Elise Remling

Adaptation, now?
Exploring the Politics of Climate Adaptation through Poststructuralist Discourse Theory

SÖDERTÖRN DOCTORAL DISSERTATIONS

Subject: Environmental Science
Research Area: Environmental Studies
School: Natural Science, Technology and Environmental Studies

Södertörns högskola
(Södertörn University)
The Library
SE-141 89 Huddinge

www.sh.se/publications

Cover image: Sebastian Danta © 2019
Collage reproduced with the artists' kind permission
Cover layout: Jonathan Robson
Graphic form: Per Lindblom & Jonathan Robson

Printed by Elanders, Stockholm 2019

Södertörn Doctoral Dissertations 168
1652-7399

ISBN 978-91-88663-78-8 (print)
ISBN 978-91-88663-79-5 (digital)

Abstract

Increasing evidence of anthropogenic climate change and the recognition that warming is likely to go beyond 2°C raises the need for responses that help people cope with the anticipated changes. The rise of attention to so-called climate adaptation on political agendas at the local, national and international scale has come about with a hastily growing field of academic knowledge production. But while adaptation choices are inherently political, adaptation has been largely considered a 'problem free' process and 'tame' challenge; only a relatively small strand of scholarly work engages in critical enquiry into the idea of adaptation, the discursive practices through which it is imagined, and related questions of power and politics.

Responding to calls for more attention to the socio-political dimensions of adaptation and for conceptually embedded research, this thesis investigates the creation, interpretation and use of adaptation as a concept in research, policy and practice. Drawing on Poststructuralist Discourse Theory and the so-called Logics of Critical Explanation in particular, it develops a perspective through which the politics of adaptation can be investigated in a theoretically and methodologically consistent and transparent manner. Through a close analysis of official adaptation discourses at the international level, the EU level, and the national level in Germany, the thesis enquires into the discursive practices around adaptation responses and what these different discourses open up or limit in terms of broader implications for political action.

The contributions of the thesis are empirical, methodological and conceptual. In addition to providing critical insights into contemporary understandings of adaptation, including revealing some depoliticising 'building blocks' in conventional adaptation discourses, the thesis makes two important conceptual contributions to the growing field of critical adaptation studies: (1) It suggests that the increasing interconnectedness between people and places makes it impossible to know whether adaptation efforts undertaken have in reality reduced net vulnerability or simply shuffled vulnerability across the board. Ignoring the potential for such redistributive effects can have significant consequences in practice and will likely lead to unsustainable and, in the long run, maladaptive outcomes. (2) It argues that non-rational and affective dimensions are vital to the emergence of adaptation responses and that paying attention to them is important if critical scholarship is to understand and intervene in the persistence of techno-managerial approaches to adaptation. Furthermore, to the field of critical policy studies this thesis makes a methodological contribution by developing a new analytical framework for poststructuralist policy analysis.

Keywords: Climate change adaptation; Adaptation policy development; Politics of adaptation; Discourse; Poststructuralist Discourse Theory; Logics of Critical Explanation; Discourse Analysis; European Union; Germany; Qualitative policy analysis; Critical policy studies; Fantasy; Depoliticisation.

Für Otis.

In memory of all the wise women who came before me:
Käthe, Tusnelde, Elisabeth, Ruth, Grace, Anna and Gesche,
and in memory of Sean,
who taught us how to make coconut cream.

List of Papers

Paper I

Atteridge, A. and E. Remling 2017. Is adaptation reducing vulnerability or redistributing it? *Wiley Interdisciplinary Reviews: Climate Change*, 9:1, e500, DOI: 10.1002/wcc.500.

Paper II

Remling, E. 2018. Depoliticizing adaptation: a critical analysis of EU climate adaptation policy. *Environmental Politics*, 27(3), 477–497, DOI: 10.1080/09644016.2018.1429207.

Paper III

Remling, E. 2018. Logics, assumptions and genre chains: a framework for poststructuralist policy analysis. *Critical Discourse Studies*, 15(1), 1–18, DOI: 10.1080/17405904.2017.1382382.

Paper IV

Remling, E. (Manuscript): The affective dimensions of climate adaptation: Fantasy and future-making in German adaptation policy.

My contribution to the papers

The idea for **Paper I** was developed together with Aaron Atteridge. Aaron and I jointly designed the study, selected and analysed the empirical material and co-wrote the paper. I was solely responsible for **Papers II, III** and **IV**.

Other relevant publications

Remling, E. (under review) Migration as climate adaptation? Exploring discourses amongst development actors in the Pacific Island Region (Submitted to a peer-reviewed journal).

Remling, E. and J. Veitayaki 2016. Community-based action in Fiji's Gau Island: a model for the Pacific? *International Journal of Climate Change Strategies and Management*, 8(3), 375–398, DOI: 10.1108/IJCCSM-07-2015-0101.

Acronyms and Abbreviations

AR	Assessment Reports of the United Nations Intergovernmental Panel on Climate Change
CBA	Community-based adaptation
CDA	Critical Discourse Analysis
EC	European Commission
EU	European Union
IPCC	United Nations Intergovernmental Panel on Climate Change
LA	Logics Approach, or Logics of Critical Explanation
PDT	Poststructuralist Discourse Theory
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

Figures and Tables

Contents

Prologue

The starting point for this research was not a set of clear questions to be answered. Rather, this thesis is a reaction to my observations as a novice researcher in the emerging field of adaptation. Straight out of university, I began researching different aspects of climate change adaptation activities at the international level and, later, in the Pacific in the context of development aid. With the recent climate science, under my belt, and having been sensitised to issues of politics, social vulnerability and capability frameworks, I somewhat naively expected there to be radical and dedicated action to support broad societal adaptation to climate change. This, however, was not the case. As I began looking into the way in which finance for adaptation is dispersed by international funds, how contingency agencies prepare for the impacts of disasters, and what monitoring and evaluation frameworks for adaptation give value to I found there was very little bold action, but rather small, timid adjustments that did not seem to make much of an impact. Puzzled by this observation I wondered, *why is it that adaptation responses are so unambitious*, and *what is it that makes them like this*? This uneasiness with adaptation practice motivated me to embark on a journey to interrogate current adaptation discourses.

1. Introduction

Are we adapting well?

Eighteen of the nineteen warmest years ever recorded in human history have all occurred since 2001 (NASA 2019). In February 2018, the temperature measurements in the Arctic were 20°C higher than the average recorded for that calendar date (Watts 2018). In August 2019, Iceland commemorated the first-ever loss of a glacier due to climate change (Agence France-Presse 2019). With such increasing evidence of anthropogenic climate change occurring and the recognition that it is likely to lead to a global warming beyond the 2°C target (Friedlingstein *et al.* 2014, Anderson 2015, CAT 2018), comes the acknowledgement that humans will need to adjust to these anticipated changes in novel and profound ways (O'Brien 2016). Concern for this is no longer limited to researchers and policymakers. A survey amongst European citizens showed that climate change is seen as the second most important issue facing the European Union (EU) today; in seven European countries – Sweden, the Netherlands, Denmark, Finland, Belgium, Luxembourg and Germany – it even ranked as the biggest topic of concern (EU 2019).

Social responses that help people cope with the anticipated changes have come to be described as climate change adaptation (hereafter adaptation).[1] While there seems to be growing consensus about the need to 'do something', adaptation is a relatively nascent topic of concern for research and government and means different things to different people. The term itself lacks a widely agreed-upon definition beyond those put forward by the Intergovernmental Panel on Climate Change (IPCC) syntheses (see for instance IPCC 2014). While the problematisation of adaptation is precisely the focus of this thesis, the term needs a preliminary working definition. Here, leaning on Eriksen and Brown (2011), Eriksen *et al.* (2015) and

—

[1] It is important to note, as others have done (see for instance Moore 2010, McLaughlin 2011, Pelling 2011), that the human adjustment to climatic variation and environmental change is not a new phenomenon. Rather, it is a process of societal response that has been ongoing since time immemorial and is, and always has been, a key concern for societies. As such, adaptation to a changing environment is not novel. However, while historically societies have always waited for impacts to react, what is new about adapting to anthropogenic climate change is awareness about future changes-to-come. Even though the exact conditions of future climate are unknown, this general foresight enables *proactive* and *intentional* responses and the potential for *planned* rather than *reactive* responses.

Taylor (2015), I define adaptation very broadly to refer to *decision-making processes and actions that seek to help people prepare for actual or expected harmful impacts associated with climate change*.[2]

Drawing on Poststructuralist Discourse Theory (PDT) (Laclau and Mouffe 2001 [1985], and beyond), this thesis investigates the creation, interpretation and use of adaptation as a concept in research, policy and practice. In so doing, it responds to recent calls for more attention to the socio-political dimensions of adaptation and for conceptually embedded research (Pelling 2011, Eriksen *et al.* 2015, O'Brien and Selboe 2015a, Schulz and Siriwardane 2015). To this end, the thesis attends to adaptation as an imaginative idea and social construction that does not *in itself* follow from the material biophysical changes happening around the globe. Rather, following previous work in the environmental sciences that considers environmental issues not as fixed problems but as socially constructed (Hajer 1997, Dryzek 2013 [1997]), it therefore acknowledges that the social constructions of adaptation are, in fact, intrinsically intertwined with physical reality.

Over the last 15 years or so, adaptation has risen on the political agenda, both in local and national policy agendas and at the international level. This is the case not only in places predicted to be particularly vulnerable to climate change, commonly referred to as developing countries, but also in areas associated with lower, or different, vulnerabilities, such as the European region. Denmark, Finland, France, Germany, the Netherlands, Spain and the UK, all countries with relatively high adaptive capacities, were amongst the early wave of countries to develop national strategies on adaptation (Biesbroek *et al.* 2010). In 2018, 25 of the 28 EU member countries had an adaptation strategy (EC 2018). The United Nations Environment Programme (UNEP) (2018) estimates that in 2016, global public finance for adaptation amounted to at least US$23 billion, dispersed domestically and through bi- and multilateral official development assistance (including national and local budgets which are difficult to account for, this figure might actually be significantly higher). This growing interest reflects a trend in news stories, funding initiatives, and academic studies to support adaptation. This scale of activities under way and resources mobilised (GEF 2019), begs the question: what is adaptation considered to be? And are we adapting well?

When adaptation in response to climate change emerged as a new concept in research, public and policy discussion in the mid-1990s, it promised to do some-

—

[2] This is not fundamentally different from the IPCC AR5's definition, which defines adaptation as '*[t]he process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects.*' (Noble *et al.* 2014, p. 838). I chose to use this alternative definition instead of referring to the IPCC's, because their definition lacks a sense of agency and attention to the socio-political processes that mediate how adaptation takes place. With this alternative definition I want to explicitly capture the decision-making part as an important dimension of adaptation.

thing novel, namely, to help address climate change impacts and even capitalise on potential opportunities (Bassett and Fogelman 2013). A few years down the line however, adaptation *practice* – the policy development, planning and implementation of adaptation interventions – in developing and developed nations alike is slow in coming (Lesnikowski *et al.* 2015) and appears to have focused largely on technical and managerial approaches (hereafter paraphrased as techno-managerial). As will be discussed in the following section, evidence has come to the fore, however, that suggests such techno-managerial and incremental adaptations to be less effective, just and sustainable than expected (Kates *et al.* 2012), and some scholars have raised concern that they may even result in harmful maladaptation (Barnett and O'Neill 2010, Brown 2011, Wise *et al.* 2014, Juhola *et al.* 2016).[3] Others have cautioned that adaptation has simply become a new label for ongoing practices that have very little to do with climate change and largely follow business as usual development trajectories (Cannon and Müller-Mahn 2010, Ireland and McKinnon 2013) – perhaps best exemplified by the increasingly popular concepts of climate mainstreaming and climate-proofing (Methmann 2010). Calls for transformational adaptation have pointed out that in cases where vulnerabilities are severe or climate impacts significant, incremental approaches might simply not be enough, which raises the question whether adaptation can be addressed within the parameters of existing social systems, or only by changing them (Pelling 2011, Kates *et al.* 2012). More recently, debate around 'Deep Adaptation' (Bendell 2018) has fundamentally questioned the premise that societies can adapt meaningfully to climatic changes at all, in a way that leaves their physical, economic, social, political and psychological situation largely unchanged.

Aims and research questions

Against this background, the overarching aim of this thesis is *to analyse and critically explain the various ways in which adaptation is constructed* in official discourses and which kinds of political action these constructions thereby – implicitly or explicitly – recommend, enable or prevent, drawing on a range of representative adaptation activities at the international level, the EU level, and the national level in Germany. Specifically, I employ the approach of the so-called Logics of Critical Explanation within PDT (hereafter Logics Approach, or LA for short) (Glynos and Howarth 2007) to examine the ways in which underlying assumptions, discursive politics and affective dimensions shape and are embedded in the ways in which

—

[3] The concept of *maladaptation*, as used in both adaptation literature and policy documents, recognises the possibility of adaptation actions producing unintended and undesirable consequences that might increase vulnerability in certain groups or places (Barnett and O'Neill 2010, Brown 2011, Wise *et al.* 2014, Juhola *et al.* 2016). In the context of adaptation the concept was first theorised by Barnett and O'Neill (2010).

adaptation is represented. In so doing, I develop a perspective through which the politics of adaptation can be investigated in a theoretically and methodologically consistent and transparent manner. The interest here is to critically explain the discursive practices and ideological assumptions behind conventional adaptation discourses and bring critical adaptation research one step forward. The aim is broken down into the following four research questions (RQ), which will be used to analyse the findings of the thesis:

RQ1: In what ways and by what discursive practices is adaptation constructed in different contexts?

This first question sets out to empirically explore the discursive elements and practices that function as 'building blocks' in conventional adaptation discourses, paying particular attention to the ways in which existing accounts of adaptation are formulated in relation to dominant political practices. Importantly, my interest here is not only in the way in which adaptation is conceptualised (e.g. as a techno-managerial or apolitical matter), but in *how* it is rendered that way. What are the underlying rules and inner logics that shape the definition of and approaches to adaptation?

RQ2: What are the political and ideological implications of these constructions?

Assuming that discourses are purposeful, this second question pays particular attention to the political and ideological implications of the identified discourses, what they implicitly conserve, protect or conceal. In doing so, I aim to extend existing research on the politics of adaptation by examining the role of meaningful and implicit political work in adaptation discourses, and policy in particular.

RQ3: What are the practical implications of these constructions?

Considering that adaptation as tangible, concrete action is still in its infancy but can be expected to be scaled up and out in the near future, the third question addresses what the 'real world' implications might be and what types of action (or inaction) are made possible through the examined adaptation discourses. Here, the focus is on 'extrapolating' how the ways in which adaptation is constructed might affect the possibilities for action, in other words, what they make possible and delimit.

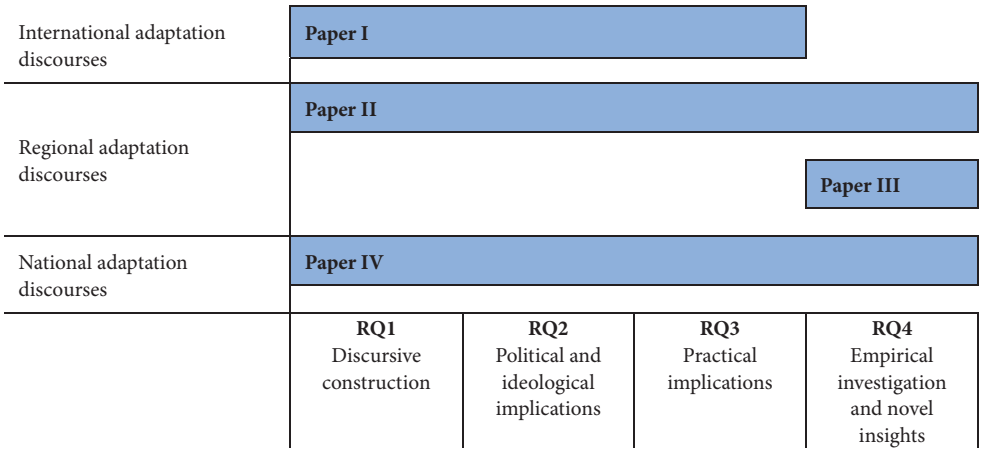
RQ4: How can the discursive construction of adaptation be empirically investigated through the LA and what insights can be gained into the politics of adaptation?

This fourth question seeks to offer a more concrete contribution to concepts for the study of adaptation politics, but it also asks what can be learned about adaptation and its politics when looking at it from a discourse–theoretical perspective.

