, with guidance from the mentor, Professor Matthew Paterson, and the internal and external advisory teams totalling seven further academics, as well as the practitioner partner, the Manchester Climate Change Agency (MCCA). Research outputs will be co-authored with members of the academic advisory teams according to the subject of the research, and the MCCA will co-host Knowledge Exchange events as well as facilitating the research process.

The PI's time will be organised as follows:

Year One- Mapping the field of existing research; collating online data; conducting stakeholder analysis; completing methods and language training, commencing the research interviews.

Year Two- Completing the research interviews; analysing data; commencing writing up; directing Knowledge Exchange; attending conferences.

Year Three- Completing the writing up; directing and hosting Knowledge Exchange events; attending conferences; submitting articles and monograph.

Research Assistant (RA) - [REDACTED]

I will pay a PhD student to work as an RA. Specifically, the RA will transcribe the interview data I obtain. The RA will be paid to transcribe around 80 hours of interviews. As part of the pilot study for this project, I have already paid a PhD student to transcribe seven initial interviews in Manchester using my departmental research budget, and so I am familiar with the steps involved and the time requirements needed for a PhD student to complete such work.

Administrator support - [REDACTED]

Finally, a member of administrator support will book and manage travel and accommodation arrangements, co-ordinate the processing of Human Resources documents relating to the RA, and support the organisation of Knowledge Exchange events.

Impact Summary

Impact Summary (please refer to the help for guidance on what to consider when completing this section) [up to 4000 chars]

There is an urgent need for governance models to be optimised for mitigating climate change. As such, the primary goal of the project's impact activities is to shape policy; the secondary goal is to inform the wider public about their capacities to mitigate climate change as actors in their own right. Because policy guidance is the primary goal of this project's impact agenda, the Manchester Climate Change Agency (MCCA) has been involved in the design of the project and will be a partner throughout the research process. Beneficiaries of the policy guidance will include local, national and European policy-makers in Western Europe, and employees working for NGOs, businesses and civil society groups that seek to

strengthen climate policy ambition as part of their work. Any emissions reductions resulting from this guidance will benefit all of society. [REDACTED] has been allocated purely to generating policy guidance, and further University of Manchester funds will be sought to expand these activities. As this project focuses primarily on guiding public policy, the budget is prioritised towards achieving that goal, and so activities designed to engage with the wider public will be cost-free. Policy guidance will be pursued via four main activities, and engagement with the public will be pursued in three ways. Throughout the project, I will seize further opportunities for generating impact as they arise.

Policy guidance will be pursued by firstly holding two events targeted at policy-makers and practitioners based in Manchester (co-hosted by the MCCA) and London. Around twenty individuals from a wide range of organisations will attend each event, where they will learn about how governance models can be designed to include a wider range of actors and to encourage greater climate policy ambition and experimentation. Attendees will benefit by learning best practice examples of polycentric governance models, and their impacts upon climate ambition. Feedback from this event will then shape the second activity. The second activity which will be a national workshop, held in London, for local government employees based in cities across the UK and for national-level policy-makers. This one-day event will be designed to discuss how local and national governance models can be designed to facilitate the development of climate mitigation policy. Third, having built on the feedback and discussions at the national workshop, I will submit evidence to the national parliaments of the UK, Germany and Sweden, as well as the European Parliament, both digitally and in person. Finally, this policy guidance will be generalised for small and large cities across Western Europe and then made available on the project's website.

Wider public engagement will seek to alter the perspective that climate change should be solved by 'others'. I will seek to inform the public about how they can influence the policy process themselves and to empower them to do so, and will pursue these goals in three ways. First, I will write articles for high-profile blogs, such as The Guardian's 'Comment is Free' and the Washington Post's 'Monkey Cage' regarding the findings of the project. Second, I will participate in the Political Studies Association's Total Exposure competition, whereby applicants pitch a proposal to a panel of media executives. I will propose a TV show in which I visit the city-regions of this project and explain the role of citizens and local initiatives in producing pioneering climate policies. Finally, I will host a range of public lectures at The University of Manchester for local citizens. Attendees will benefit by understanding how to influence the climate policy process, facilitating their involvement in future, possibly more polycentric, climate policy projects. As well as informing the public, these events will then shape my subsequent research project, on citizens' abilities to influence climate policy.

Ethical Information

Has consideration been given to any ethical matters raised by this proposal ?

Please explain what, if any, ethical issues you believe are relevant to the proposed research project, and which ethical approvals have been obtained, or will be sought if the project is funded? If you believe that an ethics review is not necessary, please explain your view (available: 4000 characters)

The ethical issues arising from this research are expected to be limited. The project has been designed in accordance with the ESRC's framework for research ethics. The pilot study for this project was assessed by the University of Manchester's online ethics decision tool and found not to require submission to the Research Ethics Committee. Likewise, the design for this bid has undergone the same process and does not need to be submitted to the University-wide Research Ethics Committee.

The primary area of ethical significance for this project is the completion of research interviews. No interviews will be conducted with vulnerable people, all interviewees will be offered to have their statements made anonymous, and withdrawal of consent for participation will be guaranteed for participants at any point prior to publication of research. All interviewees will receive a research information document and will be required to sign a consent form prior to the start of the interview. No data regarding the personal lives of the interviewees will be collected. I will also ensure that research interviews are conducted in a professional setting, to safeguard my safety and that of the interviewee. Consent for the

request of copyright to be transferred to the PI will also be requested, in line with the guidelines provided by the UK Data Archive. After the interviews are transcribed, the relevant transcription will be emailed to each participant, such that they can confirm that they are happy with the representation of the wording used within.

I do not possess any conflicts of interest regarding the subject under investigation in this project.

Summary of Resources Required for Project

Financial resources

Summary fund heading	Fund heading	Full economic Cost	ESRC contribution	% ESRC contribution
Directly Incurred	Staff	████████	████████	█
	Travel & Subsistence	29040.00	23232.00	80
	Other Costs	13100.00	10480.00	80
	Sub-total	████████	████████	
Directly Allocated	Investigators	████████	████████	█
	Estates Costs	████████	████████	█
	████████	████████	████████	█
	Sub-total	████████	████████	
Indirect Costs	Indirect Costs	████████	████████	80
Exceptions	Staff	0.00	0.00	100
	Other Costs	0.00	0.00	100
	Sub-total	0.00	0.00	
	Total	████████	████████	

Summary of staff effort requested

	Months
Investigator	27
Researcher	3.25
Technician	0
Other	0
Visiting Researcher	0
Student	0
Total	30.25

Other Support

Details of support sought or received from any other source for this or other research in the same field.
Other support is not relevant to this application.

Travel and Subsistence

Destination and purpose		Total £
Outside UK	ECPR Methods School summer: travel	300
Outside UK	ECPR Methods School summer: accommodation	900
Outside UK	ECPR Methods School winter: travel	300
Outside UK	ECPR Methods School winter: accommodation	900
Outside UK	Fieldwork travel and accommodation: Brussels (4 weeks)	1900
Within UK	Fieldwork travel and accommodation: London (2 x4 nights + 1 x 2 nights)	1800
Outside UK	Fieldwork travel and accommodation: Sweden (4 weeks)	3000
Outside UK	Fieldwork travel and accommodation: Germany (4 weeks)	2200
Outside UK	Targeted interviews travel and accommodation Brussels	1500
Outside UK	Targeted interviews travel and accommodation Berlin	1500
Outside UK	Targeted interviews travel and accommodation Stockholm	1800
Outside UK	ECPR (Europe) conference travel and accommodation (3 nights)	620
Within UK	PSA (UK) 1: conference travel and accommodation (3 nights)	520
Within UK	PSA (UK) 2: conference travel and accommodation (3 nights)	520
Within UK	UACES 1: (UK) conference travel and accommodation (3 nights)	520
Outside UK	UACES 2: (Europe) conference travel and accommodation (3 nights)	620
Outside UK	APSA (US) conference travel and accommodation (3 nights)	1820
Outside UK	ICPP conference travel and accommodation (3 nights)	1820
Within UK	Select Committee travel and accommodation: London	450
Outside UK	Select Committee travel and accommodation: Berlin	800
Outside UK	Select Committee travel and accommodation: Brussels (2 nights)	800
Outside UK	Select Committee travel and accommodation: Stockholm (2 nights)	900
Within UK	Advisory Committee travel and accommodation: travelling from London (3 nights)	600
Outside UK	Advisory Committee travel and accommodation: travelling from Heidelberg (3 nights)	950
Outside UK	Advisory Committee travel and accommodation: travelling from Brussels (3 nights)	950
Outside UK	Advisory Committee travel and accommodation: travelling from Stockholm (3 nights)	1050
Total £		29040

Other Directly Incurred Costs

Description	Total £
ECPR Methods School summer: registration	515
ECPR Methods School winter: registration	515
CMI training workshop	60
Languages for all courses	1100
Swedish Language course	660
End of project stakeholder lunch Manchester	1000
End of project stakeholder lunch London	1500
UK-wide policy-makers' workshop	5450
Data analysis software	200
ECPR conference	300
PSA conference x 2	600
UACES conference x2	600
APSA conference	300
ICPP conference	300
Total £	13100

Other Directly Allocated Costs

Description	Total £
██████████	██████████
Total £	██████████

Project Partners: details of partners in the project and their contributions to the research. These contributions are in addition to resources identified above.

1	Name of partner organisation	Division or Department	Name of contact	
	University of Heidelberg	Institute of Political Science	Professor Jale Tosun	
Direct contribution to project			Indirect contribution to project	
	Description	Value £	Description	Value £

2	Name of partner organisation	Division or Department	Name of contact	
	Vrije Universiteit Brussel	Institute for European Studies	Professor Sebastian Oberthür	
Direct contribution to project			Indirect contribution to project	
	Description	Value £	Description	Value £

3	Name of partner organisation	Division or Department	Name of contact	
	Stockholm University	Political Science	Professor Andreas Duit	
Direct contribution to project			Indirect contribution to project	
	Description	Value £	Description	Value £

4	Name of partner organisation	Division or Department	Name of contact	
	Manchester Climate Change Agency	Programme Director	Mr Jonny Sadler	
Direct contribution to project			Indirect contribution to project	

<p>It is a requirement to offer data for archiving. Please include a statement on data sharing. If you believe that further data sharing is not possible, please present your argument here justifying your case.</p>	<p>Anonymised data will be shared with the UK Data Service upon the project's completion, except where any issues of commercial confidentiality arise.</p>
<p>Who are likely to be the users (academic or non-academic) of the dataset(s)?</p>	<p>Academic social scientists; Non-academic policy-makers; Non-academic business leaders and environmental NGO employees.</p>
<p>Please outline costs of preparing and documenting the data for archiving to the standards required by the affiliated data support service (UK Data Service) working with the Research Councils.</p>	<p>Preparation of the datasets for archiving will take place throughout the research process. The costs for doing so are covered by salary of the PI.</p>

OTHER INFORMATION

Academic Reviewers

1	Name	Organisation	Division or Department	Email Address

Academic Reviewers

2	Name	Address	Town	Email Address

Classification of Proposal

(a) User Involvement

The nature of any user engagement should be indicated

Design	x
Execution	x
Dissemination	x
Training	
Not applicable	

Proposal Classifications

Research Area:

Research Areas are the subject areas in which the programme of study may fall and you should select at least one of these. Once you have selected the relevant Research Area(s), please ensure that you set one as primary. To add or remove Research Areas use the relevant link below. To set a primary area, click in the corresponding checkbox and then the Set Primary Area button that will appear.

Please select one or more Research Areas

Subject	Topic	Keyword
Political science and international studies	European/EU Studies	
Political science and international studies	European/EU Studies	European Union
Political science and international studies	European/EU Studies	EU Member States
Political science and international studies	International Studies & Relations [Primary]	
Political science and international studies	International Studies & Relations [Primary]	Governance
Political science and international studies	International Studies & Relations [Primary]	Nation State
Political science and international studies	International Studies & Relations [Primary]	NGOs
Political science and international studies	International Studies & Relations [Primary]	Non-State Actors
Political science and international studies	Political Science	
Political science and international studies	Political Science	Governance
Social policy	Social Policy (General)	Environmental policy
Social policy	Social Policy (General)	

Qualifier:

Qualifiers are terms that further describe the area of study and cover aspects such as approach and geographical focus.

Please ensure you complete this section if relevant.

To add or remove Qualifiers use the links below.

Type	Name
Approach	International Comparative
Approach	Qualitative
Approach	Quantitative
Approach	Theory Development
Collaboration location region	Scandinavia
Collaboration location region	UK & Ireland
Collaboration location region	Western Europe
Geographic Area	Scandinavia
Geographic Area	UK & Ireland
Geographic Area	Western Europe
Project Engagement by Sector	Academic Users

Project Engagement by Sector	Central and Local Government
Project Engagement by Sector	Third Sector
Public Engagement Audience	Adult spec. interest/lifestyle
Public Engagement Audience	Adults by occupation
Public Engagement Audience	Government/policy-makers
Public Engagement Audience	NGP/campaigners
Public Engagement Audience	Scientists/engineers/academia
Public Engagement Audience	Those affected by issue
Public Engagement Methodology	Lecture
Public Engagement Methodology	Public dialogue (deliberative)
Public Engagement Methodology	Publication
Public Engagement Methodology	Workshop
Time Period	Contemporary

Free-text Keywords:

Free-text keywords may be used to describe the programme of study in more detail. To add a keyword, you first need to search existing Research Areas by entering the keyword in the Search box and selecting the Filter button.

If the keyword is adequately reflected by one of the terms displayed below, click in the corresponding checkbox then select Save. If no potential matches are displayed, or none of those displayed are suitable, select the Add New button followed by the Save button to add it as a descriptor.

To add or remove those previously added use the links below.

Pathways to impact

Impact has been placed at the centre of the design of this research project. The primary goal of the project's impact activities is to shape policy; the secondary goal is to inform the wider public about their capacities to mitigate climate change as actors in their own right. Both of these goals hold acute significance: climate change holds the potential affect every policy area in the decades to come, and so governance models, and public engagement within these models, must be as robust and as ambitious as possible, in order that the worst effects of climate change can be mitigated (Stern, 2010). Research and impact will be intertwined throughout the whole project: policy-makers will inform the research, and the research will then be used to guide policy-makers. Indeed, the Manchester Climate Change Agency (MCCA- see letter of support) has been involved in shaping the design of this project, and will provide access to existing datasets, and interview access with employees, as well as introducing research contacts and co-hosting Knowledge Exchange events, in exchange for targeted policy advice that will be employed within Manchester. [REDACTED] **has been allocated purely to generating policy guidance**, and applications will be made to internal University of Manchester funds (for example, School of Social Sciences Small Grants) in order to expand these initiatives still further. In order for governance models to be hospitable as possible for citizens' initiatives, the focus of this bid is to influence the policy process, before future research funding bids then seek to engage more explicitly with the wider public.

Policy guidance

I have some experience already of designing policy guidance (National Student Forum 2010) and documents for environmental campaigners (National Student Forum 2012). I will use this experience to **create targeted policy guidance for policy-makers throughout Western Europe, which will be made specific according to the type of actor and level of governance in question**. As this project seeks to optimise the design of governance models for more climate mitigation activity, an additional benefit of this project should be that other research fields will be able to achieve greater impact too. For example, redesigned governance models may be able to experiment more easily with trialling new science and engineering technologies (Voß & Scroth, 2018).