Scope of the thesis

The aim and research questions are examined empirically through four papers, which focus on a series of different but interconnected empirical cases (see Figure 1 below, and also Table 3 in Section 5). Although the four papers vary in terms of subject matter, they all focus on climate adaptation as a discursive set of practices and processes and interrogate these critically with the aim of further advancing critical research approaches to adaptation.[4] The unit of analysis is adaptation discourses, especially in policy, at different geographic locations and scales (from the international level, to the regional level of the EU, to the national level in Germany), and in different contexts (from adaptation research and development cooperation, to policy development). Common across the four papers is an acceptance that climate change is a real and material circumstance and that responses to it are urgent, but that making decisions about adaptation is at its core a political, and therefore contingent, process.[5] While the papers have a descriptive foundation, they also aim to critically explain how the specific articulations came about and what political work they do. It is my hope that in doing so, the analyses will open up discursive space for asking what other ways of imagining adaptation are possible, though I do not attempt in this thesis to provide any final answers to this question. The papers and their aims are described in more detail in Section 5.

Figure 1: Overview of papers showing the geographical scale and research questions that each corresponds to.



—

[4] Taking a *critical* perspective in this context means to scrutinise and question the assumptions and agendas inherent in public discourses of adaptation as well as within the research field, '*making familiar things strange and unfamiliar things more easily visible*' (Death 2014, p. 4).

[5] Seeing climate change and adaptation as discursive is not to question the existence of material things, or to deny the real, biophysical changes happening around the globe. But while changes are happening in ecosystems around us, *how* we describe, problematize and make sense of all this constitutes what Hajer and Versteeg call the '*societal phenomenon of climate change*' (2011, p. 1).

A few more words on the scope of the thesis are in order. First, as this thesis is about how adaptation is *conceptualised* as a topic of concern, the focus is not on assessing tangible or concrete adaptation efforts 'on the ground', or on the *outcomes* resulting from such efforts for changes in vulnerability. This is important, but it is a research concern that extends beyond the scope of this thesis.

Second, while I provide some context to each of my cases, I do not focus so much on the policy-shaping processes as such (i.e. the specific meetings and actors involved in their emergence). Importantly, while much previous research on the governance of adaptation has focussed on such institutions as the sites where politics happen, for the purpose of this thesis *political practices* are seen as ongoing in any meaningful action around adaptation, including guidance and policy documents and funding decisions. Policies are seen as political negotiating spaces – not simply *outcomes* of such processes.

Third, the geographical focus of this thesis is on adaptation discourses at the international, the European and the nation state level in Germany (see further elaborations on case selection in Section 4). These selected adaptation activities – in research, policy and practice – of course do not represent the full breadth and range of activities underway in the EU, Germany or international adaptation activities. Especially sub-national and local level responses to adaptation are also critical; however, they are not the focus of this thesis.

Fourth and relatedly, it is also important to point out that in looking at 'representative official' adaptation discourses in these different locations, the four papers do not say so much about competing discourses or alternative ways of imagining adaptation. Prioritising depth over breadth, in my cases I specifically study one discourse as expressed in a small selection of documents (or in the case of **Paper I** a spread of activities). These cases were selected in a conscious manner since they represent the official discourse of influencial governing bodies (or in the case of **Paper I** a number of international actors) and thus have a privileged status, in that they carry some degree of automatic political legitimacy. More research is needed on alternative or non-conventional discourses to adaptation, such as 'deep adaptation', hi-tech/geoengineering approaches, degrowth, or social justice approaches.

Finally, my work is underpinned by the conviction that laying open and challenging the deep-rooted assumptions behind current societal patterns around adaptation is itself an essential, if minor, contribution and can begin the process of creating new visions for how to respond to climate change. Therefore, the work this thesis does leads not so much to a prescription of what kind of adaptation is right or justified, as to a critical and interventionist impulse that does not automatically take it as its task to rebuild.

Contribution of the thesis

This thesis engages in conversation with two research fields. First and primarily, it builds on and speaks to the field of adaptation, specifically the emerging field of *critical adaptation studies* that is concerned with questions of politics (Bauriedl and Müller-Mahn 2018, Klepp and Chavez-Rodriguez 2018a). Second, it engages with *critical policy studies*, and the emerging overlapping field that has been called *critical fantasy studies* (Glynos 2014). In the following, I will sketch out how the thesis contributes to knowledge in these two areas of academic interest.

Regarding the field of adaptation studies, this thesis provides critical insights into contemporary understandings of adaptation, thereby making five important *empirical contributions:* First, the thesis examines how the potential for unintended negative effects of adaptation interventions is considered in the planning and implementation at the international level (**Paper I**). It demonstrates how despite some attention to the potential for redistribution of vulnerability by adaptation interventions in scholarly discussion, adaptation practice does not consider this. Second, the thesis deconstructs the 'inner workings' of EU adaptation policy and considers how these have developed and changed over time (**Paper II**). Third, the thesis explores what role identity projects and affect play in adaptation discourses, taking German policy communication as an example (**Paper IV**). These three issues, conceptually and in terms of their empirical and geographic focus, have not gained attention in research so far. Fourth, as will be discussed in the following section, previous research has noted certain depoliticising tendencies in adaptation practice, which is to say that it does not account for the social context which gives rise to vulnerabilities, and unequal benefits and burdens of adaptation responses (Cannon and Müller-Mahn 2010, Eriksen *et al.* 2015, Ojha *et al.* 2015, Schulz and Siriwardane 2015, Smucker *et al.* 2015). This thesis further advances these claims by showing not only how the European discourse engages in what I call a 'triple depoliticisation', of the responsibility for climate change, of the differentiated impacts and vulnerabilities and of adaptation benefits and costs (**Paper II**), but also more specifically what some specific mechanisms are through which the depoliticised view on adaptation is constituted in conventional adaptation discourses and how these operate. In the German policy discourse (**Paper IV**), for instance, I find fantasies of *control and objectivity* operate as such depoliticising building blocks by providing subjects uncertain about their future with forms of secure identities. In the EU and Germany building blocks of depoliticisation also operate around the *homogenisation of social space* where differences between socio-economic groups are brushed over (**Papers II** and **IV**). Fifth, this thesis shows how established authorities, which are the focus of my empirical work, *domesticate* adaptation into existing structures rather than *changing* existing structures in response to climate change. This suggests that leaving the planning and implementation of adaptation to those in positions of power is unlikely to lead to the kind of changes needed to prepare for the impacts of

climate change. With these latter two empirical contributions, this thesis advances beyond more general descriptions of adaptation discourses to apply a poststructuralist theoretical framework as a means of critically explaining key factors that make conventional approaches to adaptation 'work' and identifying important orientations for future critical adaptation research.

In addition to offering enhanced knowledge and understanding of the discursive constructions that shape current adaptation processes in these different contexts, the papers in this thesis also make two important *conceptual contributions* to the growing literature. They explore new pathways for thinking about the discursive politics of adaptation and, as a result, propose changes to the way in which research has conceptualised adaptation. The need for such conceptually sound investigation has been raised by a number of scholars (Pelling 2011, Eriksen *et al.* 2015, O'Brien and Selboe 2015a, Schulz and Siriwardane 2015, Bauriedl and Müller-Mahn 2018), but although research has increasingly paid attention to the political nature of adaptation and the importance of language therein – as will be discussed in the next section – few studies examine *how* these discourses operate and make hegemonic meaning. To the best of my knowledge this thesis is a first attempt at providing such a theoretical framework based on a deeper understanding of politics and the constitutive role of language.

The two main *conceptual contributions* to the field are: First, the increasing interconnectedness between people and places in a globalised world means people are *not only affected by changes in climate but also by adaptations of other people in other places* (**Paper I**). This not only points to a significant risk and challenge for adaptation planning and implementation, but also shows how current conceptualisations of adaptation in research, policy and practice need to be fundamentally revised if they want to reduce net vulnerability.

Second, the introduction of *affect and non-rational dimensions* to adaptation research presents new insights into how adaptation discourses 'take hold' of their audiences and justify themselves. It therefore enables an analytical focus on discourses' underlying ideological work, where ideology is understood as those mechanisms through which a discourse manages to achieve discursive closure and generate attachment so that its 'version of reality' – or adaptation in this case – is no longer seen as contingent. The role of affective hold is an aspect largely ignored in environmental research generally (but see Kenis and Lievens 2014, Methmann 2014, and Mert 2015 for important exceptions) and has not gained much attention in the field of adaptation research specifically. In exploring this empirically, **Papers II**, **III** and especially **Paper IV** thus make a new and original conceptual contribution to the literature on the politics of adaptation. Attention to affective dimensions, and the subject and the '*continuous identificatory acts*' (Glynos and Stavrakakis 2008, p. 260f) with which it seeks re-institute an identity is also of societal relevance, since if alternative conceptions of adaptation such as calls for profound transformation (O'Brien and Selboe 2015a) are to be successful, they must offer '*points of attachment that can*

grip subjects in particular ways' (Griggs and Howarth 2017, p. 3). Taken together, the papers not only introduce these conceptual ideas to the study of adaptation politics, but also point to new possibilities for critical adaptation research and intervention into prevalent incremental approaches to adaptation.

To the field of *critical policy studies* that is the second area of academic interest, this thesis contributes with a novel framework for empirical analysis and directions for future theoretical development. With the Logics Approach being a relatively recent contribution to PDT, there is a growing, but still relatively small number of studies applying it to empirical analysis of policy and planning discourses. In **Paper I**, I develop a new analytical framework for poststructuralist policy analysis to address the need for further operationalisation of the LA's abstract theoretical concepts. This is not only a *methodological contribution* to critical policy studies in that it demonstrates how the LA can be practically operationalised for the analysis of policy, but it also identifies scope for where more theory development is required within the LA, specifically when it comes to the conceptual differentiation between social and political logics.

To summarise, the papers gathered in this thesis offer a wide ranging, and I hope fresh, set of insights for rethinking the politics of adaptation including its international, regional and national aspects. Taken together, the papers argue for an approach to adaptation research and planning that is more cognisant of its contingent political origins and embraces the uncomfortable spaces in between rather than pretend that they can be managed away.

Structure of the thesis

The thesis consists of this introductory chapter and four appended papers, each of which can stand for itself. The introductory chapter comprises seven sections. After having laid out the background, rationale and research questions of the thesis in this first **Section 1**, the introductory chapter proceeds in **Section 2** with an overview of previous research in the field of adaptation, identifying how the notion of adaptation has been construed as an object of political and scholarly concern, and pointing to emerging themes and open questions. In **Section 3** I outline my understanding of PDT, introduce the LA as a specific strand thereof, and explain why these theoretical perspectives are relevant to the study of adaptation politics. The subsequent **Section 4** then sets out how the research was carried out in more practical terms, by providing a description of the overall research approach and methodological strategy and offering reflections on the research process and criteria for research quality. This is followed by **Section 5**, which describes the four papers that form part of the thesis and lays out their respective findings. **Section 6** synthesises common themes across the papers, discussing the individual findings in relation to the thesis' aim and the research questions posed at the outset. The thesis

concludes in **Section 7** by offering reflections on the thesis' contribution and wider societal relevance.

2. Background: Adaptation in policy and previous research

In this section, I provide an overview of the current state of adaptation policy and practice and discuss previous research that influenced this thesis of conceptualisations of adaptation. Before moving into the body of this section, however, I will briefly revisit the thesis' object of study; that is, adaptation.

A short history of the slippery object that is adaptation

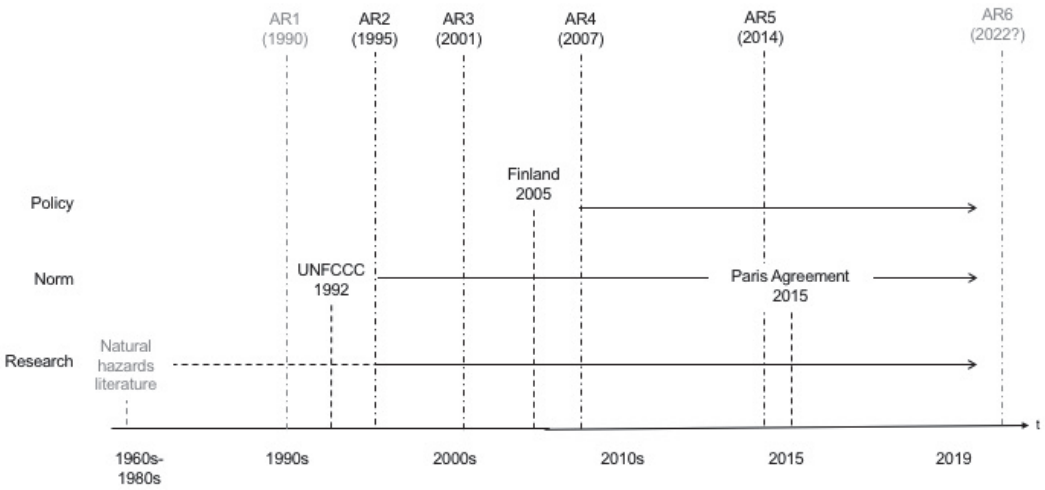
The term 'adaptation' was originally coined as a scientific concept by scholars of the so-called 'Natural Hazards School' in the 1970s and 1980s, to describe the relation between biophysical risk and vulnerability in the context of natural hazards (Bassett and Fogelman 2013, Watts 2015). Importantly, it was a concept transferred from evolutionary biology to human societies (Bauriedl and Müller-Mahn 2018). After having subsequently come under heavy political economic critiques (from what eventually developed into the tradition of Political Ecology) that found the technocratic and reductionist concept lacked attention to causal structures and social processes that make populations more or less vulnerable, it lost scientific popularity (Bassett and Fogelman 2013). In the early 1990s, adaptation made a dramatic reentry by being transplanted into the climate context, headed by the second and especially the third IPCC synthesis reports where the term retained much of its original, technical focus (Bassett and Fogelman 2013).

Most dedicated research on adaptation only emerged after the turn of the century, in the early 2000s, in what has been termed '*the third generation*' (Biesbroek *et al.* 2010) of climate research (the first and second being research on the climate system and on mitigation. In parallel with its scientific renaissance, adaptation was turned into a normative goal in policy and planning after the Rio Summit in 1992 (Pelling 2011, Taylor 2015, Klepp and Chavez-Rodriguez 2018b). It has since become a practical approach to the planning, policy development, funding and implementation of concrete adaptation responses in both developed and developing nations, with many professionals working on adaptation in public and private sectors (though see Lesnikowski *et al.* 2015 on little concrete action). The borders between these three dimensions – the *scientific concept* and area of academic interest, the *normative idea* in policy and planning and the *practical approach* – are fluid as their respective communities flow into one another, physically meet, interact with, and influence one another, for instance around the development of the IPCC Assessment Reports (see Figure 2). The borders are also blurred in adap-

tation action. Reviewing national communications to the UNFCCC, Lesnikowski *et al.* (2015) found that actions planned by national governments not only include policy development, projects and programmes aimed at preparing for the impacts of climate change but also, to a significant extent, *research*.

This parallel development of adaptation AS a scientific concept and area of academic interest, to a norm, to planning practice, and the constant cross-pollination between these fields makes adaptation and its politics a somewhat 'slippery' (Pelling 2011, Taylor 2015) or 'messy' (Tompkins *et al.* 2018) object of study. For this reason, it is a challenging and somewhat artificial task to disentangle adaptation policy and practice from research. For the purpose of clarity, however, I have chosen to divide the following background section into adaptation as a topic of concern for government and, second, as a topic of concern for research.

Figure 2: Sketch outlining the parallel development of adaptation as an area of academic interest, as a normative goal and as a policy practice.



Explanatory note for Figure 2: The IPCC AR2 in 1995 was the first one to provide a definition of adaptation, AR6 is expected in 2022. The UNFCCC was adopted at the 1992 Earth Summit in Rio de Janeiro and is the parent treaty of the 2015 Paris Agreement. Finland was the first developed country to adopt an adaptation strategy in 2005. Source: Own sketch based on Bassett and Fogelman (2013), Klepp and Chavez-Rodriguez (2018b) and Noble (2019).

Current policy practice: Incremental and depoliticised

While, compared to mitigation – that is, the reduction of greenhouse gas emissions into the atmosphere – adaptation remained somewhat of a taboo topic until the

early 2000s (Pielke Jr *et al.* 2007), it is now firmly established as a cornerstone of climate policy (Moore 2010, Massey and Huitema 2013, Henstra 2015, Massey 2016). In 2015, the signatories to the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement (UNFCCC 2015, Article 7) set a '*global goal on adaptation*' and recognised that '*adaptation is a global challenge faced by all*', not just low-income developing countries. This marked an important shift in international climate change negotiations towards the recognition of adaptation as equally important with mitigation (though important challenges remain, especially in regards to defining and tracking adaptation; see Magnan and Ribera 2016, Lesnikowski *et al.* 2016, Tompkins *et al.* 2018).

However, when considering what adaptation activities are underway and what governments are willing to undertake, the evidence seems to suggest that it is not very much.[6] Biesbroek and colleagues (2010, p. 448) review European adaptation policy development in its early stages and found great similarities in terms of topics, methods and approaches addressed and that policies '*facilitate a discussion on adaptive practices rather than impose particular solutions*'. The authors also note that none of the policies clarify how adaptation should be financed, or set out clearly defined responsibilities, and only three have clear time frames for monitoring and evaluating action, suggesting that the policies have low political importance. This leads the authors to question whether the policy documents are '*simply there to raise awareness and show that the government recognises the projected [climate] impacts*?' (2010, p. 448).