I will seek to guide policy-making in four ways. The first three activities listed below will act as a chain reaction; the first two local events will enable me to develop more generalizable guidance for policy-makers in the rest of the UK, which in turn will hone my guidance for policy-makers based in cities throughout Western Europe. Detailed feedback forms will be completed by participants at each event to enable me to monitor and evaluate each impact activity.

1. I will hold two targeted policy lunches for local policy-makers and practitioners based in Manchester [REDACTED] and London [REDACTED], respectively, 30 months into the project. The MCCA will co-host the Manchester event. As polycentric governance models comprise a wide range of actors, these two events will draw together local civil servants, councillors, business leaders, religious leaders and environmental campaigners, with a view to increasing the effectiveness and capacities of their policy-making efforts. The event will also serve as a means of introducing relevant community leaders who have yet to meet local policy-makers, with a view to increasing local policy capacity. In addition, the feedback and discussions from this event will be used to create more general policy guidance for policy-makers based in other cities throughout the UK.
2. I will hold a one-day workshop in London ([REDACTED]) for local policy-makers who are based in cities throughout the UK, and for national-level UK policy-makers, 33 months into the project. This event will build on the policy lunches held in Manchester and London by providing policy guidance for all UK cities, including smaller cities, such as Bath and York, and will also seek to shape national policy-makers to make changes at the UK level. The two

goals of this event are to help policy-makers to tailor local governance models to facilitate practices that are found to support greater climate policy ambition, and to provide examples of best practice policy documents and policy components that can be replicated. Finally, the feedback and discussions arising from this event will enable me to then generate still more generalised policy guidance for policy-makers working in cities across Western Europe.

3. I will seek to inform policy decisions in Germany, Sweden, the UK and the EU by submitting evidence to parliamentary committees digitally, and by returning to Berlin, Stockholm, London and Brussels in person in the final three months of the project to provide evidence to their respective parliaments (■■■■). As a result, German and Swedish language training is included within the project's budget (■■■■), so that I can converse fluently by the end of the project, having already been learning both languages for several years.
4. A cost-free *WordPress* website will be built that is similar to those I have previously created for *PSA Environment* and for Professor Charlotte Burns' Leverhulme research project. This website will act as a hub for policy-makers and practitioners from across Western Europe to visit, learn from and offer feedback upon, and will feature policy guidance for large and small cities alike, written in English, French, German and Swedish. I will actively liaise with policy-makers across Western Europe via email to inform them of this new resource.

Wider public engagement

As a secondary goal of the project, I will seek to inform the wider public about their roles in shaping climate policy, but as the main priority is guiding policy, the wider public engagement activities will be zero-cost during this particular project. I possess very good public speaking skills that should help me to engage effectively with the public, and which have, for example, resulted in my winning five teaching prizes to date, including the 'Most Inspiring Academic' at The University of Manchester.

The primary goals behind the project's public engagement activities are to shift the perspective that climate change will be solved 'by others', to inform the public about how they can influence the policy process themselves, and to empower them to do so. Wider public engagement will be pursued through three routes:

1. I will write articles for high-profile blogs, such as *The Guardian's* 'Comment is Free' and the Washington Post's 'Monkey Cage', as well as more targeted and specific articles for environmental NGOs, such as the *WWF Blog*. These articles will seek to inform the public about the ways in which governance models can be shaped and influenced, and also about the types of climate policies that can be considered more ambitious due to the primary components they includes, such as the format of emissions reductions targets and the types of emissions that can be more carbon intensive.
2. I will take part in the Political Studies Association's *Total Exposure* competition, whereby applicants pitch a proposal to a panel of media executives, such as employees from the BBC and Sky. My pitch will be for a TV programme show where I visit the cities analysed in this research project, identifying examples of pioneering climate policy initiatives, and explaining the roles that citizens played in achieving these outcomes.
3. Finally, I will organise several public lectures at The University of Manchester, including through the *Jean Monnet Centre of Excellence*, of which I am a Board Member and which has held a many high-profile public events in recent years. In addition to seeking to inform the public about the findings from the project, I will also use these events as a means of listening to the public about their experiences of local governance and climate policy, particularly the obstacles to their engagement. These experiences will then be used to shape my next research project, which will seek to analyse and explain how and why citizens can become more heavily involved in climate policy-making.

Case for support

Polycentric pioneers? Explaining variations in governance models and their impacts on local climate change policy

This project will explain how different governance models are developed, and why these models influence the ambitiousness of local climate change policy. This topic is important: early efforts to address climate change failed because governance models neglected the local level and were instead too ‘top-down’, stymying climate policy ambition. Most notably, the 2009 Copenhagen climate conference failed despite drawing world leaders together, because its governance model fostered opposition amongst states that felt it was too hierarchical (Bodansky 2010). As such, scholars increasingly argue that governance models need to be designed so that different types of actors, such as businesses, NGOs, and local and national government, are encouraged to assume leadership positions that are independent of, but overlapping with, one another (Cole 2015; Jordan et al. 2015). These governance models are known as ‘polycentric’ climate networks (Ostrom 2010). In contrast to more top-down governance models, these nascent polycentric networks are highly complex systems (Pattberg et al. 2018), and are lacking research. As a result, we do not yet understand fully how or why polycentric networks are developed, or even whether such networks facilitate more ambitious climate policy (see Jordan et al. 2018a, 2018b). For instance, despite widespread academic support for polycentric models, it may transpire that these networks actually enable individuals who wish to *weaken* climate policy ambition to gain a stronger foothold (Boasson 2018: 131).

Significance

Mitigating climate change is a political issue; humanity has become ‘locked in’ to carbon-based technologies, such as fossil fuels (Unruh 2000); in response, polycentric governance has been “designed to disrupt carbon lock-in” (Berstein & Hoffmann, 2018: 252). As such, this project is exceptionally timely: in order that ‘catastrophic’ climate change is prevented, emissions must be reduced rapidly in the next decade (IPCC, 2014), perhaps via polycentric governance. Yet, we do not know the factors that influence the development of polycentricity, or whether such polycentric models actually mitigate climate change efficiently. For political scientists, this project will provide new knowledge regarding the processes of governance and policy-making: in addition to examining the impacts of polycentric governance on climate policy outputs, the project will contribute to existing public policy debates regarding how actors can overcome other priorities that may appear more ‘urgent’, such as economic crisis (Burns & Tobin 2016; Burns et al. 2018; Skovgaard 2014), and debates over the nature and importance of European Union (EU) integration (Jordan 2002), particularly in a context of the UK’s EU withdrawal (Farstad et al. 2018). Moreover, this project is significant for scholars from disciplines outside political science. For example, in order that new scientific and engineering solutions for climate change can be employed effectively, it is first necessary to ensure that the governance models into which these solutions are proposed are able to support such changes (Stern 2010). In sum, this project examines an urgent policy problem that holds the potential to affect every economic sector for decades. As such, as well as generating original research, the project explicitly seeks to inform policy decisions and to engage with the wider public.

Aims and Objectives

In this project, I will develop new understandings of the factors that shape the creation of polycentric models, generate much-needed empirical data on the effectiveness of polycentric approaches, and obtain new insights into the roles of national governance and direction of European integration on local climate policy. The outcome of this research will be the creation of internationally-leading research articles, detailed policy guidance, and targeted public engagement initiatives. As such, throughout its design, this project has received extensive guidance from leading scholars in related fields and from its practitioner partner, the Manchester Climate Change Agency (MCCA). Specifically, the project will pursue the following objectives:

1. Establish myself as a future research leader in the fields of European and environmental politics;
2. Explain the creation and development of polycentric practices within climate governance networks;
3. Analyse the impact of various polycentric practices upon local climate policy;
4. Produce policy guidance for local, national and European practitioners regarding how governance models can be designed to facilitate climate policy ambition;

5. Engage with the public to educate and challenge them on their roles in mitigating climate change.

I am ideally suited to pursue these objectives. My prize-winning research on national climate policy leadership (Tobin 2017; Tobin et al. 2018) and my postdoctoral research on environmental policy at the EU level (Burns & Tobin 2017; Burns et al. 2018) and local level (currently under review) provide me with detailed knowledge of local, national and EU policy-making. In addition, my experience developing policy guidance (National Student Forum 2010), advising environmental NGOs (Stop Climate Chaos 2012), engaging with the public (Burns et al. 2015) and multi-award-winning teaching skills (see CV) will ensure that my results reach the widest audience possible.

Research context

The local level has been identified as *the* vital cog in the creation of polycentric networks (Dorsch & Flaschland 2017: 52). In particular, local actors possess significant capacity to experiment with new types of governance models (Acuto & Rayner 2016; van der Heijden 2016). As Ostrom (2009: 15) noted, “the problem’ [of climate change] has been framed so often as a global issue that local politicians and citizens sometimes cannot see that there are things that can be done at the local level that are important steps in the right direction.” Indeed, many local governments are now developing climate policies that are more ambitious than at the national level (Reckien et al. 2014). Specifically, this research project seeks to understand how polycentric practices are facilitated or hindered by existing European, national and local governance practices. These little-understood factors (see Jordan et al. 2018b) underpin **Research Questions (RQ) 1, 2 and 3**, below.

First (**RQ1**), the direction of integration with the EU – towards greater or lesser integration – may affect governance at the local level, because of the EU’s role as a funder and facilitator of polycentric initiatives (Rayner & Jordan 2013; Tosun 2018). Second (**RQ2**), different types of national governance model – especially the presence of either federal or unitary government – may encourage or inhibit more polycentric governance at the local level, by allocating greater or lesser amounts of responsibility and resources ‘downwards’ (Ostrom 1999: 68; see also Selin & VanDeveer 2012). A third variable (**RQ3**) that may shape the development of local polycentric governance is whether the region under investigation surrounds a capital city, or alternatively, a non-capital city. On the one hand, capital city regions may develop more polycentric practices due to their size and greater access to resources, but on the other hand, they may be hindered by the proximity of national-level institutions that favour top-down solutions; to date there has been no research on this topic.

As such, I will examine a capital and non-capital city region in each of Germany, Sweden and the UK; these three states were similarly ambitious towards climate during the late 2000s and early 2010s (Germanwatch 2012; Tobin 2017). To date, the states have been examined as part of medium-n and large-n analyses (Bernauer and Böhmelt 2013; Lachapelle and Paterson 2013), and via individual case studies (Carter 2014; Gillard 2016; Jänicke 2010; Karapin 2012; Knaggård 2014; Sarasini 2009), but there has been little investigation of the cities within them (for exceptions that do not discuss polycentricity, see Lenhart et al. 2014; Monstadt 2007). By selecting six city regions across these three states, the first three RQs – regarding the direction of integration with the EU, the type of national governance model, and the status as a capital or non-capital city – can be answered.

Finally, we do not yet fully understand how variations in these governance models affect local climate policies (**RQ4**). Measuring climate policy ambition is a complex challenge (Tobin et al. 2018: 14). Rather than analysing policy outcomes, such as reductions in emissions, which can easily be shaped by factors outside the control of the actor in question (Burns & Tobin 2016), detailed analysis of individual policy components within policy outputs is needed, as outlined in the Research Design, below. Upon determining the ambitions of each of the actors’ climate policies, I will then combine these findings with my research into the factors that influence the creation of polycentric governance models, to provide highly policy-relevant findings regarding the relationship between these governance practices and climate policy ambition. At the same time, I will also analyse how the UK’s Brexit negotiations – regardless of their outcome – have shaped local climate policy in the UK by asking UK interviewees about their experiences of this process. This important topic that has yet to receive significant research (see Farstad et al. 2018), yet Manchester City Council (2017) is actively changing its policy behaviour now to apply for new EU funds while it still can.

Research questions

The Research Questions below were developed following an extensive review of the existing literature, and my completion of a pilot study on this topic (conducted 09/2017 – 06/2018):

RQ1. *How and why* does the direction of EU integration in a state influence the development of local polycentric governance?

RQ2. *How and why* does the type of national governance model influence the development of local polycentric governance?

RQ3. *How and why* do capital city regions and second-level major city regions develop polycentric governance models differently?

RQ4. *How and why* does the degree of polycentricity in a local governance model affect climate policy outputs?

Case studies

Six city regions across three EU member states will be analysed. In order to select the six regions, the variables underpinning **RQ1**, **RQ2** and **RQ3** will be used, in order to maximise comparability and the robustness of the study. First, because “[t]he diffusion of climate policies within the EU has helped to establish the EU as a domain in which polycentric climate governance takes place” (Tosun, 2018: 158), the direction of European integration, towards greater or lesser integration, is the first independent variable in the case selection process (see Rayner & Jordan 2013). As the UK has begun negotiations over withdrawing from the EU, and thus is in a process of dis-integrating from the EU, with attendant consequences for climate policy (Farstad et al. 2018), two city regions in the UK will be compared with city regions from two EU states that are not seeking to withdraw from the EU, thus enabling **RQ1** to be answered.

Second, the presence of a federal system of government has been identified as introducing a ‘significant’ dimension of polycentricity to a governance model (Ostrom 1999). As such, two city regions within the federal republic of Germany will be analysed and compared with city regions in unitary states, one of which will be the UK, enabling **RQ2** to be answered.

Thus, having selected Germany and the UK, I use national climate policy ambition as a means of identifying the third case, which must also be a unitary state and not seeking to leave the EU. The 2012 Climate Change Protection Index (Burck et al. 2012) found Germany, the UK, and also Sweden to be the three most ambitious climate policy actors in the world at that time. Sweden is an ideal case, as it is not seeking to withdraw from the EU, as required to answer **RQ1**, and it is a unitary state, as needed to answer **RQ2**. As such, two city regions in each of Germany, Sweden and the UK will be analysed. This case selection technique enables the most important variables to be controlled for and compared, whilst also minimising the number of cases under exploration. Because the three national level governments possessed similarly world-leading climate ambition in 2012 (Burck et al. 2012), that year has been selected as the start date for the period under investigation, enabling subsequent differences in polycentric governance to be analysed from a comparable starting point.

Finally, the city regions within each state have been selected according to their status as either a capital city region or non-capital yet major city region, thus enabling **RQ3** to be answered. Regarding the selection of non-capital city regions, major city regions are selected instead of smaller city regions because the networks of actors comprising smaller city regions may not be extensive enough to develop any polycentric practices (van der Heijden 2018). Each of the non-capital city regions, Frankfurt, Malmö and Manchester, is several hundred miles from their respective capital city, ensuring that the causal mechanisms behind the creation of each region’s governance model can be determined. *Table 1*, below, summarises the case selection process.

Table 1: The case selection process.