Seeking to establish a baseline understanding of adaptation activities being implemented globally, Lesnikowski and colleagues (2015) review national communications from the UNFCCC between 2008 and 2012, and find that the majority of activities underway, 73%, are what they call at the 'groundwork level', which are activities to prepare for and inform later action. These include impact and vulnerability assessments, research, conceptual tools, scenario development, stakeholder networking, and policy recommendations. Tangible 'adaptation level' actions that aim to improve the ability of people to respond to climate change make up only 23% of activities. Here, the largest number of reported activities focus on infrastructure, technology and innovation in the agriculture and public infrastructure sectors. Lesnikowski *et al.* (2015) also find that across the board attention to vulnerable groups is minimal, and while some groundwork level activities identify vulnerable groups (with a main focus on the elderly), they do not feature prominently in adaptation level action. Their assessment leads the authors to conclude that pro-

—

[6] A common differentiation when it comes to implementation is made between public/planned and private/autonomous adaptation (see for instance Smit and Wandel 2006). This thesis is concerned with the former. Others differentiate between the cause/source of damage addressed (hazard vs. social vulnerability) and the modalities in which action is being taken (top-down vs. bottom up) (Mikulewicz 2018).

gress on adaptation is primarily occurring on the groundwork level, preparing for later action, and that progress on actual interventions remains slow (Lesnikowski *et al.* 2015).

More recently, UNEP's (2018) Adaptation Gap report notes that most countries have adaptation policies in place, however, very few use quantifiable targets or legislation, suggesting a weak political standing. Tompkins *et al.* (2018) point out that while actions to support adaptation have begun in many places, whether these *actually* result in the outcome of people being more adapted is a different question. The authors also note that despite important reviews such as Lesnikowski *et al.* (2015) most documented adaptation remains anecdotal; we actually know very little about the extent to which it is occurring on the ground (Tompkins *et al.* 2018). Noble (2019) adds to this overview that even among forerunners in policy development, such as Finland which was the first developed country to develop an adaptation strategy in 2005, progress on *implementation* remains slow.

From these brief accounts I conclude that, in general, adaptation action is in its infancy and that the scope of current adaptation activities is rather limited, focused on technical and scientific responses. In practice, the 'problem' of adaptation is most commonly construed in fairly narrow terms following the IPCC's early definitions (IPCC, 2007, 2014) as a form of adjustment to external climate stimuli that emphasises exposure to biophysical changes, and *'[e]ngineered and technological adaptation options are still the most common adaptive response'* (Noble *et al.* 2014, p. 836). Such '*to-do-list approaches*' to adaptation (O'Brien and Selboe 2015b, p. 2) stay within familiar patterns of action and usually involve small-scale changes, strengthening existing measures that are used to mitigate extreme weather events, including enhancing existing coastal protection measures, the modification of early warning systems, or improvements in water supply and building standards. As a result of this narrow understanding, both climate change and adaptation become separated from inequalities, power and associated dynamics. The placement of adaptation under the responsibilities of environment ministries (Biesbroek *et al.* 2010, Nightingale 2017), rather than 'stronger' ministries of finance or planning, repeatedly suggests that it is seen as 'just' an(other) environmental management problem. These kinds of approaches to adaptation are not only put into practice by local and national governments but also international organisations and implementing agencies across the globe, such as the World Bank, the United Nations family (see for instance projects funded by the Global Environment Facility, which serves as one of the main funding bodies for adaptation projects under the UNFCCC (Biagini *et al.* 2014)).

In the following part of this section, I shift attention to the *research field* of adaptation and examine how this has engaged with the notion of adaptation. Drawing on previous research, I observe a gap when it comes to more theoretically-informed post-positivist research on adaptation and note a number of understudied issues around the politics of adaptation.

Previous research: Little critique and a gap of post-positivist research

Adaptation as a techno-managerial problem

The narrow understanding of adaptation as adjustment to biophysical risk prominent in global development and policy circles is also reproduced in the majority of academic work. Reviewing how adaptation has been conceptualised in the academic climate change literature between 1996 and 2011, Bassett and Fogelmann (2013) show that despite its recent increase in popularity, the concept of adaptation as used in scholarly discussions is not novel but greatly resembles scientific discussions from over three decades ago when it was used in the context of hazards research (see previous subsection).[7] This is a puzzling observation, given the long timeframe since the concept's emergence and that adaptation has become a '*thriving field of scientific activities with an enormous publication output'* (Bauriedl and Müller-Mahn 2018, p. 275). Furthermore, Bassett and Fogelmann (2013) find that the vast majority of publications, 70%, follow the IPCC's view of *adaptation as adjustment* (IPCC, 2007, 2014). A much smaller number of publications, 3%, view adaptation as something that requires paying attention to the multiple sources of vulnerability and the need for more systemic societal change. As will be discussed further below , such calls for more transformative change (Pelling 2011, Kates *et al.* 2012, Feola 2015, Gillard *et al.* 2016, Fazey *et al.* 2018) and '*Deep Adaptation*' (Bendell 2018) have increased since Bassett and Fogelman's (2013) review, and the understanding of adaptation has significantly evolved in some chapters of the most recent IPCC AR5 report (Noble *et al.* 2014)[8], and has also broadened in the Paris Agreement to include sustainable development aspirations (Lesnikowski *et al.* 2016). However, the perspective of adaptation as techno-managerial adjustments remains 'sticky', see for instance the recent flagship report by the Global Commission on Adaptation (2019). The way most of this research in this area has discussed the uptake of more effective climate action has been through calls for producing *more and better knowledge* about climate change; for *raising awareness* of climate change as a complex problem; and for placing the *responsibility for action on individuals* (Fleming *et al.* 2014).

Critical scholars have explained this persistence of the notion of adaptation as adjustment by the 'muscle power' of natural science models (Swyngedouw 2010,

—

[7] While no comprehensive 'theory of adaptation' has emerged, in the academic literature adaptation is often discussed in association with the concepts of *resilience* and *vulnerability*, and three dimensions that are seen as making up vulnerability; *exposure*, *adaptive capacity, and sensitivity*. Much has been written about these notions and the relation between them, and elaborating on these debates falls outside the scope of this thesis (for an overview, see Smit and Wandel 2006, Gallopín 2006, Füssel 2007, 2009, Adger *et al.* 2009, Scheffran and Remling 2013, Watts 2015).

[8] While others, for instance in the Special Report on 1.5°C (de Coninck *et al.* 2018), continue to frame it in narrow terms (see also Klepp and Chavez-Rodriguez 2018b).

Hulme 2011, Taylor 2015) and a tradition of linear models of causality for environmental risk (Forsyth 2003, Bassett and Fogelman 2013). Much research on adaptation has developed in conjunction with deterministic, positivist social science (Hulme 2011, Bassett and Fogelman 2013, Taylor 2015).[9] Oels (2013, citing Cohen 1998), traces this back to the emergence of climate change as a phenomenon 'produced' by the natural sciences, to which social sciences were later 'attached' as an appendage. Castree and colleagues (2014, p. 764) note that much research on global environmental change and on adaptation (including under the IPCC) '*exclude[s] social sciences where a broadly positivist worldview is not the reigning paradigm*'. It also reflects the strong influence resilience and systems thinking have had on the adaptation literature with their tendency to emphasise 'bouncing back' (Cannon and Müller-Mahn 2010, Pelling 2011).[10] Keskitalo and Preston (2019a) observe that the IPCC, as the generating body of the world's most highly visible reports on climate change, is somewhat dismissive of the value of social theory for understanding adaptation and too focused still on observational and descriptive methods and applied adaptation research. Adding to these observations, Bulkeley (2019) notes how the discipline of human geography has lacked engagement with global environmental change research and that the engagement there has been has continued to fit with and perpetuate the nature-society divide that characterised the emergence of climate research in the past decades.

Adaptation as a socio-political process

As laid out in the previous sections, since adaptation's emergence on the public and scientific agenda it has most commonly been defined as a technical adjustment to changing climatic parameters, where decisions about what to adapt to and how to do it are seen as pretty straightforward choices, and decisions are based on risk and impact assessments.

—

[9] Taylor (2015) demonstrates how current conceptions of adaptation hinge on a silent ontological presupposition that separates between 'the social' and 'the climate'. Both are seen as separate entities that externally influence one another through impacts, shocks and stresses. Drawing on Mike Hulme's work (2011), Taylor (2015) suggests that this understanding hinges on scientific rationalism directly transferred from the natural sciences to the social sciences.

[10] A growing body of work critically examines the emerging importance of *resilience* as a new norm in climate change responses. Central concerns pertain to the concepts' focus on the return of the overall system to some pre-disturbed state ('bouncing back'), blindness to power relationships and socio-economic factors, and how its governmentalising effects relocate responsibility away from the states and institutions and on to populations and communities with various, often depoliticising effects (Cannon and Müller-Mahn 2010, Oels 2013, Stripple and Bulkeley 2013, Joseph 2014, 2016, Welsh 2014, Methmann and Oels 2015, Chandler and Reid 2016). Gillard and colleagues (2016, p. 256) even suggest that '*resilience may be seen as an apology for incrementalism*'. This is an important discussion, but a more detailed account of these literatures falls outside the scope of this thesis.

Since the early 2000s, a growing body of research takes issue with this narrow understanding. These scholars see adaptation as a more complex, socio-political process and raise attention to questions of social justice, equity and power relations (Ribot 2010, Swyngedouw 2010, Pelling 2011, Bassett and Fogelman 2013, Eguavoen *et al.* 2013, Ireland and McKinnon 2013, Eriksen et al. 2015, Manuel-Navarrete and Pelling 2015, O'Brien and Selboe 2015a, Ojha *et al.* 2015, Schulz and Siriwardane 2015, Smucker *et al.* 2015, Taylor 2015, Watts 2015, Klepp and Chavez-Rodriguez 2018a, Mikulewicz 2018).[11] This body of research also raises attention to the paradox that despite the significant political effects of adaptation, most times it is effectively represented in an *apolitical* manner (Eriksen *et al.* 2015, Smucker *et al.* 2015, Taylor 2015, Klepp and Chavez-Rodriguez 2018a).

Four broad themes emerge in this body of work, concerning the source of vulnerability and role of vulnerable people, the risk of redistributive effects, calls for more systemic, or transformational change, and calls for re-politicising adaptation research and practice. First, important contributions have highlighted the ways in which vulnerability to climate change is mediated by social drivers including socio-economic status, gender, age, health and ethnicity (Kates 2000, Arora-Jonsson 2011, Tschakert 2012, Taylor 2013). In this context, Nightingale (2017, p. 12) speaks of the '*socionatural processes that shape vulnerability*', but are largely overlooked. To avoid such pitfalls, Taylor (2015, p. 8) proposes the term of '*vulnerablisation*' as a more useful concept to examine how vulnerability is (re)produced over time and situated in societies and political economies, rather than factoring vulnerability into wider frameworks for analysis of climate (as widely-used vulnerability indices tend to do, for instance). Relatedly, scholars observe that much of current adaptation planning does not include or consider the most vulnerable or marginalised people (see evidence of this also in the findings from Lesnikowski *et al.* 2015), or might actually have negative distributive impacts on them (Taylor 2013, Popke et al. 2014, Ojha *et al.* 2015, Sovacool and Linnér 2016a). They also point out that decisions about how societies should respond to the challenges posed by climate change do not take place in a political vacuum but emerge from and are mediated by complex socio-political contexts (Nightingale 2017), will influence social relations and the natural environment, can involve substantial redistribution of authority or resources (Swyngedouw 2010, Tanner and Allouche 2011, Eriksen et al. 2015, Smucker *et al.* 2015), and what may seem 'good' adaptation in one place may lead to negative effects elsewhere (Eriksen *et al.* 2015). Work in this first theme, therefore, shifts the analytical focus from impact research to more vulnerability-oriented

—

[11] Critique of current adaptation discourses and practice has also come from outside academia, for instance from civil society actors who challenge the conventional notion of adaptation as a techno-managerial problem and instead advocate for alternative approaches such as community-based adaptation (CBA) and approaches that pay attention to the role of local and indigenous/alternative knowledges and learning. However, the focus here is on scholarly discussions.

studies (though as Mikulewicz 2018, p. 2 notes, this does not automatically lead to rigorous conceptual considerations of power and politics). These advances of differentiated and contextual understandings of vulnerability have found their way into some chapters of the most recent IPCC report (see e.g. Noble *et al.* 2014).

A second theme concerns the observation that adaptation is too narrowly focused on climate impacts and in discrete locations, thereby not only ignoring the multiple processes that people are exposed and responding to, and the wider conditions which make some people but not others vulnerable to climate change in the first place (see the previous point), but also the complex spatial and scalar interdependencies in today's globalised world (Leichenko and O'Brien 2008). This omission may cause social or environmental externalities and spillover effects (Adger et al. 2005, Barnett and O'Neill 2010, Brown 2011, Atteridge and Remling 2013).

Third, the narrow understandings of adaptation as adjustment are critiqued for aiming to control and minimise change and having as their ultimate objective the maintenance of the status quo, in the sense that they represent a '*structure conservative solution*' (Bauriedl and Müller-Mahn 2018, p. 279) which leaves untouched the existing social structures and institutions that created climate change and vulnerabilities in the first place (Swyngedouw 2010, Pelling 2011, O'Brien 2012, Ojha *et al.* 2015, Taylor 2015, Nightingale *et al.* 2019). When it comes to adaptation, O'Brien and Selboe (2015b, p. 313, referencing Swyngedouw 2010) observe that '*there is in reality no radical dissent, critique, or fundamental conflict that truly challenges the status quo*'. As climate change presents an unprecedented challenge with unknown consequences for the planet, including human populations, these scholars raise concern over whether the incremental changes currently under way will be sufficiently effective to adapt societies to the impacts of climate change, and argue that finding effective responses to climate change needs to involve pursuing solutions that go beyond the current spectrum of business as usual approaches (O'Brien, 2015). As climate change is a structural problem, responses should question the current systems and paradigms that have generated climate change and produced vulnerability, rather than accommodating them, and aim for more fundamental, or *transformative societal shifts* (Pelling 2011, O'Brien 2012, Kates *et al.* 2012, Feola 2015, Geels *et al.* 2015, Schulz and Siriwardane 2015). Importantly, transformative responses would not only depend on altering behaviours, practices or disrupting institutional structures, but essentially encompass a deeper reflection on '*conflicting values, interests and understandings, and approaches to change*' (O'Brien and Selboe 2015b, p. 2) (but see Few *et al.* 2017 on important differences between calls for 'transformational' vs. 'transformative' adaptation). This debate around incremental versus transformational adaptation has to some extent also been taken up in the IPCC's Fifth Assessment Report (see e.g. Noble *et al.* 2014).

Sharing the other themes' concern over important political implications of the conventional understanding of adaptation as adjustment, a fourth, and arguably even more 'political', theme evolves around depoliticising in adaptation practice and

research.[12] Hidden behind a language of evidence-based policy making, researchers observe, many conventional approaches to adaptation assume there to be no normative, subjective and value-laden political choices (Swyngedouw 2010, Berglez and Olausson 2014), thereby drawing attention away from the social and economic contexts which make people vulnerable, from the contingency of proposed courses of action and from their unequal outcomes.[13] This culminates in '*a field of governance that engages with topical questions of the technologies and timings of adaptation initiatives, shoring up existing political and economic systems "in the face of supposedly exogenous threats"*' (Lindegaard 2018, p. 167, citing Swyngedouw 2013 and Taylor 2014). Consequently, what adaptation means does not seem open for debate. As presenting adaptation as an objective or neutral process is a political move in itself, this tendency has led Smucker *et al.* (2015) to speak of *'the anti-politics of adaptation'*, raising concern over the way adaptation is currently discursively constructed to suggest some form of unquestionable objectivity.[14, 15]

Some scholars extend this criticism to the research community and argue that the academic literature is itself infused with unexamined and unchallenged assump-

—

[12] Associated often with Ferguson's (1994) famous work on development organisations in Lesotho, depoliticisation *'involves all counter-strategies which seek to conceal the contingency of reality, sew the gaps in hegemonic discourses and channel dislocations in such a way that fundamental social structures remain untouched*' (Stephan *et al.* 2013, p. 70). From a PDT perspective, depoliticisation serves the purpose of covering up differences of view, opinion or position (concealing the fact that social order is fundamentally contingent), and therefore preventing (actual or potential) instances of dissensus.

[13] This observation holds true not only for adaptation planning but also for other policy and decision-making processes. Bendell (2018, p. 15) suggests that a depoliticised, technocratic attitude has pervaded responses to environmental challenges generally, with a resulting call for '*people to try harder to be nicer and better rather than coming together in solidarity to either undermine or overthrow a system that demands we participate in environmental degradation*'. Bendell (2018) observes that since the 1970s, when the neoliberal economic paradigm became dominant, responses to environmental issues have been focused on the individual action of consumers, market mechanisms, incremental action and have separated the environment from other areas of social life. Other scholars have raised concerns that many current liberal democracies manifest conditions that can be considered *post-political*, even *post-democratic,* in that relations of power and conflict are made invisible by consensual and technocratic forms of decision making (Mouffe 2005, Swyngedouw 2010).