National government	<i>Germany</i>	<i>Sweden</i>	<i>The UK</i>
Direction of EU integration	Closer integration	Closer integration	Dis-integration
Governance model	Federal	Unitary	Unitary
Global climate policy ambition ranking (Germanwatch 2012)	3 rd	1 st	2 nd

Capital city region	Berlin	Stockholm	London
Non-capital city region	Frankfurt	Malmö	Manchester

Research Design and Methods

This project will take a **mixed methods approach**, drawing primarily from qualitative approaches. The research design will enable two goals to be achieved: determining the degree of polycentricity in each city region (answering **RQ1, RQ2 and RQ3**); and assessing the ambitiousness of actors’ climate policies (answering **RQ4**). First, the analysis of the degree of polycentricity at the local level will involve **identifying the quantity and strength of linkages between actors**. The outcome will be the creation of policy actor networks that reflect both ‘vertical’ linkages – relating to the role of Europeanisation of policy actors (Jordan 2002) and the extent that resources and responsibilities have been devolved downwards from the national government (Bulkeley & Kern 2006) – and the ‘horizontal’ linkages, determined by identifying previously unknown advocacy coalitions of actors (Sabatier 1988). To obtain these data, in addition to extensive analysis of formal partnerships and coalitions through document analysis, **80 semi-structured elite interviews** will be conducted (Dexter 2012). Ten to twelve interviews will be conducted in each of the six city regions, plus Brussels. The indicators of the existence of linkages will include individuals’ common roles across governance units, formal financial cooperation, and the sharing of best practice between actors, amongst others. I will digitally record the interviews before they are transcribed by a research assistant. Interviews will be analysed qualitatively using *NVivo*. From here, two networking techniques will be used to analyse the data, which will be complemented by the interview data. **Social Network Analysis (SNA)** will be used to create networks of the linkages between the actors (Green 2007). My mentor, Professor Matthew Paterson, has significant experience of employing SNA (Paterson et al. 2014). These results will be complemented by – and compared with – the results of a **Discourse Network Analysis (DNA)**- see Leifeld 2013; Tobin et al. 2018) that will be employed to analyse the linkages between these actors’ policies, determined by the similarities within their proposals, as gleaned from policy documents and official institutional partnerships. This second network analysis will enable us to understand the extent to which linkages between actors actually influence policy outputs. By creating these extensive and complex networks for six robustly-selected cases, it will be possible to identify the impacts of EU (**RQ1**), national (**RQ2**) and local (**RQ3**) governance on the creation of polycentric practices in these city regions.

The second aspect of the study will involve **determining the ambitiousness of the climate policy outputs (RQ4)** produced by a small number of key policy-makers and stakeholders, such as businesses, NGOs and particularly local government, within each city region. The guiding hypothesis here is that the greater the connectedness between local actors within polycentric networks, the more ambitious the subsequent climate policy. Extensive **document analysis** will be conducted regarding the actors’ respective climate policy goals, focusing upon the funding allocations, overall emissions targets (for example, reductions based on ‘business as usual’ scenarios may be expected to be weaker than absolute emissions reductions), and the economic sectors, types of gases and offsetting techniques (such as carbon capture and storage) included in each policy. Finally, this second stage of the research design will conclude by combining the analyses of polycentricity with the analyses of policy ambition to **determine the relationship between polycentric governance and climate policy ambition** in each city region; this combination of findings on the two research areas (polycentricity and climate policy ambition) will be published as a monograph with a major university press.

Academic outputs, knowledge exchange and public engagement

I will ‘triple write’, publishing an article, policy brief and blog for each major finding.

I will publish *at least* **four major research articles** in leading high-impact journals in which I have not previously published, such as *West European Politics* and *Nature Climate Change*. The articles will include: a Social Network Analysis of the policy actor networks that exist in the six city regions, explaining the roles of EU, national and local factors in shaping polycentric practices; a Discourse Network Analysis of the policy document networks produced in the city regions, demonstrating how actor networks influence policy outputs; a comparative analysis of the ambitiousness of the city regions’ climate policy outputs; and an analysis of the impacts of Brexit on

UK climate policy at the local level, using a framework that will determine whether changes have occurred in the UK's political opportunity structures (Kitschelt 1986), and whether there has been policy expansion and dismantling (Bauer et al 2012) as a result. A **special issue** on polycentric climate governance in Europe will result from the project's two-day research workshop.

I will publish a **monograph** explaining the relationship between polycentric governance and climate policy ambition with a leading academic press, such as *Oxford University Press*, with which I have already published a co-edited book (Burns et al. 2018). The book will identify the factors shaping polycentric governance, determine the polycentric networks in each city region, and combine these findings with analyses of actors' climate policy outputs, as a landmark text in the field.

Short policy articles for policy and third sector communities will provide guidance and will be published in high-profile venues, including the *The Guardian's* 'Comment is Free' and the *Washington Post's* 'Monkey Cage'.

Policy briefs and parliamentary evidence will be submitted to the national governments of all three states and the European Parliament, both digitally and in person. I will liaise directly with local practitioners via **two policy lunches** in Manchester and London (co-hosted by the MCCA), before hosting a **one-day event in London for policy-makers based in cities across the UK**.

Finally, a **website** will act as a hub for all of the outputs of the project, and will be built using the cost-free *WordPress*, with which I have previously built research project websites.

Skills Development Programme

In addition to developing the academic networks that I have built during my roles as Secretary of the *Political Studies Association (PSA)* and as UK co-representative on the Management Committee of the *COST Action on Climate Governance*, I will focus on four other key skills:

1. **Advanced research methods training:** I have not previously employed SNA, so I will attend the introductory course on SNA run by the *Cathie Marsh Institute*, before attending an intensive course on the same topic at the *ECPR Summer Methods School*. As a result, I will become an Associate of the *University of Manchester Mitchell Centre for Social Network Analysis*. I will complete attend an *ECPR Winter Methods School* workshop on *MAXQDA*, which will help me to combine my network analysis results with the qualitative interview data. Finally, I will attend the *methods@manchester* two-day workshop 'Learning to harness *NVivo* for qualitative and mixed methods', as I am also new to this software.

2. **Language skills:** I already possess very good German and Swedish reading abilities, but seek to write policy briefs provide verbal evidence in both languages. To do so, I will attend German language classes run by the *University of Manchester Language Centre*, and Swedish classes with *Cactus*, and will aim to reach C1 ability for both languages by the conclusion of the project.

3. **Knowledge exchange with policy-makers and media training:** A key goal of the findings is to influence policy-making on the creation of governance models, the development of ambitious climate legislation. At the end of the project, I will seek to shape local and national policy decisions by liaising directly with policy-makers. To do so, I will complete training on Knowledge Exchange through the *University of Manchester* to feed into UK Parliamentary and Select Committees, and their equivalents in Germany (*Ausschüsse*) and Sweden (*Utskotten*). In addition, in order to explain to citizens how their involvement at the local level can shape climate change mitigation, I will undertake extensive media training, via the *University of Manchester's* 'Media Production Training' and 'Communication and Media Skills Training'. Subsequently, I will apply to the *Political Studies Association's* 'Total Exposure' competition, which enables participants to pitch proposals to media executives.

4. **Project management:** As I have not previously managed a six-figure research budget, I will complete the *University of Manchester's* 'Managing Small Projects' training and *Vitae's* 'Leadership in Action' course, to develop my budgetary and research assistant management skills. Also, throughout the project, I will discuss best practice techniques for managing large project grants with my mentor, Professor Matthew Paterson, who has experience of running large research projects.

Proposed Mentor, Host Organisation and Advisory Groups

The **host organisation** will be the Politics Department at The University of Manchester, which is a world-leading centre for European and environmental politics research. I am a Board

Paul Tobin – Polycentric pioneers?

Member of the *Manchester Jean Monnet Centre of Excellence*, and will liaise with *Tyndall Manchester* throughout this project. I am also the convenor of the *Comparative Politics and Public Institutions* research cluster, and active in the *Environmental Politics Research Group*, which will facilitate the sharing of new methodologies and feedback on my research. **My proposed mentor, Professor Matthew Paterson**, is an expert on climate policy networks and is based in my Department.

The internal advisory committee will comprise, alongside Professor Paterson: Professor Dimitris Papadimitriou, a leading expert on EU politics; Dr. Sherilyn MacGregor, an expert on environmental politics who is currently researching local initiatives in Manchester; and Dr. Carly McLachlan, Director of the Tyndall Centre at Manchester, who specialises in climate policy research.

An **external advisory committee** will provide opportunities for methods training, feedback on outputs and international visits to universities in each state. Professor Charlotte Burns (University of Sheffield, UK) is co-leading a complementary ESRC project on environmental policy and Brexit (ES/R00028X/2), and is an expert on EU environmental politics (Burns & Carter 2012). Professor Jale Tosun (Heidelberg University, Germany) is an expert on climate change and public policy (Tosun 2018). Professor Andreas Duit (Stockholm University, Sweden) has previously researched comparative environmental policies (Duit 2015). Finally, Professor Sebastian Oberthür (Vrije Universiteit Brussel, Belgium) is an expert on European climate policy (Oberthür & Roche Kelly 2008) and polycentricity (Oberthür 2016). The internal and external advisory committees will meet as part of a **two-day research workshop**, which will lead to the creation of a special issue, as well as determining new avenues of research after the project’s completion.

Finally, a **practitioner partner**, the Manchester Climate Change Agency, has already fed into the design of this project, and will provide data, access to interviewees and co-host a research findings event targeted at policy-makers, in exchange for specific policy guidance.

Timetable	Y1	Y1	Y1	Y1	Y2	Y2	Y2	Y2	Y3	Y3	Y3	Y3
	Q1 09.19	Q2 12.19	Q3 03.20	Q4 06.20	Q1 09.20	Q2 12.20	Q3 03.21	Q4 06.21	Q1 09.21	Q2 12.21	Q3 03.22	Q4 06.22
Mapping field												
Collating online data												
Conducting stakeholder analysis												
Completing methods and language training												
Conducting UK interviews												
Conducting GE/SW/EU interviews												
Analysing data												
Writing up												
Directing Knowledge Exchange												
Attending conferences												
Submitting articles and monograph												

Justification of resources

Staff- Directly Incurred Costs [REDACTED]

Research Assistant (RA)

During my pilot study for this project, I hired a PhD student to transcribe my interviews as a Research Assistant. Interview data is a cornerstone of this research project and is the primary form of new data being collected as part of the study. The RA will be paid [REDACTED], as stated by the University of Manchester pay-scale. As was the case in my pilot study, the RA will be paid for five hours of transcription per one hour of recorded interview, totalling 400 hours (plus holiday).

Staff- Directly Allocated Posts - [REDACTED]

Principal Investigator (PI)

Funding from this application will enable me to allocate 75% of my time to this project for three years as the Principal Investigator, in order to conduct the necessary research, analysis and dissemination of findings to key stakeholders, totalling [REDACTED]. All of the research will be conducted by me. A significant amount of this time (c.10% of the total) will be spent liaising with mentors, co-authors and hosts in the three non-UK states. The University of Manchester will provide the remaining 25% of my salary while the research is being conducted.

A **dedicated administrator** (from pool), will be allocated to the project for 10% of their employed time, in order to provide administrative support for the project ([REDACTED]).

Other directly incurred costs - [REDACTED]

Data analysis software - £200

No equipment needs to be purchased, as I already own a digital recorder for interviews. However, specialised software, such as *NVivo* (which is provided for free for University of Manchester staff) will be needed, in order to analyse the interview data. As such, £200 is budgeted, to purchase software that I have yet to determine, or which is currently not on the market.

Skills training programmes - £2,850

I will attend two, week-long *ECPR Methods Schools* on MAXQDA and SNA. One will take place in the summer, and one in the winter, priced at £515 each (2018 prices). I will attend a *Cathie Marsh Institute* training workshop, priced at £60. I will also take part in a 'Languages for All' course in German at the University of Manchester for the first two years of the project, priced at £550 each, thus totalling £1,100 (Swedish is not available via the University). During the first year, I will also take three 10-week Swedish courses via *Cactus*, charged at £220 each (totalling £660).

Targeted policy lunches for local policy-makers and practitioners - £2,500

Two lunches for policy-makers and practitioners will be held, in Manchester (£1,000) and London (£1,500), at the end of the project, co-hosted by the Manchester Climate Change Agency (MCCA). These lunches will bring together around twenty individuals each from across the government, business and NGO communities who are solely based in the two cities.

UK-wide policy-makers' workshop - £5,450

In order to inform policy-makers from across the UK about the findings of the project, a one-day Knowledge Exchange workshop will be held for councillors and policy-makers working on climate policy in cities around the UK. This event will disseminate guidance on how other UK cities, beyond Manchester and London, can implement the project's findings. Venue hire, lunch and coffees will be covered by the project's budget. Feedback from the participants based in smaller UK cities will be used to refine the policy guidance documents that are then submitted to the three states' Parliaments, and shared digitally with policy-makers across Western Europe via the project's website.

Conference registrations- £2,100

Research dissemination and the sharing of feedback are important components of the project. In the first year, I will attend the European Consortium for Political Research Conference, which will take place within Europe in August 2020 (registration budgeted at £300). I will also attend the Political Studies Association conference in the two final years of the project, which will both be in the UK (registration totalling £600). In addition, I will attend the University Association for Contemporary European Studies Conference in the second and third years of the project, one of which will be in the UK, the other abroad (£600). I will attend my first American Political Science Association Conference, to disseminate the project's findings with colleagues from the European

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Studies section of the Association and build new international research networks (£300). Finally, I will attend the International Conference on Public Policy in the last year of the project (£300).

Travel and subsistence - [REDACTED]

Skills training programme – £2,400

I will attend two ECPR Methods Schools, with travel at £300 each and accommodation £900 each. No travel or accommodation costs are entailed for training events held in Manchester.

Fieldwork - £13,700

As the project relies heavily on interviews, a large budget is needed for travel and accommodation across the three states. No costs are required for the interviews in Manchester, but accommodation in and travel to and from London for two sets of four nights plus one two-day trip will entail costs (£1,800). During the first eighteen months, I will spend four weeks each in Belgium (£1,900), Germany (£2,200) and Sweden (£3,000) as a Visiting Scholar to conduct interviews. In the final eighteen months, I will take shorter trips to each, in order to complete remaining, targeted interviews, again in Brussels (£1,500), Berlin (£1,500) and Stockholm (£1,800). The interviewees are not considered vulnerable and no costs are envisaged for the meeting with the interviewees.

Advisory committee meeting and research workshop - £3,550

Travel and three nights' accommodation will be required for my academic advisory committee members from Sheffield, Brussels, Heidelberg and Stockholm, to visit Manchester where I will host a two-day research workshop. The advisory committee will meet for a lunch on the first day before the workshop begins to discuss the project, after which other guests will join, whose travel costs will be covered by my Departmental research budget (£2,000 per year), with travel bursaries targeted particularly to early career researchers. During the workshop, attendees will present their latest research on the topic, which will then lead to a special issue in a leading journal. Students and members of staff at the University of Manchester will also be able to listen to the presentations.

Conference travel - £6,440

Attendance at one ECPR, two PSA, two UACES, one APSA and one ICPP conferences each require a maximum of three nights' accommodation, resulting in total costs for all conferences (including travel and accommodation) of £6,440.

Provision of evidence to parliaments - £2,950

I will feed into the relevant select committees of the three states' respective parliaments at the end of the third year of the project. Travel and accommodation for two nights in each of the capital cities will cost £450 (London), £800 (Berlin), £800 (Brussels) and £900 (Stockholm).

Impact (included in Other Directly Incurred and Travel and Subsistence above - [REDACTED])

The MCCA will co-host a policy report lunch for practitioners in Manchester at the end of the project. I will replicate this model in London for practitioners there. In addition, a one-day event will be held in London to inform local-level policy-makers from across the UK as well as national policy-makers who are based in London. The feedback from these events will be used to develop more generalizable policy guidance that can be targeted at city regions across Western Europe.

I will submit written reports to the three states' national parliamentary committees (Select Committees – UK; *Ausschüsse* – Germany; *Utskotten* – Sweden) regarding the findings of my research, as well as the European Parliament, and I will travel to each of the capital cities to feed into their policy development in person, separately to my visits when I conduct research interviews.