[14] I use the two terms, *depoliticisation* and *anti-politics*, synonymously to describe a situation in which *properly political* contestation (in Mouffian terms) is evacuated from adaptation, to the extent that it invokes a closure so that there is no real space for genuine political contention and dissent, and where what it means to *do adaptation* is taken for given as a matter of techno-managerial administration.

[15] This critique mirrors that of others who have interrogated the depoliticised nature of related environmental concepts such as sustainable development (Elgert, 2010), and resilience (McGreavy, 2015).

tions and '*depoliticising tendencies*' (Schulz and Siriwardane 2015, p. 10).[16] Eriksen *et al.* (2015, p. 2) for instance observe '*in most scientific writing and policy responses a reluctance to deal with the politics of adaptation head-on'*. In this context, Ojha *et al.* (2015, p. 10) go even as far as to suggest a '*hegemony of a technocratic approach to vulnerability research'*. These are concerning observations in light of the fact that after government, research communities make up the second biggest stakeholder group involved in adaptation activities around the globe (Lesnikowski *et al.* 2015). In reaction, Taylor (2015, page xi), proposes to interrogate '*adaptation not as a self-evident analytical framework and normative goal but as an array of discursive coordinates and institutional practices that themselves [should] form the object of analysis*'.[17] It is the latter criticism in particular – the call for scrutinising the discursive nature of adaptation and the current disregard for this in adaptation research – that this thesis responds to. Building on the literature concerned with the discursive construction of environmental problems, this thesis attempts to more explicitly illustrate how the discursive coordinates embedded in accounts of adaptation come about.[18]

Underlying these critical approaches to adaptation research is an awareness that planning for adaptation is not primarily a problem-free technical, managerial or scientific process, but fundamentally political in character (Andersson and Keskitalo 2018). By implication, they also challenge the assumption that adaptation is an *environmental* policy problem and reframe it as a *socio-economic* one. As an illustrative quote, Eriksen et al. (2015, p. 4) point out that

> any adaptation decision […] is the product of prioritizing some interests over others, privileging and experiencing some biophysical changes over others, hearing some voices and ignoring others. These processes of prioritization and exclusion necessarily have positive and negative effects distributed socially, spatially and through time.

—

[16] Even the IPCC, which as a consensus organisation is rather conservative and, as should be evident from the above accounts, is not commonly seen as a progressive body (Pelling 2011, Keskitalo and Preston 2019a, Klepp and Chavez-Rodriguez 2018b), its most recent AR5 observes that *'[t]here is a tendency in the literature to consider adaptation planning a problem- free process capable of delivering positive outcomes, underestimating the complexity of adaptation as a social process […]'* (Mimura *et al.* 2014, p. 871).

[17] These bodies of work raise similar questions to those raised by Political Ecologists, who have long emphasised that *'[t]here is little point in conducting political analysis of environmental degradation or studying the political allocation of risks if concepts of degradation and risk are themselves political and not acknowledged as such'* (Forsyth 2003, p. 267).

[18] A fifth group of critical scholars, which will not be discussed in detail here, examines current adaptation practice through a post-developmentalist perspective and takes issue with developmentalist and modernist paradigms evident in much of the adaptation literatures. According to these scholars, adaptation is often being used to enable the continuation of the same growth-driven development agenda present in the past decades (see e.g. Ireland 2012, Ireland and McKinnon 2013, Nagoda 2015).

Taken together, these critiques suggest that emerging adaptation practice is raising rather substantial concerns about who will have access to and control over resources, and the potential for adaptation decisions to affect social (in)equality, social change, human rights, and environmental degradation and raise attention to the political context and the spaces in which adaptation happens. In so doing, they take a more openly normative stance than early adaptation research and bring to the fore questions about interests, power and the politics of adaptation.

These contributions are influenced by a broad range of research traditions. Approaches have emerged from within the traditions of Political Ecology (Birkenholtz 2012, Tschakert 2012, Taylor 2015), Political Economy (Tanner and Allouche 2011, Sovacool and Linnér 2016b), governmentality studies/biopolitics (Andersson and Keskitalo 2018, Klepp and Chavez-Rodriguez 2018b), feminist approaches/gender studies (Arora-Jonsson 2011), and postcolonial and post-development perspectives (Cameron 2012, Ireland 2012, Ireland and McKinnon 2013, Nagoda 2015). *Political* aspects of adaptation in these literatures are often understood in terms of changing power relations and access to resources, differentiated social vulnerabilities and other kinds of injustices that can be reinforced by adaptation responses (Klepp and Chavez-Rodriguez 2018b).

Adaptation as discourse

A much smaller number of researchers engages specifically with the *idea* of adaptation and has drawn attention to *discursive aspects of adaptation politics*. These discourse studies start from the assumption that how people understand the notion of adaptation exerts influence on the kind of questions asked, the knowledge produced and the responses prioritised (Dewulf 2013). Thus, paying attention not only to the *material* practices around adaptation (e.g. the delivery, efficiency and effectiveness of interventions) but also to the *discursive* practices that precede these is seen as important for critical research.

Conceptually, contributions have focused on *frames/framings* (McGray *et al.* 2007, Bisaro *et al.* 2010, Juhola *et al.* 2011, Bassett and Fogelman 2013, Dewulf 2013, Dodman and Mitlin 2014, Fünfgeld and McEvoy 2014, Ojha *et al.* 2015, Smucker *et al.* 2015, Vink *et al.* 2015, Lindegaard 2018, Woroniecki *et al.* 2019), *heuristics* (Preston *et al.* 2015), and *narratives* (Paschen and Ison 2014, Fløttum and Gjerstad 2016). These works provide helpful insights into different ways in which adaptation has been understood and what these open up in terms of broader implications for adaptation action. But while highlighting the important role of language and 'mapping out' what current understandings are, most of these more linguistic approaches are not able to account for the political dynamics surrounding the *making* and *unmaking* of meaning around adaptation and their inherent contingency. With a few exceptions (see for instance Cannon and Müller-Mahn 2010, Oppermann 2011, Andersson and Keskitalo 2018) the concept of *discourse* has received relatively little attention to date. Even when studies do use the term, few make reference to the concept from a theoretical

perspective; rather, they draw on a somewhat 'shallower' understanding of discourse or apply it as a *method* for empirical exploration (see e.g. O'Brien *et al.* 2007, McEvoy and Wilder 2012, Ireland and Keegan 2013, Nagoda 2015, O'Brien and Selboe 2015b, Taylor 2015, Klepp and Chavez-Rodriguez 2018b); what others have called '*discourse-lite*' forms of research (Howarth 2005, Griggs and Howarth 2013).[19] Hence, despite some reference to discursive approaches, current adaptation research has not explored their full theoretical and empirical potential. How exactly the discursive production of meaning occurs, and how it can be productively analysed in a conceptually consistent manner, remains open.

While '*it has almost become a platitude to characterize public problems as socially constructed*' (Hajer 1997, p. 42), social constructivist political analysis has not been taken up extensively in adaptation scholarship. This leads me to suggest that while scholarship on adaptation exhibits a wealth of empirical diversity (i.e. a variety of different quantitative and qualitative methods and case studies), theoretically and epistemologically the field has been somewhat less open to experimentation (see also Weisser *et al.* 2014, Nyamwanza and Bhatasara 2015). Keskitalo and Preston (2019a, p. 478) observe that '*only a limited set of social perspectives and even science theories have so far often been emphasised in relation to adaptation*' and thus call for '*expanding the range of social theories that are engaged in adaptation research*' (Keskitalo and Preston 2019a, p. 481). In line with these authors (Weisser *et al.* 2014, Nyamwanza and Bhatasara 2015, Keskitalo and Preston 2019a), I suggest that critical adaptation research needs to broaden its theoretical repertoire. It appears that there is a particular gap when it comes to applying more theoretically driven, post-positivist approaches to the study of adaptation discourses (Gillard *et al.* 2016).[20]

This absence of constructivist approaches to adaptation research is noteworthy for two reasons. First, discursive approaches have become a reoccurring theme in social science research on the environment (Hajer 1997, Feindt and Oels 2005, Hannigan 2006). While far from being mainstream, such perspectives that '*highlight the constitutive power of language, knowledge and ideas in environmental affairs*'

—

[19] The term *discourse studies,* describes a broad range of research concerned with the study of language and meaning making, including analysis of narratives and framings. They span from more positivist (e.g. corpus linguistics, sociolinguistics, content analysis, conversation analysis, discourse psychology), critical-interventionist (e.g. Critical Discourse Analysis (CDA), Habermasian discourse ethics), to constructivist approaches (e.g. Foucauldian approaches, Keller's Sociology of Knowledge Approach to Discourse (SKAD), Speech Act Theory, Rhetorical Political Analysis, Poststructuralist Discourse Theory (PDT)). I follow Howarth (2004), who distinguishes between discourse *analysis* and discourse *theory;* the two are not synonymous. The former can be considered a set of *tools* to analyse empirical phenomena, but '*they do not exhaust the concept of discourse theory itself*' (Howarth 2004, p. 318).

[20] By post-positivist research I refer to a way of doing social science that is not based on a model transferred from the natural sciences to explain the social world that follows a rationalist, empiricist and qualitative model of research where contextual meaning is secondary (Glynos and Howarth, 2007).

(Bäckstrand and Lövbrand, 2016, p. 3) have made important contributions to the study of environmental politics (Hajer 1997). Two main approaches can be distinguished, following Habermasian and Foucauldian traditions respectively. A well-known representative of the first is John Dryzek (2013) who sketched out how basic concepts concerning the environment (such as wilderness, climate, earth, nature) have changed dramatically over time and continue to be disputed. Dryzek emphasises that environmental problems and their understandings are contingent and socially constructed. Influenced by Habermasian thought, this discursive approach places emphasis on *deliberation* as a way to democratise environmental discourses and policy-making (Stevenson and Dryzek 2012a, 2012b). A second strand of discursive approaches to environmental politics is informed by the writings of Michel Foucault and emphasises the constitutive nature of discourses and their role in *governing*. A central figure here is Maarten Hajer, who has drawn attention to systems of meaning that underpin environmental decision making and therefore contributed to shaping the 'post-positivist turn' in the field of Environmental Studies (Hajer 1997, Hajer and Versteeg 2005).

Second, the paucity of constructionist discourse work on adaptation is also surprising because there is a significant and growing poststructuralist current on climate change politics centred around *mitigation* responses.[21] Important work has examined the political processes through which responses are imagined and governed, for instance in multilateral processes at the global level (e.g. Oels 2005, 2013, Lovell *et al.* 2009, Lövbrand and Stripple 2011, 2012, Randalls 2011, Stephan 2012, Methmann and Rothe 2012, Bettini 2013, Stephan *et al.* 2013, Methmann and Oels 2015, Stripple and Bulkeley 2015, Bäckstrand and Lövbrand 2016, Weisser and Müller-Mahn 2017). In research about *adaptation* responses, interest in the constitutive role of language has been much slower to rise on the agenda.[22]

What distinguishes such a post-positivist/poststructuralist approach from earlier work, for instance on narratives or framings, is that the former is not only concerned

—

[21] Mitigation and adaptation are both responses to climate change and can be considered 'subfields' of climate change politics, see Oels (2013). This is not to suggest these are naturally divided fields of research, policy and practice, but here I differentiate them to show how adaptation scholarship seems to have had less of a 'critical impulse' compared to mitigation research.

[22] There are a number of possible reasons why there are relatively few constructionist adaptation scholars and less attention to politics compared to research on mitigation. First, at the international level mitigation has been a controversial and highly political issue from the very beginning. Negotiations under the UNFCCC have brought up different kinds of North/South dynamics, including historic responsibilities for emissions, colonial legacies and development aspirations, most prominent perhaps the debate about responsibilities for causing and solving climate change, which boils down to the principle of *common but differentiated responsibilities*. Second, the common conception of adaptation being local (Nalau *et al.* 2015) may have also played into this (even though 'local' does not mean there are no disagreements or conflicts of opinion).

with investigating what kind of understandings exist.[23] Rather, it goes beyond a purely linguistic perspective to explore *how* and *why* the understandings of adaptation emerged and what tacit political, ideological and affective work they do. For scholars working within this perspective, '*it is meaning, not language, which is at the core of discourse analysis*' (Kolankiewicz 2012, p. 128). The biggest difference of such an approach is a different ontological take on *what adaptation is*. Whereas many studies on adaptation politics start from a realist definition of adaptation and take the object of adaptation for granted, a poststructuralist perspective highlights adaptation's contingent origins and deeply political construction. In other words, adaptation is not a 'real' and tangible object, but one socially constructed, and '*what counts as an effective or desired adaptation strategy is highly contestable*' (Mikulewicz 2018, p. 8). As a result of this conceptualisation, politics are not seen as only playing out between actors, interests and institutions, but also in the processes of making meaning around adaptation (see Section 3 for more detail).

A minority of adaptation research engages in such critical enquiry into processes of meaning making and related questions of (discursive) power. Looking at development discourse in the context of climate change, an early contribution by Cannon and Müller-Mahn (2010, p. 631), raises attention to the fact that adaptation '*is not a direct reaction to climate change as such, but to the way changes are perceived, discussed and evaluated in a society, and how the reactive measures are negotiated*'. Oppermann (2011), uses Critical Discourse Analysis (CDA) to analyse the discourse of adaptation as it is constituted in the UK Climate Impacts Programme. Drawing on poststructuralist thinkers such as Foucault and Kress, Fleming et al. (2014) analyse three common discourses on climate change in the academic literature; the 'logical action discourse', the 'complexity discourse', and the 'culture of consumption discourse'. The authors find that all three hinder effective action on climate change. Symons (2014) shows how Kenya's national strategy on climate change is driven by persuasive imaginaries rather than by a 'rational' process informed by scientific evidence and serves to obscure the politics of uneven development and inequality. At a more conceptual level, Nyamwanza and Bhatasara (2015) argue for the utility of postmodernist thinking for rigorous and contextually relevant adaptation research. Studying adaptation in the Swedish Forestry sector, Andersson and Keskitalo (2018) suggest is it important to '*identify the logics that affect policy processes and actually cause inaction*' (Andersson and Keskitalo 2018, p. 76, referencing Noble et al 2014). Analysing the logics and framings around adap-

—

[23] *Poststructuralism* is a late-twentieth-century development in philosophy that comprises a variety of reactions by predominantly French philosophers to *structuralism*. It is particularly associated with writers such as Jacques Derrida, Jacques Lacan, and Michel Foucault. Poststructuralists emphasise the instability of meaning and contingent construction of the world and are interested in the effects of language and alternative possibilities for thought. The focus of analysis is commonly on discourses and the different ways people make meaning from language.

tation inaction from a governmentality perspective, the authors find that the main rationalities guiding adaptation in the Swedish forestry sector are economic, cultural and managerial and lead to a repetition of existing goals and approaches.

Section summary

This background section provided an overview of ongoing adaptation policy and practice and sketched out the growing research field around adaptation, highlighting that while there is a dominant perspective in practice and research that adaptation is a form of technical adjustment, there is also an increasingly political current in adaptation research.

From this overview, I would like to reiterate two aspects of particular relevance for this thesis. First, conventional approaches to adaptation are *limited* (by socio-political contexts in which they emerge) and *limiting* (in the sense of constraining broader debate over what kind of change is needed) and may lead to the perpetuation of systems and practices that result in unsustainable outcomes and long-term maladaptation. Second, an increasing stream of critical research lays open and questions the role of politics in adaptation. This thesis builds and expands on this work. I concur with Eriksen et al. (2015, p. 1) who see '*adaptation as political "all the way through"*', and therefore start out from the assumption that an understanding of the ideas and discursive powers shaping conventional approaches is required as a starting point to address the political nature of climate adaptation. By turning to PDT, this thesis therefore responds to calls that '*propose a reframing of adaptation [research] that focuses explicitly on its political nature*' (Eriksen et al. 2015, p. 1). In the following section I will lay out the theoretical framework of the thesis and argue how this allows taking a clearer stand on a number of issues in relation to adaptation politics.

3. Making meaning is making politics: Theorising a discursive approach to adaptation

There is a wide spectrum of approaches to discourse studies, spanning from those that supplement positivist viewpoints and employ discourse as methodological techniques for linguistic analysis, to those that see discourse as a theory, have an overriding concern with power relations, and investigate and analyse the constitutive role of language and meaning in the making of those relations (Glynos *et al.* 2009, see also footnote 19).

As the previous sections have anticipated, this thesis draws on a specific body of work in the latter tradition, the political-theoretical work of Chantal Mouffe, Ernesto Laclau and what has become known as the '*Essex School in Discourse Theory*' (Laclau and Mouffe 2001, Laclau 1990, 2005, Norval 2000, Howarth and Stavrakakis 2000, Howarth 2004, Glynos and Howarth 2007). While there are a few studies drawing on Laclau and Mouffe on environmental topics more broadly (Griggs and Howarth 2013, 2017, Mert 2016, 2015, Griggs *et al.* 2017), the approach PDT has remained relatively absent within climate change research. There are a few notable exceptions (Methmann 2010, Methmann and Rothe 2012, Stephan 2012, Swyngedouw 2010, 2013, Bedall 2015, Bettini 2015, Friman 2015, Methmann and Oels 2015), none of which, however, focus explicitly on adaptation.[24] This underrepresentation of a discourse-theoretical perspective is in contrast to, for instance, Habermasian or Foucaultian approaches outlined above (see Section 2).[25]

I suggest that PDT's rich theoretical vocabulary, with its attention to politics and power, merits deeper engagement, as it offers a means to shed light on the ways in which adaptation discourses produce what is considered possible and desirable (and what is not). Apart from providing a theoretically and methodologically consistent approach to studying adaptation politics, PDT and specifically the LA are uniquely

—

[24] The only other publication on adaptation I am aware of that uses Laclau and Mouffe is Manuel-Navarrete and Pelling's (2015) account of narratives of local tourism entrepreneurs and workers in Akumal, Mexico. Yet, despite subjectivity being one of the main foci of the paper, it dedicates no more than one paragraph to Laclau and Mouffe's extensive theorising on radical political agency and subject formation.

[25] As a case in point, in a recent anthology on adaptation policy (Keskitalo and Preston 2019b) PDT and the work of Laclau and Mouffe find no mention. In a comprehensive book on climate governance (Bäckstrand and Lövbrand 2015), which sets out to cover '*the diverse ways in which climate governance currently is theorized as a matter for the political and social sciences*' (2015, p. xxi), PDT is only mentioned once, in passing (Oels 2015, on page 465).

positioned to help address some of the emerging concerns in the field of adaptation research; '*Who decides? Whose values count? And why?*' (O'Brien and Selboe 2015a, p. 314).

Discourse: A way of constructing the world

As a school of thought, PDT emerged out of a critique of structural Marxism in the 1970s and 1980s, when the Marxist theoretical framework became unable to account for a number of new social and political phenomena, such as the emergence of social movements that were not based on class (e.g. feminism, environmental movements), neo-liberalism and the failure of 'the working class' to establish itself as an agent of emancipation (Mouffe 2013, see Glynos and Howarth 2007 for additional examples).[26] Reacting to this 'theoretical crisis', Ernesto Laclau and Chantal Mouffe (2001) began to sketch out their theory in *Hegemony and Socialist Strategy*, by drawing on a range of theoretical resources, including the works of Antonio Gramsci (especially his notion of hegemony), Ferdinand de Saussure (structural linguistics as a theory of meaning), Jacques Derrida (deconstruction), post-analytic philosophy, and, later, Lacanian psychoanalysis (Glynos and Howarth 2007). Since then, Laclau and Mouffe and others, most notably Aletta Norval, David Howarth, Jason Glynos and Yannis Stavrakakis, have continued to refine the theory further and expand its theoretical vocabulary.[27] In the following, I outline the foundations of PDT as relevant for this thesis and as I understand them. Given that the different papers discuss in more detail the specifics and methodological aspects relevant to their cases, I here focus on providing a general overview only. To understand PDT, which has sometimes been criticised for being '*rather inaccessible*' (Jørgensen and Phillips 2002, p. 24) it is useful to first discuss a number of fundamental premises. The ontological departure point to Laclau and Mouffe's work is the realisation that there is no essence to social life. This anti-essentialist ontology means that categories such as 'class' or 'society' do not exist independently of their discursive contexts, but that everything is radically contingent, ontologically incomplete and fundamentally undecided (Mouffe 2013). PDT scholars refer to this as the *radical contingency* of all systems of meaning and social order (Glynos and Howarth 2007), which is to say that there is no 'essence' to subjects, objects, or the way we organise social life. For poststructuralist discourse theorists, then, '*social reality is nothing more than the contingent articulation of different elements in a hegemonic discourse*'

—

[26] A key problem with Marxism, according to Laclau and Mouffe, was essentialism, particularly in the form of economic determinism and class reductionism (Mouffe 2013).

[27] It is worth noting, since this sometimes leads to some confusion, that Laclau and Mouffe's work is not one consistent body of work, but that PDT has organically developed (and diverged) over time (see also Torfing 2005).

(West 2011, p. 417). In other words, social order is a discursive construction. Things could always be otherwise.

Importantly, the notion of *discourse* for PDT extends beyond a minimal, linguistic understanding of discourse as text, beliefs or words that describe a 'reality'.[28] Rather, this 'thick' conception of discourse (Griggs and Howarth 2013), includes all forms of meaningful actions and practices such as making vulnerability maps, giving a political speech in parliament, sending an email or dispersing climate funds to support adaptation projects. From this perspective, it is not possible to distinguish between *the discursive/linguistic elements* and *the extra-discursive/non-linguistic elements*, because we can only make sense of the external world through discourse. The view is that it is discourses that *construct* and *produce*, rather than simply *reflect*, their subjects and objects as communicable entities and, thereby, give rise to social realities. This does not imply the complete absence of material things (as critics sometimes assert), but that material surroundings remain meaningless until interpreted and assigned meaning by humans (Laclau and Mouffe 1987). This understanding is very much in line with previous work in the environmental social sciences that demonstrated there being no 'natural' way of seeing nature, environmental problems and solutions that are proposed (Hajer 1997, Dryzek 2013).

From these first two fundamental premises arises the question *what, then, gives social structures their form, and what makes societal order possible*? From the perspective of PDT, the only way meaning and social order can be established is through discursive practices, or specifically, *articulations*. The concept of articulation describes the practice of establishing a system of relations between elements that are not necessarily, or *in themselves*, related to one another (Laclau and Mouffe 2001).

The two types of articulations by which things are assigned relations – and therefore meaning – are the articulation of *equivalence* and *difference* (Laclau and Mouffe 2001). Equivalence denotes the creation of an association (or equation) between disparate elements, asserting some form of unity between them against a constitutive outside. What is important here is the *assertion* of equivalence; what elements of a discursive system have in common is not something that they *actually* share (they are not intrinsically alike), but rather what unites them is what they exclude (i.e. an antagonistic other). *Difference* describes the strategy of 'disarticulating' elements from an equivalential chain. The meaning that arises from these articulatory practices is relational, in the sense that objects and subjects attain their meaning by being articulated in relation to other objects and subjects. In other words, something has meaning only because it occupies a position in a wider *system of relations* (Howarth and Stavrakakis 2000).

—

[28] Note that *reality* from a PDT perspective always refers to an '*intersubjective understanding of reality*' (Glynos 2014, p. 184).

While an articulated discourse or discursive formation may '*temporarily stand for the social*' (West 2011, p. 418), the ontological condition of radical contingency implies that discourses can only ever be partially and temporarily fixed; they remain forever incomplete and unstable.[29] Also, discursive formations are not coherent or clearly delimited entities, but constantly overlap with, flow over into, and borrow from other discourses (Hajer 1997), and '*there are always multiple discourses present at any point in time*' (Oels 2013, p. 21). This means that all attempts to create hegemony are, nonetheless, inevitably unstable and that there can never be only one coherent, discursive formation that dominates and silences completely. There could always be other, potentially radically different, ways of articulating elements. As a result, there are constant and ongoing social 'struggles' over the meaning of society and identities. It should be evident from this brief account not only why discourses are seen as *productive* – because they produce the understanding of the world around us – but also that this understanding of discourse is more radical or comprehensive than other approaches occupying the wide field of discourse studies (Howarth and Stavrakakis 2000).

These four premises (radical contingency, a thick understanding of discourse, articulation and relational systems of meaning) have a number of implications for research within a PDT framework: First, the thick understanding of discourse means that, in principle, all social phenomena can be analysed by using discourse theory. Second, because meaning can only arise through contingent articulation, also research practice is necessarily articulatory in that it *constructs* an explanatory account of the study. I will return to the second point in the section on retroduction as a research strategy (see Section 4). For now it suffices to conclude that provided that *discourse* is understood as a *system of relations* as a result of contingent articulatory practices, then *discourse analysis* is the study of these *relations:* how they are articulated, how they came about, to what political ends they are employed and how they could be different.

Defining central concepts: Politics and the political, power, affect and hegemony

A number of additional concepts constitute the theoretical backbone of PDT. Here I focus on five central ones for this thesis: *politics*, *the political*, *power*, *affect* and *hegemony*. They help to further situate the thesis and its critical impulse for adaptation research.

—

[29] I use the terms *discursive formation* and *discourse* interchangeably, the former being perhaps more precise as it highlights the temporary and contingent nature of relational systems of meaning. It also leads to less conceptual confusion with other strands of discourse studies that reduce the notion of discourse to linguistic elements (see e.g. Fairclough 2003).

First, politics and the political. As the establishment of meaning happens through the contingent articulation of similarities and differences and always excludes other possible interpretations, every practice has in it something political. Whatever form an articulatory process takes, it is always a social construction and the discourse that emerges from it is '*intrinsically political*' (Howarth and Stavrakakis 2000, p. 4).

It is important to point out that especially Mouffe (2005, 2013) and her followers distinguish between *politics* and *the political.* The former connotes the normal or conventional form of decision-making '*within*' an established social order and system; for instance, the goings-on which we can observe around the European or German parliaments or in the UNFCCC Conference of the Parties' negotiations, where established rules and values are not challenged (Weisser and Müller-Mahn 2017). The notion of *the political*, by contrast, is broader in scope in that it relates to the ontological condition of social reality and, specifically, to moments of re-activation of 'proper' contestation. *The political* dimension as the space for contestation and antagonism becomes visible in '*moments where routinized proceedings are interrupted*' (Hajer, 1997, p. 60), in which established social structures are called into question and a subject can suddenly make decisions '*about*' the structure. This is the moment of symbolic dislocation, when a sudden making-visible event challenges the perceived naturalness of the social order in such a way that it reveals its contingency. The disaster at the Fukushima nuclear power plant in 2011 can be described as such a dislocatory event, which (re)opened space in the German public debate on the country's energy system, leading to the immediate shutdown of eight of its 17 nuclear reactors, speeding up the country's withdrawal from nuclear energy and transition to renewable energy (*Energiewende*). For research on adaptation politics such understanding implies that the locus of politics proper is not seen as lying in the 'vested interests' of decision makers, funds and organisations, or related power hierarchies in the official political system and its institutional structures, which has been the focus of much adaptation governance research, but in the spaces where meanings are imagined, conceptualised and sedimented.[30]

Second, power. While power is not an explicit term in the conceptual grammar of PDT, it is intrinsically intertwined with the idea of discourse. Since, as pointed out above, there is no necessary relation between meaning and matter, to establish systems of relation is an act of power. Relatedly, Torfing (2005, p. 23, my emphasis) suggests:

> discourse theory puts power and power struggles at the top of the agenda. Power is not analysed in terms of a resource or capacity one can possess, store, or retrieve, or as a relation of domination. *Power is conceived in terms of the political acts of*

—

[30] This is of course not unique to adaptation. The field of critical policy studies has long argued that writing policy and deciding on policy instruments is not a technical matter but involves highly political decisions (see for instance Bacchi 2000, Henstra 2015).

> *inclusion and exclusion that shape social meanings and identities* and condition the construction of social antagonisms and political frontiers. The construction of discourse always involves both inclusion and exclusion of identity and this means that *discourse and power are intrinsically linked with each other*.

That means looking at discourse is a way of looking at (the discursive dimensions of) power. As with adaptation politics, the locus of power, then, does not sit with institutions or actors but is constitutive of the meanings made through discourse.[31]

Third, affect. One central difference of PDT compared to other discursive approaches is its interest in and focus on the role of affect in discourse.[32] This is where the influence of Lacanian psychoanalysis on recent PDT becomes evident (Glynos and Howarth 2007). As I will discuss in the section on fantasmatic logics below, I am particularly interested in what political work affect *does* in and for adaptation discourses. The notion of the subject and its affective and emotional investment in adaptation discourses remains largely underdeveloped in current research, both theoretically and methodologically.

Fourth and lastly, hegemony. When a certain discursive formation with its specific definition of reality becomes widely accepted, it has gained (temporal) discursive closure, or *hegemony* in Laclau and Mouffe's (2001) terminology. Consequently, it creates a 'horizon of possibility' of what it is appropriate to say, think, imagine, and do in a certain situation – for instance about adaptation – and what is not (Torfing 2005). In a policy context, hegemonic discourses not only construct the 'problem', but also create the '*discursive truths*' (Griggs and Howarth 2017, p. 3) and the social and moral compass from which responses are deemed suitable, while defining others as 'out of place' or irrelevant. As discussed in the previous section, the conventional understanding of adaptation as adjustment to biophysical changes is so prevalent that it can be described as such a hegemonic discourse. This does not imply, however, that there is no possibility for political change (and agency). There are two, interrelated reasons for this: First, as the creation of meaning is a social process, discourses are not structures operating *outside* of human intervention but they are reliant on their constant reiteration, and, therefore, dependent on what Bacchi calls (2000, p. 52) '*agentic production*'. Second, as noted above, discourses are *incomplete* relational systems of meaning, they are never able to fully capture the surplus of meaning; therefore, the meaning and discursive closure they create is unstable. Elements become recon-

—

[31] Morrison and colleagues (2017, p. 9) suggest that framing power, '*the ability to frame problems and set norms*' (and which for them encompasses discursive and epistemic power), is an overlooked form of power in the governance of environmental problems, despite it possibly being one of the dominant modes through which goals are sought and achieved.

[32] Increasing interest in the role of affect and emotion is evident across the social sciences. While still on the margins of their fields, there is also attention to this within diverse fields of geographical concern, including development practice and theory (Clouser 2016). Equally, an 'emotional turn' in human geography, including in the area of emotional Political Ecology, has highlighted how emotions shape society and space (Anderson and Smith 2001, Clouser 2016).

figured, or rearticulated with other discourses, as for instance adaptation has with development discourse (Cannon and Müller-Mahn 2010, Webber 2016) and, more recently, with migration discourses (Bettini 2014). In sum, '*[a]ny order that is created, finally, is temporary, precarious; it requires ongoing work to keep it alive*' (Ruttland and Aylett 2008: 633). These dynamics give rise to the possibility for more political agency. By emphasising the instability of discourses, PDT transcends the dualisms of actor/structure, in the sense that the two are not seen as standing in some kind of external relation to each other. Rather, the approach allows conceptually for discourses to be both, *structuring* and *structured by* people. How such hegemonic processes can be empirically investigated, I turn to now.

A conceptual vocabulary: Social, political and fantasmatic logics

To apply these theoretical perspectives to the study of concrete empirical material, Jason Glynos and David Howarth (2007) developed the so-called *Logics Approach to Critical Explanation*. Building on the theoretical architecture of PDT elaborated above, this approach provides a conceptual framework for a problem-driven approach to poststructuralist social and political analysis. Its novelty lies in the central idea of *logics* of critical explanation, which are the basic explanatory units used to problematise, critically explain, criticise, and evaluate a certain empirical phenomenon. Glynos and Howarth (2007) conceptualise three logics that are drawn on to capture different dimensions of discourses; these are social, political and fantasmatic *logics* (definitions for each follow below). The separation into these three serves analytical purposes; in practice they are commonly interwoven to form one overarching explanatory logic (Glynos and Howarth 2007).

Social logics: The unsaid background

The first analytical concept of social logics helps characterise and describe paradigmatic assumptions about 'how the world works' that remain largely implicit in a discourse but constantly provide orientations for social activity and order (Griggs and Howarth 2013). They constitute the taken-for-granted 'rules of the game', the unsaid background of a discursive formation. These inherent rules determine what is considered a 'legitimate' solution, and which practices would be regarded as 'out of place'. Social logics provide the discursive resources from which particular policies and practice approaches need to be constructed in order to be thinkable and socially acceptable. For instance, in many Western countries that are governed by neoliberal economic policies, naturalised norms underlying public discussions and policy on adaptation seem to be that adaptation should be cost-effective and promote (or at least allow for) economic growth and expanding economic activities. As an analytical concept, social logics help expose the implicit assumptions held to be true and important, and the expectations and rules adaptation as a practice has to abide by (see also Table 1 below).

Political logics: What is part of adaptation, what not?