Through a cost-free *Wordpress* website I will provide guidance for policy-makers and NGO employees who are based throughout Western Europe. I have previously co-written a guide for environmental activists to help them build their community events more effectively (Stop Climate Chaos 2012), and so will use these skills to create regular articles and blogs that activists and local-level policy-makers can employ as needed. The ability of these practitioners to employ these pieces of policy guidance will then underpin a future study that will arise after the completion of this three-year ESRC investigation. The website will include articles in English, French, German and Swedish.

Finally, a separate part of this website will be targeted at the wider public, so that citizens can learn more about the factors that shape climate governance. I will also participate in other cost-free initiatives to engage with the wider public, such as writing for *The Guardian's* 'Comment is Free' blog, and taking part in the Political Studies Association's *Total Exposure* competition.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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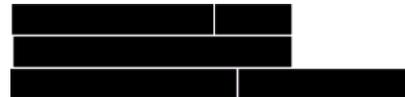


Universität Heidelberg, Bergheimer Straße 58, 69115 Heidelberg

Heidelberg, den 27.03.2018

Economic and Social Research Council
Polaris House
North Star Avenue
Swindon
SN2 1UJ
United Kingdom

Prof. Dr. Jale Tosun



Dear Members of the Economic and Social Research Council,

I hereby wish to express my strong support for Paul Tobin's application for a New Investigator Grant. We have been working closely together for the past three years and not only did I get to know him very well throughout this period, but I also feel that I am in a very good position for pointing out Paul Tobin's excellence as an early-career researcher.

The project proposal aligns with his expertise in climate politics and demonstrates his willingness to further the lines of theoretically informed empirical research to which he has already begun to contribute. The project demonstrates an excellent knowledge of the state of research and offers a promising mix of different methodologies.

Considering that Paul Tobin has been a guest researcher at the Institute of Political Science in 2016 in the context of the Cost Action INOGOV, I would be delighted to offer him office space in the institute for a period of 30 days (valued at 100 EUR/day). Being a guest to our institute will facilitate the data collection for the planned case study on the City of Heidelberg.

Paul Tobin is a gifted scientist and I am convinced that he will have a stellar research career, with the potential to contribute significantly to the literature in climate politics and beyond. Therefore, I hope you will give his grant application full consideration.

Best regards

Prof. Dr. Jale Tosun

Economic and Social Research Council
Polaris House
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Swindon
SN2 1UJ
United Kingdom



Prof. Dr. Sebastian Oberthür
Professor for Environment and Sustainable Development
Institute for European Studies
Pleinlaan 5, 1st floor
B-1050 Brussels

Brussels, 6 June 2018

Dear Sir/Madam,

I would herewith like to confirm that I will be more than happy to serve on the external advisory board of Paul Tobin's project on the impacts of 'Brexit' on climate policy across multiple levels (New Investigator Grant). Not only is the project very timely and the subject in urgent need of further analysis, but I also know Paul as a dedicated, diligent and skilled researcher who will no doubt be able to live up to the highest standards of excellence and hence make this an exciting project.

I would also be delighted to offer Paul office space at the Institute for European Studies at the Vrije Universiteit Brussel for a period of up to 30 days (valued at 100 EUR/day). As a visiting researcher, Paul would have the chance to test and discuss his findings as well as to get access to EU policymakers in Brussels.

I am very much looking forward to working with Paul on this exciting project.

Your sincerely,

Prof. Dr. Sebastian Oberthür
Professor Environment and Sustainable Development

Dear ESRC colleagues,

By means of introduction, I am a Professor at Stockholm University, Sweden, where I specialise in comparative environmental politics. As such, my research expertise aligns perfectly with the proposed content of Paul Tobin's New Investigators bid.

I wish to offer my sincere support for Paul's proposed project and am willing to serve on his External Advisory Board. The project is relevant and timely, and stands to make useful theoretical and empirical contributions to two high-profile policy issues (Brexit and climate change policy).

I have met Paul on two previous occasions, at conferences and workshops, but have not worked with him on research. I am happy to support Paul's visit to Sweden for three weeks, including his Visiting Scholarship here at Stockholm University (valued at around 100 EUR/day). During this visit, Paul would be able to present his research to colleagues here at Stockholm, as well as discuss with me the use of cluster analysis research methods, which I have employed in published work previously, with a view to co-authoring research using the method.

Moreover, by being based at Stockholm University, Paul will be in a stronger position to conduct research interviews with policy-makers across Stockholm, which are integral to his project.

Yours faithfully,



Andreas Duit

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MANCHESTER CLIMATE CHANGE AGENCY

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7th September 2018

For the attention of ESRC

RE: Paul Tobin Research Proposal

Manchester Climate Change Agency was established in September 2015 to provide strategic capacity and expertise to support the development and implementation of climate change policy in the city. Established as a not-for-profit private entity the Agency is a politically independent organisation that seeks to engage and influence key stakeholders across the city to ensure that Manchester *'play its full part in limiting the impacts of climate change'*.

Underpinned by this commitment, in the city's overarching *Our Manchester Strategy* for 2016-25, the Agency works with Manchester City Council, the wider public sector, business leaders, community and faith leaders and other local partners to further develop this aim into a coherent climate change strategy for the city and plays a leading role in facilitating its implementation. The Agency also plays a role in supporting the development and implementation of Greater Manchester climate change policy.

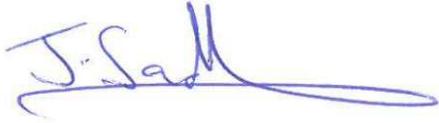
Manchester is part of a growing number of cities looking to establish Paris-aligned climate change policy and the associated governance structures required for the development and implementation of such commitments. It comes as part of the recognition that multi-level governance and multi-stakeholder approaches are fundamental to integrate climate change action as an embedded and intrinsic part of all cities and their long-term success.

The proposed research therefore comes at a critical time for Manchester, cities and global efforts more widely to meet the Paris Agreement targets. Our belief is that Manchester provides a valuable case study that can be used to help support the development of climate change policy in cities around the world. And at the same time has the requisite appetite to learn from other cities and the latest expert insights to support the city's aim to become zero carbon by 2038.

On that basis Manchester Climate Change Agency commits to provide staff time in support of this project for a total of 10 hours per year, for each of the three years of the project. The Agency will provide Dr Tobin with access to Agency data (under confidentiality agreements as required), meetings with the Manchester Climate Change Board and its members, access to other partners as relevant, and dissemination of the research findings through the Agency's channels and networks. This contribution will be facilitated by myself as Programme Director for the Agency, to a value of £3,000, based on an hourly rate of £100 per hour.

We look forward with great enthusiasm to working with Dr Tobin.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'J. Sadler', with a long horizontal flourish extending to the right.

Jonny Sadler
Programme Director
Manchester Climate Change Agency

Check out Manchester's plans to become a zero carbon city by 2038 at www.manchesterclimate.com/manchester-2038 and [@McrClimate](https://twitter.com/McrClimate)

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04 June 2018

Dear Paul,

I am writing to confirm that I am delighted to be a part of your external advisory group for your project investigating the impact of Brexit upon climate policy. This is a timely and interesting project that complements the work of the Brexit and Environment network. The increasing importance of local actors and the complex interplay of supranational, national and local politics in shaping climate ambition and policy is still relatively understudied. The new challenges posed by Brexit to UK and EU climate ambition definitely merits investigation and I look forward to working with you and the advisory group to develop your project.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'CJBurns'.

Prof. CJ Burns

Data Management Plan

Data management has been considered throughout the research design. The following Data Management Plan builds upon information and support provided by the *University of Manchester's* Research Data Services.