While social logics uncover that which is largely accepted within a discourse, political logics help explain how a certain discursive formation evolves and functions, and how its different elements are connected with one another. Building on the two articulatory strategies of equivalence and difference elaborated above, political logics describe who and what is included within or excluded from a certain discourse. They illuminate how the articulation of inclusions (i.e. equivalences) and exclusions (i.e. differentiation) is structured (see Table 1 below); in other words, how and where borders between 'good' and 'bad' adaptation are drawn. They can also reveal moments of contestation and institution of new meanings and practices (Glynos and Howarth 2007). To that end, Glynos and colleagues (2015) differentiate between *contestatory* political logics, as those that explicitly question and openly confront others' positions, and *marginalising* political logics, which operate more implicitly as a means to more subtly shuffle alternative visions to the margins. Extending on this thought and based on my empirical work, I suggest that marginalising political logics are most commonly employed by established discourses to fend off new or alternative issues that put their inherent stability at risk, whereas contestatory political logics are more commonly employed by minor discourses that seek to challenge an established discourse. Political logics therefore answer to the important question of how *permanence* is secured and *change* comes about in discourses (Hajer 1997). In the context of adaptation, political logics might for instance contain proposals for novel forms of governance under the auspices of securitising vulnerability (Thomas and Warner 2019) (i.e. instituting new practices), or exclude responses not seen as legitimate, for instance approaches that significantly regulate private businesses. Analytically, they indicate where the unsettled borders of a discourse or between competing discourses lie, shedding light on '*what discursive-rhetorical moves have political and ideological significance*' (Glynos *et al.* 2014, p. 64).

Methodologically, it is important to point out that the study of political logics can show what is *dismissed* in a discourse and what aspects have been excluded from it (e.g. through marginalising and contestatory moves), not what is *absent*. In other words, the interest is in the politics of a discourse's emergence, not in the complete horizon of alternative discursive possibilities.

Fantasmatic logics: That which gives energy to a discourse

Evidently, not all discourses are equally successful at capturing broad support, otherwise there would not be dominant ones; they would all be equal. This is what the third logic of fantasy attends to. It aims at understanding how a certain discourse could emerge and is able to maintain its popularity, and hence its dominance. Building on insights from Lacanian psychoanalysis, the basic idea is that in order to understand discourses it is not sufficient to stop at studying the form of language (signification), but to look at what this language *moves* in people and how

it helps them establish a sense of identity (Glynos and Stavrakakis 2008). In order to be effective, a discourse is seen as needing to connect to and resonate with its audience and must offer points of identification.

Fantasmatic logics are '*affectively charged elements*' (Glynos 2014, p. 194), in a discourse that 'grip' or 'hold' subjects by promising the achievement of a whole identity, structuring their desires, providing them with forms of identification and promising the enjoyment of a 'fullness-to-come', directed towards a future goodness that is better than the present (Glynos and Howarth 2007, Glynos and Stavrakakis 2008). By creating a sense of necessity fantasies typically provide an explanation of why a certain social order is the way it is (or should be) and what might happen if this order was abolished (or disrespected).

Consequently, fantasmatic logics serve to justify a particular course of action or social order, making a certain discourse appear attractive or necessary and therefore win popular support. The effect of this essentially is to render the subject complicit with the discourse, draw it to the proposed (policy) solutions, and preclude alternative ways of thinking about an issue (Glynos *et al.* 2009). For PDT, the concept of fantasy is closely linked to ideology, insofar as it contributes to sustaining particular relations of power, domination and subordination, and conceals and covers over the radical contingency of social practices.[33]

Importantly, fantasy is not seen as something bad, morally corrupted or regressive. Instead, fantasy fulfils an essential role in any discourse, as it provides the affective energy necessary in order for this discourse to stabilise itself and make people invest in its social or political logics, thereby securing permanence and preventing the emergence of political contestation and hence change (West 2011). At the same time, fantasies can also become the prime vehicles for social change, as *that which gives energy* to alternative political projects, a point of relevance for critical research, to which I will return in the concluding section. One might even say that the success and persuasiveness of a particular discursive formation hinge on the resonance of its fantasmatic logic, as the essential 'discursive glue' that holds discourses together. Looking at fantasy therefore seeks to understand the conditions that make a particular conceptualisation of adaptation possible, viable and appealing and, therefore, can attend to questions of *why* certain understandings of adaptation are dominant and what might explain their prevalence over others; that is, what makes people attached to *this* specific discourse rather than *another*. Fantasmatic logics are of particular interest in this thesis, because they provide insight into how the conventional under-

—

[33] *Ideology* here is understood '*as the attempt to pass off as necessary what in fact is contingent*' (Glynos 2014, referencing Laclau 1991). So it is not about *political ideologies* (e.g. conservationism, socialism, liberalism etc.), nor about *ideology as superstructure*, where a sedimented or dominant discourse produces specific hegemonic meanings, but about how a discourse manages to achieve '*ideological closure to the radical contingency of social relations*' (Griggs and Howarth 2013, p. 39), structure desire and generate attachment (Glynos 2001, Kølvraa and Ifversen 2017).

standing of adaptation as adjustment is justified and explained and, importantly, how it attempts (and manages) to 'win over' its audience.

Table 1: A poststructuralist framework for the study of adaptation discourses.

Analytical category	Key explanatory function	General questions	Empirical questions
Social logics	Reveal sedimented practices, values, rules, and norms (i.e. sedimentation).	What are underlying the rules and norms?	What characterises adaptation discourses? What 'facts' does this discourse rest on, i.e. what appears as 'natural' or 'given'? What kinds of rules and norms are reproduced, what values 'count'? What are implicit expectations adaptation responses have to abide by?
Political logics	Reveal political contestation, incl. emergence and installation (i.e. change)	How did they come about? How are/have they been challenged or defended?	What discursive strategies create the adaptation discourse? What meanings and courses of action are put forward and excluded? What is adaptation associated with and how? What is considered legitimate adaptation, i.e. what must responses look like to be acceptable? Which ideas and options have been closed off in the process?
Fantasmatic logics	Reveal affective attachment, i.e. what recruits, grips, persuades subjects (i.e. affective energy)	Why and how are discourses sustained and justified? What accounts for the solidity of a particular discourse?	How is the understanding of adaptation justified and explained, and how does it attempt to 'win over' its audience? What outcome(s) do they promise or warn against? How is this narrative sustained, what makes it 'tick'? What ideological work do the discourses do, and to what end?

Source: Adapted from Paper II, III and IV.

What is PDT's critical potential?

My choice of the Logics strand within PDT vis-à-vis other discursive approaches is motivated by the central place given to *radical contingency* as the central ontological premise and how this accounts for the constant discursive struggle over the fixation of meaning. Compared to other forms of discourse studies (see Section 2) the approach has three major advantages, which also sets it apart from more widely used Foucaultian approaches (Oels 2005, Rutland and Aylett 2008, Lovell *et al.* 2009, Randalls 2011, Lövbrand and Stripple 2011, 2012, Stripple and Bulkeley 2013, Oels 2015, Bäckstrand and Lövbrand 2016). First, the central concept of *articulation* with its two strategies of equivalence and difference makes this approach theoretically strong when

it comes to conceptualising both discursive permanence and change. Redeveloping and extending on Gramsci's notion of hegemony, these concepts account for the dynamic and antagonistic *processes of change* by which discourses and their borders are constituted and transformed, something that Foucaultian approaches, which often treat governmentalities as rather stable and uniform formations, fall somewhat short of capturing (Hajer 1997, Stephan *et al.* 2013, Stephan 2014).

Second, the notion of *fantasmatic logics*, which builds on the psychoanalytic theory of Lacan and a non-essentialist view of the subject, is an important addition to the discourse-theoretical vocabulary in order to account for the emotional, non-rational, investment of subjects into a particular discourse. One of the fundamental assumptions of much adaptation policy and practice is that people are essentially driven by rationality, which is to say they assume a direct link between information provision (e.g. about climate impacts or costs-and-benefits) and effective adaptation action (see also Fleming *et al.* 2014). This reflects a behavioural and technical view on social change where knowledge is assumed to directly result in awareness and change. A poststructuralist view on social change by contrast highlights the role of power, politics, and hegemonies but also the potential for dislocation in moments of crisis, discursive innovation and agency. This goes beyond conceptions of the subject in Habermasian or Foucaultian approaches that account poorly for emotion, affect, and passions.

The third distinctive feature of the approach, on a more practical level, is its three-fold typology of basic logics, which provides a methodological program as to how to apply discourse theory to the analysis of data, something that gives it a critical advantage over other theoretically informed discursive approaches in which such methodological aspects are often overlooked.

Together the concepts of *hegemony*, *dislocation*, *articulation* and the three explanatory logics allow for the analysis of *how* particular ways of understanding *emerge(d)* and *why they* and not others (have) become dominant and are able to prevail. As pointed out above, for research that has a critical impulse and an agenda for change this not only helps understand the reasons for discursive permanence, but also shows how breaks and change in discourses happen, and, therefore, contains a positive message for how critical scholars and practitioners might begin intervene more productively into the prevalent techno-managerial discourse on adaptation.

Section summary: Implications of discourse theory for research on adaptation

From these theoretical elaborations, I would like to recap three important implications for research on adaptation politics specifically. First, recognising the *discursive nature* of adaptation implies that adaptation measures are not simply responses to external and material 'threats', but *constitute* them in the first place through dis-

cursive practice. What it means to 'do adaptation' is thus continuously contested in a struggle about its meaning, interpretation and implementation (Hajer and Versteeg 2005). Second, politics is not something that simply affects adaptation discourses, choices and actions; rather, it is *inherently embedded* in the very process of identifying the problem and defining possible solutions to it, for instance in the formulation of policy, and therefore always present within climate change responses. This means academic, public and policy discourses on adaptation can be understood as '*active political sites*' (Bäckstrand and Lövbrand 2016, p. 2) where important meanings and interpretations of adaptation are formed and negotiated. Third, an analytical perspective based on discourse theory is not merely interested in which policy options are the 'most appropriate', but also in the way in which ideas about adaptation are articulated and by whom, how they are structured, and what political ends they pursue.

4. Research approach and methodological strategy

In this section, I describe the methodological approach of the thesis in practical terms. In particular, I discuss my ontological and epistemological standpoints, introduce the notion of retroduction as a research strategy, explain the selection of my cases and empirical material, and outline how the theoretical framework has been translated into analytical procedures. I conclude with some brief reflections about research quality in the context of my thesis.

On ontological and epistemological underpinnings

As stated, one of my intensions with this thesis is to problematise and open up the understandings of what adaptation is considered to be. This means I depart from a perspective that sees nature, climate change, or adaptation as ontologically fixed categories, in favour of a perspective that emphasises their socially constructed character. The research is therefore based on the premise of social constructivism, in other words the idea that human thought, knowledge and action are shaped by language and discourse (Moses and Knutsen 2012, Paschen and Ison 2014).[34] This implies that I have an anti-essentialist understanding of adaptation and climate change (but see Footnote 5).

Following from this ontological position (i.e. idea about how the world works), if the nature of my empirical phenomenon is conceptualised as being socially constructed, obtaining scientific knowledge about it requires an epistemology (i.e. idea about how we can generate knowledge about the world) that does not consider 'mere facts' as independent of their social, cultural and political context, but which

—

[34] In the social sciences and humanities social constructivist approaches to research are well accepted and, in some disciplines, perhaps even represent the norm. However, within the field of Environmental Studies, in which this thesis is situated, conventional approaches to science and research with positivist epistemologies prevail as the status quo (see also a discussion on this in Forsyth 2011). Due to this unquestioned agreement of what 'normal' science is, there is very little reflection on the researcher's *values*, take on the *nature of reality,* understanding of *what knowledge is* and *how* it can be *obtained* (others have referred to this as 'uncritical positivism', see Forsyth 2013, p. 29). At times I experience this silence on questions of ontology and epistemology with a sense of frustration. Hence my choice to discuss my personal take on 'reality' as essentially social constructivist. As one's ontological and epistemological position not only has fundamental implications for the choice of theory, but also more broadly the understanding of what research is, and the generation (as opposed to 'gathering') of empirical material, I believe it is important to be transparent about one's point of departure and preunderstandings.

rather helps me to investigate *how* these '*social* facts' are constructed, given meaning and bound together by articulatory practices (Glynos and Howarth 2007). Instead of treating adaptation as a given, I shift the focus of my analysis to how adaptation as a phenomenon is viewed and discursively constructed into a topic of concern for research, politics and practice (i.e. how discourses *produce* adaptation as an object) and the contingent process of their emergence. This implies that my quest is not to find the 'true' meaning of adaptation (as an anti-essentialist ontology means I do not believe in such truth), but to deconstruct, interrogate and challenge the closure invoked in current adaptation discourses (Torfing 2005).

To reflect this epistemological position, I deliberately choose the term *methodological strategy* because, as others have proposed (Glynos and Howarth 2007, Fairclough 2013), speaking of *methods* suggests that one 'selects' and 'applies' a method from a set repertoire when designing and conducting research. As with the choice of theory and empirical cases there is, in my view, nothing objective about selecting a methodology for a particular study, nor are decisions independent from the theoretical and epistemological starting points and values of a researcher. Following from this idea, I see it as impossible to neatly separate 'theory' and 'method', or to reduce 'method' to techniques for gathering and analysing empirical material (see also the next subsection). The chosen term methodological strategy in my view describes more accurately the way researchers – selectively and based on their underlying ontological and epistemological assumptions – construct their research agenda, object of study and approaches, choosing certain concepts, methods and tools, but not others.

Doing the full circle: Reflections on retroduction as a research strategy

In line with Glynos and Howarth (2007), and other critical social science scholars (Blaikie 2009), my take on research is more cylindrical than the conventional linear modes of explanation of *deduction* and *induction* commonly proposed by standard textbooks on research methods. Following a post-positivist view on explanation in the social sciences, such an *abductive* or *retroductive* approach takes its departure point with an empirical phenomenon, what Glynos and Howarth (2007) call a *problematised phenomenon*. This is an empirical object under investigation, which has arisen and been constructed '*from pressing practical concerns of the present*' (Glynos and Howarth 2007, p. 11).

In this context, Glynos and Howarth (2007, p. 33) introduce the 'retroductive circle' as a model for thinking about social science research within a post-positivist framework, a model to which I subscribe. This circle comprises three dialectical moments; *problematisation*, *retroductive explanation* and *persuasion/intervention:* (1) The research begins with something the researcher encounters in the present, something that is puzzling, surprising or needs explanation (an *explanandum*). In

an *active process of problematisation* by the researcher this is articulated into something worth further investigation. This implies that research problems are not discovered, but carefully constructed. In my case, I was puzzled by prevalent approaches to adaptation and driven by a keen curiosity to understand what made them 'work', despite their absence of radical content that can be expected to contribute meaningfully to preparing societies for the impacts of climate change.

(2) The research continues following a process of *theoretically informed empirical inquiry* into this puzzling phenomenon, in a way that not only rejects law-like reasoning or causal mechanisms (as in positivist social science/deductive research), but also mere contextualised self-interpretations (as in hermeneutics/inductive research). Rejecting the dualism between *the theoretical* and *the empirical*, such an approach sees the researcher as alternating 'to-and-fro' between theoretical-empirical work and the possible explanations that make the problematised phenomenon ineligible (Glynos and Howarth 2007). This does not mean empirical phenomena are subsumed under theoretical concepts. Glynos and Howarth (2007, p. 178) say as much themselves:

> we must guard against the temptation of subsuming empirical phenomena under abstract theoretical categories, as this can result either in a naïve empiricism in which phenomena are simply given, and thus not mediated or constructed by our concepts, or a theoreticism in which abstract categories are simply imposed onto a complex social reality without mediation or construction'.

While recognising theoretical concepts as 'points of departure' and acknowledging the influence of pre-existing ideas and preconceptions, such an approach leaves space for new ideas, impulses and surprises to emerge from empirical work. Through this dialogue between the empirical and the theoretical research work, theoretical concepts are articulated together and 'creatively collapsed' with the empirical material in a way that necessarily modifies theories and concepts into a novel analytical framework so that they can be fruitfully brought to bear on the problematised phenomenon (Glynos and Howarth 2007). In the case of this thesis, the second moment in the retroductive circle involved bringing some initial ideas from PDT and the three explanatory logics elaborated above into conversation with my empirical material, reading, coding, readjusting the analytical framework, and beginning anew. The goal of this constant reformulation is to generate a plausible and convincing explanation (i.e. it primarily serves an explanatory function) but can also be a source of theoretical and methodological development, as **Paper III**, which is a direct outcome of this retroductive process, demonstrates.