Assessment of existing data

Where possible, the PI will use online and/or electronic archives to access existing data. These data will comprise widely accessible qualitative data, particularly policy documents, such as those made available by national governments (e.g. Regeringen 2017) as well as quantitative data, such as statistics on GHG emissions each year and energy consumption, taken from sources such as the OECD (2018). Key search terms and their translation into the relevant languages, and inclusion and exclusion criteria for documents will be determined in the 'mapping' and 'collating online data' phases of the project.

Regarding the six cases under exploration, this project builds on existing research examining comparative climate policy at the local (Schreurs 2008; van der Heijden 2016), national (Bernauer & Böhmelt, 2013; Lachapelle & Paterson 2013; Tobin, 2018) and European levels (Bäckstrand and Elgström, 2014; Parker & Karlsson 2010; Wurzel & Connelly 2010). However, these studies did not explore polycentric governance, as this 'explosion' of new governance initiatives has only taken place in recent years (Keohane & Victor 2011), necessitating the collection of new empirical data (see Jordan et al., 2018b). Although there are studies that examine local climate policy in Germany, Sweden and the UK, very few compare local policies across two of these states (for exceptions see Bulkeley & Kern 2006; Eckersley 2006; Emelianoff 2014). Indeed, there is no research comparing local policies across all three of these key states, let alone any research examining the specific city regions explored in this project.

Regarding the key research themes of the project – polycentric governance, climate policy and European integration – there are limited examples of existing data available for use. Regarding polycentric governance, research has only begun to attempt to analyse the complex networks of governance models that exist, necessitating significant data collection and advanced network analysis methods (see Pattberg et al. 2018). Moreover, a great deal has changed with regards to climate policy and European integration since 2012, the starting year of this project. Regarding climate policy, prior research focused heavily on state level actors, rather than the local level or non-state actors, let alone the interactions between them. In particular, the Paris climate agreement in 2015 represents a step-change in climate governance because of its less 'top-down' approach (Tobin et al. 2018), thus representing a new watershed from which new research is needed in order to understand this new global context. Regarding European integration, the UK referendum on EU membership in June 2016 has begun to change understandings of the European integration process, and has changed the UK's policy-making landscape, and potentially that of the EU too. As such, existing data do not explore the details of the complex systems that comprise polycentric governance models needed to analyse polycentric climate governance, nor do they examine the current context of European disintegration that is suggested by the UK's withdrawal. Regarding the UK's possible withdrawal from the EU, the 'Brexit & Environment' project (ES/R00028X/2) funded by the ESRC's 'UK in a Changing Europe' initiative is conducting contemporary research, but not on climate policy, the city level or on neighbouring states. As such, one of the Research Directors of that project, Professor Burns, is a member of this project's external advisory committee, with a view to ensuring that these two projects are complementary rather than in competition.

Information on new data

The new data will primarily be derived from the completion and transcription of around 80 semi-structured elite interviews with policy-makers. These interviews will be roughly divided into four sets of twenty interviews, conducted in Germany, Sweden, the UK and Brussels, Belgium, respectively. It is expected that around eight to twelve people will be interviewed in each of the six cities under investigation, plus a similar number in Brussels. The applicant has previously conducted over 90 elite research interviews as part of his Ph.D. and postdoctoral research, and so appreciates that obtaining a large volume of high-quality data will take significant time and funding.

Quality assurance of data

From the beginning of the project, the highest levels of attention will be placed on ensuring robust and reliable collection of data. The data collection process will be documented from start to finish. The PI will provide explicit guidelines for the research assistant to follow for the transcription of interviews. Transcription guidelines will be based on those proposed by the UK Data Archive, in order to ensure consistency across each of the interviews. After the first five interviews have been transcribed, the quality of the transcription will be checked by the PI against the digital recording, to ensure that the transcription represents accurate facsimiles of the recordings. The data will once again be checked once it has been imported into NVivo, to protect against the introduction of errors at any stage of the data collection process.

Backup and security

Throughout the project, all files will be saved simultaneously on the hard drive of the PI's University of Manchester laptop and onto the PI's pre-existing Business-level Dropbox account. The University of Manchester's central file-store is based off-campus, and is backed up daily, thus mitigating file loss. Moreover, once a fortnight, all files will be duplicated once again onto an external hard drive, which will be kept in a locked drawer. The University laptop, and the Dropbox account, are password protected, using different passwords of more than ten digits each, potentially containing a mixture of upper case and lower case letters, numbers and punctuation marks. Any data shared between the PI and the research assistant will be encrypted and password protected.

Management and curation of data

Separate parts of the data will be documented in either Microsoft Word or Excel files. Each interview will be saved as a different Word document, while an Excel spreadsheet will collate information regarding the code representing the interviewee's name (see anonymization strategy, below), their employer, the location of the interview, the date on which the interview was conducted, and the date on which the individual confirmed that they agreed with the contents of the transcribed interview.

Difficulties in data sharing and measures to overcome these

It is anticipated that all of the data resulting from this study will be made available for archiving to the UK Data Service. Data will be archived throughout the duration of the research process, rather than at the very end. Textual data resulting from analyses in NVivo will be exported and saved as .xml files in order to facilitate their longer availability for usage. A data documentation file will outline all of the pieces of data collected as part of the study, including the details regarding why the project was started, its aims and objectives, methods, interview guidelines and information sheets, analysis techniques (both intended and employed). As part of the UK Data Service submission process, metadata regarding the context, purpose, date and location of data will all be provided, with a view to facilitating the further use of the data by researchers in the future.

Consent, anonymisation and strategies to enable further reuse of data

Ethical approval for this project has already been obtained via the University of Manchester's online ethical decision tool. None of the participants are considered to be vulnerable, no personal data will be obtained beyond their name and role, and questions will only relate to interviewees' professional responsibilities. Informed and enduring consent, up to the point of research publication, will be gained from the participants via consent forms. These consent forms will be shared, alongside a one-page project information document, with the participant while the interview is being organised, and again at the start of the interview. The information document will outline how and why the data will be used, alongside information about the procedures for the storage, management, transmission and anonymity of the data, as well as the archival process. Consent for the request of copyright to be transferred to the PI will also be requested, in line with the guidelines provided by the UK Data Archive. After the interviews are transcribed, the relevant transcription will be emailed to each participant, such that they can confirm that they are happy with the representation of the wording used within.

All of the participants will be offered the opportunity for their interviews to be confidential. Those who wish for their data to be confidential will have their personal information removed from all transcriptions and documents relating to their interview. The PI will develop a code, which is saved on an entirely different hard drive, and a list of the contact information, which will be on a third drive, such that while he is able to access the information regarding the identities of each of the participants, no-one else will be able to do so. When the data is archived by the UK Data Service, all of the identifying information for those wishing for their interview to be confidential will be removed.

Copyright and intellectual property rights, and responsibilities

The PI will possess all of the copyright and intellectual property rights for the data that are produced as part of this project. The copyright transfer request will be included in the consent form, signed by the participant prior to the interview commencing. Likewise, responsibility for the collection, management, storage and archiving of the data will belong to the PI. The transcriber(s) will sign non-disclosure agreements to ensure that what they transcribe is not shared. As mentioned above, there will also be clear transcription guidelines for the transcriber(s), based on the best practice advice provided by the UK Data Archive.

Responsibilities

The PI will be responsible for ensuring the highest standards of security and quality throughout the data collection, analysis, sharing, management and archiving process.

Preparation of data for sharing and archiving

Data will be prepared for archiving with the UK Data Service throughout the research process. Identifiers, codes and acronyms will be used consistently throughout the data collection and analysis processes. All acronyms, classification codes and other signifying data that are used during the NVivo analysis will be made explicit and available for archiving (except for the names of the anonymised interviewees). In addition, a data documentation file will explain the timelines of the project, in addition to the project's aims, objectives, data collection methods, the software used, interview schedules and consent forms.

[Redacted]

[Redacted]