(3) The last moment in the retroductive circle involves the articulation of an explanation (an *explanans*) that is presented for critical scrutiny to the wider research community and public. Here, the researcher needs to convince '*a tribunal of critical scholars*' (Glynos and Howarth 2007, p. 39) about the value of the critical explanation provided. For post-positivist research, the criteria for research quality

and pertinence then become whether the particular explanation provided (the *explanans*) accounts for the problematised phenomenon (the *explanandum*) in a way that makes it sufficiently intelligible, and whether this provides novel insights into and greater illumination of it (see also the following subsection). In my case, I presented initial findings (or *proto-explanations* in Glynos and Howarth's (2007) terminology) to colleagues at my university (and to my supervisors), at workshops and international conferences, and subjected the *more mature critical explanations* of three of my cases to peer-review. Reactions and responses to my accounts concerned different aspects of my work, from the source and selection of empirical material (*is it enough*, *is it sufficiently representative*?), the application, choice and suitability of my theoretical framework (*is 'discourse' relevant*, *is the work too theory-heavy*?), and the meaning and significance of my findings, to the 'critical impulse' (*aren't you too normative*, *if you don't like what's happening why don't you propose something better*?). These reactions have caused me to *constantly reformulate* and *revise* my analysis, methodological strategies, interpretations and findings but also – so I hope – have improved my skills as a researcher. Some of these reactions have also – especially during the review processes for journals – made me realise how working across disciplinary boundaries can be challenging. This is not specific to my work, but the case for other forms of interdisciplinary work as well (Bulkeley 2019). Disciplinary structures, cultures and publishing practices evolved around certain norms, so writing poststructuralist papers for 'conventional' environmental journals is restrictive, as word length limit how much space can be dedicated to theory, for instance, even though this might need to be elaborated in detail due to an audience that is less familiar with such a theoretical approach. Another challenge has been PDT' extensive specialist terminology, which hinders it from being easily applied to other fields, especially those less used to conceptual work such as the field of climate adaptation (Nyamwanza and Bhatasara 2015, Weisser *et al.* 2014, Keskitalo and Preston 2019a).

Case selection

As an emerging policy area that will likely be scaled-up in the coming years, analysing and critically explaining the various ways in which adaptation is constructed in official discourses, particularly at the agenda-setting level of international guidelines (**Paper I**), the EU (**Paper II** and **III**) and influential national governments such as Germany (**Paper IV**), is a timely and much needed exercise. These are 'paradigmatic cases' (Flyvbjerg 2001, Howarth and Torfing 2004), which is to say I consider them representative of the way in which adaptation is viewed in many places and, therefore, reveal broader assumptions in the adaptation policy and planning field.

I selected the review case of international adaptation research and practice (**Paper I**) because it is indicative of how adaptation is perceived by a wider range of

influential actors including the IPCC, the UNFCCC and international climate funds. These are important political sites to consider because policy mimicry and diffusion through such international organisations is seen as an important impulse for increased adaptation activity (Lesnikowski *et al.* 2016). I selected the supranational/regional actor of the EU (**Paper II** and **III**) because it is not only an agenda setter for its 28 member states, but, as a major hub for development and climate aid worldwide, can also diffuse ideas about adaptation to geographically distant places through its participation and influence in international fora and outside of its borders (Joseph 2014, Selin and VanDeveer 2015, Remling forthcoming).[35] Finally, I selected the national level case of Germany (**Paper IV**), because the country has been a forerunner in regards to adaptation policy (Biesbroek *et al.* 2010, Massey *et al.* 2015), and as the EU's most populous member state and largest economy is one of the most powerful voices within the EU and its sub-regions. The German perspective on adaptation can be assumed to carry some authority and might become an important source of 'policy learning' for other countries, through *'directional leadership'* (Oberthür and Roche Kelly 2008, p. 36). Moreover, the preliminary analysis of the affective dimension, or fantasies, of adaptation in EU policy (**Paper II** and **III**) give some reference frame to assess whether the German fantasies are similar or different to those articulated at the EU level.

Empirical material and methods of data generation, reduction and analysis

To analyse the way in which adaptation is conceptualised in the respective cases, I make use of various types of empirical material. Together the corpus of empirical material for this thesis consists of policy documents and other documents published by governing bodies including public communication brochures of official policy (from the European Union and the German government), as well as textual material from a diverse range of activities that make up adaptation practice at the international level (from the IPCC, UNFCCC, climate funds and regional bodies and international organisations). These specific documents were selected because I judged them to be representative of the adaptation discourses that I was interested in and allowed me to get a clear sense of what the main approach to adaptation by the government bodies is in these places. For a detailed overview of the empirical material used in each paper as well as contextualising material, see Table 3.

Paper I reviews textual material across a diverse range of activities that make up adaptation practice at the international level, covering different stages and types of practitioners involved in adaptation. While **Paper I** analyses a broad range of

—

[35] For instance, through international development policy and aid, free trade agreements, accession and neighbourhood agreements, political dialogue and security cooperation.

sources, I radically limited my empirical material for more in-depth analysis in **Papers II**, **II** and **IV**. Here, the focus was on very specific adaptation policy discourses and what made them 'work', where adaptation policy is understood as *statements of intent* in which governments formally state their position on adaptation and set common preferences and objectives with the aim of influencing how the issue area is understood in their constituency (**Paper I** also reviews some transnational policy but its empirical material is broader).[36] To that end, the papers qualitatively analyse key adaptation documents at the regional and national level in the EU and Germany. Specifically, **Papers II** and **III** draw on a sequence of three central policy documents on adaptation in the EU, and **Paper IV** on public communication brochures of official adaptation policy in Germany.

The overall method of analysis for this thesis is qualitative content analysis of text material. However, the ways in which this analysis was undertaken differs across the papers. In **Paper I**, the analytical approach was qualitative content analysis of documents that play a key role in adaptation practice at the international level. Here, the approach was a broad (rather than a deep) one, where a large number of documents was reviewed in order to account for the way in which these discussed the potential for vulnerability redistribution and to assess whether this affects the way adaptation is conceptualised. For **Papers II–IV** in-depth qualitative analysis of documents was conducted by drawing on an analytical framework based on PDT, but, as discussed above, adjusted to the empirical phenomenon in focus in the respective paper.

Content analysis and coding for **Papers II–IV** was aided by qualitative data analysis software (MAXQDA).[37] Following a retroductive approach to coding, in general I began my analysis with a preliminary coding plan based on the specific research questions and theoretical framework of each paper (i.e. *a priori initial conceptual codes*). As I analysed the material and encountered new themes of interest and dynamics, I supplemented this initial list with *emergent codes* and removed

—

[36] Following critical policy theorist Carol Bacchi (2009), I understand policies as '*problematising activities*' (2009, p. xi), which '*includes but extends beyond laws and legislation*' (2009, p. ix). They are statements of intent in which a governing body formally states its position on an issue area, such as adaptation, and sets common objectives, aiming to influence how the issue is understood. For Bacchi, the term policy '*includes but extends beyond laws and legislation*' (2009, p. ix). This means that policy instruments cover both regulatory/binding (e.g. laws, directives, regulations, decisions) and voluntary/non-binding norms (e.g. communications, green and white papers, guidance notes, recommendations), which is often differentiated into 'hard' and 'soft' law.

[37] Computer Assisted Quantitative Data Analysis Software (CAQDAS) has been described as a useful tool to help structure data analysis, and as more efficient than manual methods (Bringer *et al.* 2004, Yin 2011). Such software assists with organisation and reduction of empirical material and allows for easy access, refinement, notations and connections at different points of the analysis. It does not however *do* any analytical work; that task remains with the individual researcher who reads, interprets and analyses the data, and manually generates and organises the codes.

codes that did not 'speak' to my empirical material. For further details about the specific methodological strategies, see the respective papers (**Paper I–IV**).

Table 2: Overview of empirical material used in this thesis at a glance.

	Main empirical material	Contextualising material
Paper I	- IPCC AR5 (WG II, Ch.14, 16, 17) (2014) - UNFCCC Nairobi Work Programme (NWP) (2011) - UNFCCC Cancun Adaptation Framework (CAF) (2010) - UNFCCC Adaptation Committee's 2015 annual report (2015) - UNFCCC Least Developed Country Expert Group's Technical Guidelines for the development of National Adaptation Plans (2012) - UNEP Global Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA) (2013) - Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Area (2016) - Baltadapt Strategy for Adaptation to Climate Change in the Baltic Sea region, and its associated Action Plan (2013) - Climate Adaptation Strategy for the Danube River Basin (2013) - European Union's Strategy on adaptation to climate change (2013) - Green Climate Fund (GCF) guide for applicants (2015), environmental and social safeguards (2015) and Results Management Framework (2014) - Adaptation Fund (AF) Results Framework and Baseline Guidance (2011) - 18 adaptation-related proposals approved by the GCF (2015–2017) - 4 Adaptation Monitoring and Evaluation Frameworks	Earlier research
Paper II **Paper III**	- Green Paper: Adapting to climate change in Europe – options for EU action (2007) - White Paper: Adapting to climate change: Towards a European framework for action (2009) - An EU Strategy on adaptation to climate change (2013)	Other documents from the EC's (2013) 'Adaptation Strategy Package' (which are ~30 documents), and earlier research
Paper IV	- Encountering climate change. The German strategy for adaptation (In German: *Dem Klimawandel begegnen. Die Deutsche Anpassungsstrategie)* (2009) - Action plan of the German Strategy for Adaptation to Climate Change (In German: *Aktionsplan Anpassung der Deutschen Anpassungsstrategie an den Klimawandel*) (2012) - First progress report of the German government on the German strategy for adaptation to climate change (In German: *Erster Fortschrittsbericht der Bundesregierung zur Deutschen Anpassungsstrategie*) (2016)	Policy documents, government websites, parliamentary hearings, and earlier research.

Making theory relevant to empirical cases: A common but differentiated methodology

In keeping with the underlying ontological assumptions of PDT and the LA in particular (Glynos and Howarth 2007), there is no standardised analytical procedure or fixed inventory of theoretical concepts. In order to make discourse theory relevant and practically operationable for **Papers II–IV**, its abstract theoretical concepts were carefully translated into the particular empirical context (as will be explained below, PDT is not applied to **Paper I**).[38] I therefore develop appropriate analytical frameworks for the particular empirical domain in each paper. The core analytical categories – social, political and fantasmatic logics – remain the same for **Papers II–IV**, but they are combined with other, middle-range concepts (see also Table 3). **Paper I** also rests on qualitative analysis, but here the focus is not so much on how the discourse is constructed but on the specific way in which vulnerability redistribution is conceptualised therein.

To determine how to characterise *social logics* in written documents, **Papers II** and **III** supplement the LA with the concept of *assumptions* developed within the field of CDA (Fairclough 2003) (for details see **Papers I** and **II**).[39] These represent the 'common ground' that is taken as given and therefore tend to remain more or less implicit in a discourse. Fairclough (2003) usefully distinguishes three types of assumptions – *existential, propositional* and *value assumptions*. Existential assumptions include assumptions about what exists, for instance that there are such things as climate change, or the EU.[40] Propositional assumptions are statements about '*what is or can be or will be the case*' (Fairclough 2003, p. 55), and therefore point to the possible institution of *new* social logics.[41] Finally value assumptions reveal what is considered desirable or good (or undesirable). For instance, that cohesion is beneficial for EU member states. Articulated together with the logics, the three assumptions provide more detailed and

—

[38] This idea goes back to Laclau (1991), who rejects the idea that a set of orderly procedures ('methods') can be applied to an empirical case, or a 'theoretical framework' to a case study. Instead, he suggests that both theoretical framework and methodological strategy '*will constitute an exclusive intellectual universe*' (Laclau 1991, seventh paragraph) specific to the empirical phenomenon in focus and the research context. Laclau proposes that any thesis work should result in the articulation of theoretical and empirical material in a way that '*the distinction between the theoretical and the empirical collapses. This is the moment in which the thesis is finished*' (Laclau 1991, fifth paragraph).

[39] In their application to policy documents the *logics*, as originally outlined by Glynos and Howarth (2007), were found to have significant limitations. Especially the concepts of social and political logics do not lend themselves easily to concrete textual analysis. The specifics of this combined framework are outlined and explained in more detail in Paper II.

[40] They could also be called *factual assumptions*, which would perhaps be more telling because they reveal something about what is seen as 'facts' in a particular discourse. However, for the sake of clarity I stick to Fairclough's (2003) terminology here.

[41] This would be similar to Glynos et al.'s (2014) concept of 'projected social logics', which describe alternative practices that a policy reform process might aim to introduce but which have not materialized yet.

concrete linguistic-analytical tools for uncovering underlying foundations, values and principles associated with adaptation and therefore enable a more specific analysis of the social logics in policy documents.

In order to operationalise the *political logics*, in **Papers II** and **III,** I draw on CDA's notion of *genre chains* (Fairclough 2003) as an aiding analytical concept. For Fairclough, genre chains are combinations of different text genres that are '*regularly linked together, involving systematic transformations from genre to genre*' (Fairclough, 2003, p. 31). Building on this idea, I conceptualise the three consecutive versions of EU policy as forming part of one such genre chain. Analytically 'moving along' the chain and seeing how the policy gets transformed in particular ways from one iteration to the next makes visible more subtle, but important, changes in the form of exclusions or institutions. Analytically, it is through such diachronic comparative analysis of different documents in a genre chain that I am able to tease out the more implicit marginalising political logics behind the policies and therefore re-politicise the particular meaning of adaptation that is elevated to a prime position of importance and naturalised in the EU context.

To operationalise the notion of *fantasmatic logics* for the detailed analysis of German policy communication in **Paper IV**, I supplement Glynos and Howarth's (2007) beatific and horrific dimensions of fantasy with the idea of *transgressive elements* uttered 'between the lines' (Žižek 1997) and, for that purpose inspired by work on multimodality (Kress and Van Leeuwen 2001), examine the accompanying images in particular as potent emotive communicative tools.

Methodological limitations

The contingent choices we make during the research process have implications for what can and cannot be known and said with the approach taken and the empirical material chosen. This is also the case for my thesis. In the following I reflect on three important limitations in relation to the choice of my methodological strategy.

First, my cases have focused on discourses of dominant authorities or agenda-setting actors (the ones making policies and guidelines). While I have pointed at some alternative visions of what adaptation might look like that that appear on the fringes of these official discourses, including discursive closures over time and specific aspects that these discourses seem to grapple with and dismiss (see e.g. ecosystem-based and participatory approaches in **Paper II** and **III**), I have not explicitly studied sites of discursive resistance and struggle, or counter-discourses. My analysis runs short when it comes to alternative visions of what adaptation might look like and voices outside of 'powerful' domains of government bodies and international organisations. I have, at different points on this research journey, been asked why I did not focus on alternative adaptation discoursers that provide a different perspective on what needs to be done or spaces of contestation, especially in light of my interventionist motivation. This is owed to the fact that my entry to this

research project and the motivation that drove me was to understand more about why incremental perspectives on adaptation are so prevalent, what it is that makes them 'work', despite their unlikely success. In selecting official adaptation discourses by national and regional governments as well as international bodies and organisations, I indeed privilege and give voice to them and not to alternatives. However, I hope that my account of these official discourses is sufficiently critical to deconstruct the closure invoked by them. Future research may want to investigate (i) what alternatives are articulated outside of academic discourse and prominent governance bodies for instance in the civic space, particularly at more local levels, (ii) possible arenas of controversy and disagreement in these places, and (iii) the reasons why such alternative visions, such as involving more non-government actors or more socially progressive responses, do not feature more prominently in conventional approaches to adaptation.

Second, related to the choice of empirical material and especially regarding the political logics I would like to point out that I study what is *dismissed* by the official discourses, not what is *absent* from them – these are quite different things. Here, I am interested in the politics of their emergence, not in the complete horizon of possibilities. For future research, it would be relevant to research alternative discourses, such as deep adaptation, hi-tech/geoengineering types of approaches to adaptation, and social justice approaches.

Third, regarding empirical study of fantasmatic logics, I do not claim to prove that people are *actually* gripped by the described fantasies, instead, I simply – subjectively and based on my own positionality – identify them through careful interpretative analysis. As I focus on political communication of the government to the public, **Paper IV** reveals not so much about the German public but more what was considered important by the German government. In future studies it would be relevant to consider what the understanding of adaptation is for those at the receiving end of the discourses that I studied and whether the fantasmatic images employed, for instance in the German policy communication, successfully connect with their audiences.

On research quality

To assess whether research results are of sufficient quality and based on trustworthy analysis, natural sciences often turn to discussions of *validity, reliability*, *generalisability* and *objectivity*. While applying such positivist criteria to qualitative research is illegitimate (see Tracy 2010), a brief reflection on what research quality means within the context of my thesis is nevertheless appropriate here.

As suggested in the subsection on retroduction above, the research quality and validity of this thesis' research findings should be judged based on its *internal coherence*, where the research approach and conclusions provided follow rigorously from the ontological and epistemological assumptions and the theoretical frame-

work, to provide a plausible critical explanation of the problematised phenomenon (Glynos and Howarth 2007). Throughout my thesis I have aimed to be self-reflexive and transparent about my ontological and epistemological assumptions and my choice of theory and methodological strategies, and honest about the research process and the challenges encountered (though for the papers, as I describe above, within the confines of academic publishing practices). For instance, **Paper III** derived from a methodological problem when applying discourse theory to my empirical material. In that paper, I provide the reader with an authentic account of what did not work in my original plan and why, and a detailed explanation of what I did instead. This transparency about analytical procedures, I hope, gives validity to the conclusions I reach in the different papers and the thesis as a whole.

5. Papers and findings

This section outlines the four individual papers that make up the thesis and their key findings, with particular emphasis on how the papers address the aim of the thesis to analyse and critically explain the various ways in which adaptation is constructed and which kinds of adaptation action these constructions thereby – implicitly or explicitly – recommend, enable or prevent. Table 3 provides an overview of the different papers, including their empirical foci, research questions and the analytical concepts used.

The sequence of papers follows the progression of my thinking on adaptation in a temporal and conceptual sense. In my initial exploration of how adaptation is represented in governing bodies, which is set out in **Paper I**, there was a focus on how the potential for *vulnerability redistribution*, as one particular and troubling aspect of adaptation, is conceptualised in international guidance and advice on adaptation practice. After this first case, a desire to conduct further analysis but in a more conceptually and theoretically grounded way led me to choose PDT as a theory. This theory appeared well suited to help me better understand some of the political dynamics in adaptation planning and implementation. In **Paper II**, I applied this newly acquired theoretical vocabulary – the LA within PDT – to interrogate the notion of adaptation as conceptualised in EU policy. Out of this emerged the idea for **Paper III**, which deals with specific methodological challenges that I encountered when operationalising the LA for the analysis of the EU policy documents, and in response develops a novel framework for the analysis of such material. After working on **Papers II** and **III**, and another paper on climate migration discourses amongst development organisations in the South Pacific which is not part of this thesis (Remling forthcoming), I became increasingly interested in the notion of fantasy as an important component of adaptation discourses, an area that I found has not gained much attention in previous research. **Paper IV**, therefore, 'homes in' on the logic of fantasy to interrogate affective dimensions of adaptation policies in Germany. While there are differences between **Paper I** and the other papers (**Paper II–IV**), the view that adaptation is contingently constructed, with implications for how adaptation is put to work in the world, carries through in all of them.

Table 3: Overview of the papers.

Paper	Empirical case	Empirical material	Main questions	Analytical categories/focus
Paper I **Is adaptation reducing vulnerability?**	A broad range of activities that make up adaptation practice at the international level	Adaptation policy and guidance documents	To what extent is the potential for vulnerability redistribution recognised in the way adaptation is operationalised in international documents that guide adaptation in practice? If it is recognised, how does this affect the way adaptation itself is conceptualised or designed in practice and with what implications?	Maladaptation, redistributive effects, vulnerability redistribution
Paper II **Depoliticising Adaptation**	EU adaptation policy discourse	Policy documents	In what way is adaptation conceptualised in EU policy and how has this changed over time?	Social, political and fantasmatic logics, and assumptions and genre chains as aiding analytical concepts
Paper III **Logics, Assumptions and Genre chains**	EU adaptation policy discourse	Policy documents	How can social, political and fantasmatic logics be empirically operationalised for the study of public policy?	Social, political and fantasmatic logics, and assumptions and genre chains as aiding analytical concepts
Paper IV **The affective dimension of climate adaptation**	German policy discourses on adaptation	Public communication brochures of official policy	What fantasies are animating responses to climate change and how do they operate? What kind of ideological work do they do (i.e. what function do they serve)?	Fantasmatic logics (and, to a lesser extent, social and political logics)

Paper I

Is adaptation reducing vulnerability or redistributing it?

Paper I marks the entry point of the thesis into questioning what meaning is connected to adaptation and what this might open up in terms of broader implications for political action. It starts from the observation that we live in an increasingly interconnected world where actions taken in one place can have repercussions on another. With a different theoretical focus to **Papers II–IV**, the literature review for **Paper I** was done to provide an overview of how adaptation research and practice have considered the implications of such interconnectedness for adaptation responses redistributing risk from one place to another. Specifically, it asks whether some

awareness of this risk in the academic discourse has translated into meaningful consideration in a range of activities that make up adaptation practice at the international level. To this end, the paper conducts a qualitative document analysis of knowledge synthesis, global climate policy agreements, adaptation guidance materials, adaptation policy, international climate finance mechanisms and approved projects under one major climate fund, and finally monitoring and evaluation frameworks for adaptation (see also Table 2 for details).

The key findings are:

I. Adaptation planning practice does not give attention to the potential for vulnerability redistribution, despite some concern about this in academic research. This gap seems to be systemic in that the concern is not meaningfully addressed by *any* of the different communities of practice across different stages in the adaptation process, but surprisingly this gap is not picked up much by research.
II. In the few instances where practitioners do allude to redistributive effects, these are exclusively seen as positive.
III. Concerns about maladaptation, and occasionally vulnerability redistribution specifically, are mentioned on the margins but do not significantly influence the way adaptation choices are made or evaluated by policy makers, project planners and international funds.

Paper I contributes to knowledge on the politics of adaptation, by demonstrating how the systemic omission of redistributive effects in ideas about adaptation leads real world adaptation activities across a wide range of international actors not to account for the possibility of redistributing vulnerability from one place to another (an observation that is corroborated by the policy discourses examined in **Papers II-IV**). It thereby points to a fundamental and troubling gap in both adaptation practice and research thereon, as processes of cascading adaptation endeavours globally seem likely to eventually re-distribute risks and vulnerabilities to those communities that are already the most marginalised and vulnerable. This is not only a question of social justice but may actually pose a risk to systemic stability at the global level and therefore undermine adaptation at larger scales. The paper also demonstrates how there is no clear progression from research to policy, as research has flagged this risk, but adaptation practice seems to have opted against considering this possibility in their planning and implementation of adaptation. In the absence of a body of empirical literature documenting and analysing these redistributive outcomes, it is impossible to know whether adaptation efforts undertaken so far have in reality been reducing net vulnerability to the impacts of climate change, and if progress has really been made towards the aspirational *Global Goal on Adaptation* (as agreed under the Paris Agreement), or simply shuffled vulnerability across the board. Being a review paper, the paper does not provide solutions for how to solve this dilemma

in practice, but it raises important implications for the field of study on adaptation, as the research community may have to revisit most of what is 'known' about the implementation of adaptation to date.

Paper II

Depoliticizing Adaptation: A Critical Analysis of EU Climate Adaptation Policy

Paper II investigates the ways in which adaptation is conceptualised in EU adaptation policy, what its underlying assumptions and political implications are. To do so, it offers an account of the EU's adaptation policy discourse and the discursive changes therein over the development of the policy between 2007 and 2013, by critically examining the European Commission's (EC) three key policy documents on adaptation: the Strategy on adaptation and the Green and White Papers that preceded it.

The key findings are:

I. Adaptation for the EC is wedded to an economic rationality that emphasises synergies between adaptation and economic growth. Adaptation is seen first and foremost as having to be efficient and cost-effective, and the main policy instruments proposed are market-based. No systemic changes are seen as necessary; instead, adaptation ought to be mainstreamed (i.e. integrated) into existing EU institutions, policies and activities.
II. To that end, the policies link adaptation to established policy problems and agendas that are dealt with at the European level. Because the EC already has control over these other policy areas, it asserts itself as a central authority also on adaptation planning.
III. The documents mention some alternative approaches to adaptation (e.g. nationally driven or autonomous adaptation) but dismiss them as lacking 'effectiveness'. This implicitly safeguards against the emergence of alternative visions of what adaptation might consist of.
IV. Utopian and dystopian fantasmatic logics operate simultaneously in the policies, where the utopian logics are intimately tied to the logic of economic rationality, supporting the policies' overarching take on what adaptation is and how it should be put into practice. The dystopian logics help generate a sense of urgency and immediacy, and suggest that failing to address adaptation may threaten the EU as a whole.

Paper II contributes to knowledge on the politics of adaptation by demonstrating that there is a tension between the EU's declared ambition to act on adaptation and implicit suggestion that nothing has to change, because adaptation can be suffi-

ciently addressed through market and technological innovations and by being mainstreamed into existing sectoral policies. I conclude by suggesting that the European policy discourse effectively serves to depoliticise (i) the responsibility for the emissions that cause the climate to change, (ii) the underlying socio-political factors that not only shape who becomes vulnerable to such changes but also what adaptation measures are taken, and (iii) the unequal distribution of benefits and burdens of such responses. Adaptation thereby becomes a non-political issue. The political functions and ideological effects of the discourse are to empty the notion of adaptation of more radical or transformative possibilities and to hold political debate 'in check' so that the European apparatus, including its institutions, practices and paradigms, can remain unchanged. These findings stand in contrast to observations that '*the EU has emerged as an important, coherent and active source of climate policy innovation*' (Jordan et al. 2010b, 265). At least the domain of adaptation takes the form of doing only slightly more of what the Commission already does and, therefore, demonstrates rather little novelty.

Paper III

Logics, assumptions and genre chains: A framework for poststructuralist policy analysis

The lack of methodological precision is one of the critiques of Laclauian approaches to discourse studies. Even with the addition of the LA (Glynos and Howarth 2007), I was hard pressed to find studies that outline in any great detail how researchers have gone about their discursive analysis, as most applied studies skirt over questions of method. Responding to this lack of attention to analytical procedures and overcoming methodological challenges encountered when attempting to apply the LA for the analysis of EU policy, **Paper III** presents a detailed illustration of the analytical framework developed for **Paper II**. It specifically answers to the question of how social, political and fantasmatic logics can be empirically operationalised for the study of public policy. In order to do so, the paper constructs a framework for poststructuralist policy analysis that brings together the LA with more textually oriented tools developed within another approach to discourse studies, CDA, namely assumptions and genre chains.

In addition to this novel methodological contribution, the paper makes a number of tentative observations of relevance for future empirical studies and theory development within the LA:

I. The first observation concerns important overlaps between different logics. The *marginalising function* of political logics (discussed in Section 3) operates in conjunction with a *horrific fantasmatic* counterpart in order to *dismiss alternative courses of action* and conceal the contingency of the

proposed policy reform. The *beatific fantasy*, on the other hand, provides *reason* and *motivation* for why one should adapt at all, and follow the specific measures proposed in the policies.

II. The notion of *genre chains*, creatively appropriated to the novel framework, enables a more systematic analysis of the operation of political logics, especially in the arena of policy formation. Such a diachronic approach enables the examination of shifts in policy discourses over time, thus making genre chains a powerful tool for so-called *immanent critique* (Howarth 2005), where rather than imposing an outside, normative judgement on a policy discourse, *the text is turned against itself* by uncovering struggles, inconsistencies and foreclosures within the development of policy.

III. Looking at change over time through genre chains also reveals more *implicit*, marginalising omissions of political logics, besides more *explicit* dismissals of alternative policy options.

IV. The horrific dimension of fantasy appears to be an important device in the institution of adaptation policy. As the adaptation policy discourse 'matures', it shifts its emphasis to the beatific dimension of fantasy.

Paper III contributes to knowledge in the field of critical policy studies by outlining a novel framework for conducting policy analysis within PDT that offers a means through which the more implicit social and political logics can be examined. It contributes new insights to methodological debates around the use of the LA (and PDT more broadly), specifically in relation to critical policy analysis. Finally, it contributes to theory by identifying scope where more theory development is required, especially when it comes to the conceptual differentiation between social and political logics.

Paper IV

The affective dimensions of climate adaptation: Fantasy and future-making in German adaptation policy

There have been many critiques of conventional adaptation approaches (conceptualised as economically rationalist and techno-managerial), but the literature has so far not attempted to understand more about *how* they operate and what it is that makes them seem appealing. To respond to this gap, and attending to the broader question of why it is that in the context of adaptation '*current systems and paradigms are accepted and in some cases modified, but rarely critically questioned or challenged*' (O'Brien 2012, p. 669), **Paper IV** homes in on the discourse-theoretical notion of *fantasy*. It seeks to explore and critically explain in more detail (i) what the fantasmatic forces animating adaptation responses to climate change in German policy discourses are, (ii) how they operate, and (iii) what kind of ideological work

they do. Specifically, this is done through the qualitative text analysis of a selection of public documents that communicate the government's adaptation policy to the German public.

The key findings are:

I. German techno-managerial adaptation policy is sustained and legitimised through four fantasies, which I term (i) fantasies of control and preparedness that suggest climate change is manageable and risks are under control, (ii) fantasies of objectivity and reason that suggest adaptation choices logically follow from scientific assessments and are therefore not political, (iii) fantasies of a shared sense of place that rely on a network of culturally recognisable signifiers, and (iv) fantasies about the good life that promise an optimistic future – despite climate change.

II. Taken together, the four fantasies support a common narrative for how to understand and act in society to address climate change – primarily in a way that does not challenge social order.

III. Consequently, the fantasies act as a generator of political legitimacy for the techno-managerial adaptation policy, by portraying its version of adaptation as not only compatible with Germany's identities and highly conducive to people's sense of place, but as having people's 'best interests in mind'. Through a web of affective anchor points for national enjoyment, the policies provide individuals uncertain over their future with a clear sense of who they are (Germans) and course of action (to carry on as before).

Paper IV contributes to knowledge of the politics of adaptation by (i) introducing a novel theoretical perspective to adaptation research and (ii) empirically demonstrating how adaptation in the German case is intrinsically intertwined with identity projects, in the sense that government policy is supported by fantasmatic elements that speak to non-rational desires and provide important affective anchor points for national and collective identification. In so doing, **Paper IV** attends to an important gap in previous research on the politics of adaptation, by beginning the process of developing a theoretically grounded conceptualisation of the subject and identification processes in adaptation. I argue that non-rational and affective dimensions are vital to the emergence of adaptation policy making and that paying attention to them is important if critical scholarship is to understand and intervene in the persistence of techno-managerial approaches to adaptation. **Paper IV** also contributes to the emerging field of *critical fantasy studies* (Glynos 2014) by broadening the analytical view on fantasy to include visual communicative modes in the policy communication as a way of looking for transgressive elements uttered 'between the lines'.

6. Synthesis and discussion

In this section I synthesise the overarching insights from the four papers, make judgments as to what can be learned from them collectively, relate these to the previous literature, and reflect on new questions that emerge. Before this discussion, I will return to the four inter-related research questions posed at the beginning:

RQ1: In what ways and by what discursive practices is adaptation constructed in different contexts?

RQ2: What are the political and ideological implications of these constructions?

RQ3: What are the practical implications of these constructions?

RQ4: How can the discursive construction of adaptation be empirically investigated through the LA and what insights can be gained into the politics of adaptation?

The following discussion is structured along these questions. The final section discusses the practical and theoretical implications of the findings, reflects on the limitations and provides suggestions for future research.

(RQ1) In what ways is adaptation constructed and by what discursive practices?

The first question concerns in what way climate adaptation is discursively constructed into a topic of concern. Despite the variety of cases analysed as part of this thesis, there are seven commonalities across the examined discourses that I would like to highlight:

First, confirming observations from previous research (Biesbroek *et al.* 2010, Lesnikowski *et al.* 2015), most of the discourses analysed in **Paper I–IV** are strongly informed by the hazards approach, meaning they reflect an exposure-based understanding of vulnerability that focuses on biophysical risk factors. The solutions proposed largely involve technical and corrective measures. By only making minor procedural adjustments at best and sometimes even (re)labelling existing actions as adaptive, they reflect a conservative approach to adaptation policymaking. In other words, they suggest doing only slightly more of what is already being done in

development circles, by the EU, and by the German government, thereby continuing on existing development paths.

Second, implementing adaptation through its mainstreaming into existing frameworks, policies, institutions and programmes is the favoured approach both of the EU policies and of the German national policy (**Papers II–IV**), even though evidence suggests that mainstreaming adaptation results only in limited implementation (Mimura *et al.* 2014). As with the previous observation, this finding also echoes adaptation responses across the world (Biesbroek *et al.* 2010, Lesnikowski *et al.* 2015).

Third, economic rationales in the sense of efficiency, effectiveness, and cost-benefits pervade the adaptation discourses in both the EU and the German case (**Papers II–IV**) in the sense that adaptation should not hamper economic development and growth and ideally contribute to these goals, and can be effectively addressed through market mechanisms. This is similar to findings in other areas, for instance the forestry sector (Andersson and Keskitalo 2018) Saving on future costs is one of the EU's central rationales for taking action on adaptation (**Paper II**).

Fourth, the discourses stop at the analysis of 'climate parameters' that render people affected by climate change, without taking an interest in the historical, socio-economic and political factors that make different individuals and communities vulnerable. For instance, the German policy (**Paper IV**) understands vulnerability mainly in regional and sectoral terms. The only social groups that are singled out as differently affected by climate are the elderly, children and people with chronic health issues, all factors that are 'natural' and independent from the social order, as opposed to differences in socio-economic status, ethnicity or level of education. The discourses therefore tend to take little notice of social or political drivers of vulnerability or the contexts in which adaptation interventions take place. The possibility for generating adverse impacts for some people through adaptation choices is not taken into consideration.

Fifth, the cases demonstrate that adaptation is not placed into a global context. **Paper I** fundamentally challenges the assumption that 'adaptation is local' (Nalau *et al.* 2015), by suggesting that the redistribution of vulnerability through adaptation is a serious and real risk that requires a fundamental rethinking of how to 'do adaptation', and the paper empirically demonstrates that this is largely ignored in adaptation practice at the international level. **Paper II** shows how the EU overlooks possible feedbacks between adaptation actions in different European regions and with other places outside of the EU (though the EC's (2018) evaluation report on the implementation of the EU Adaptation Strategy, which came after the publication of **Papers II** and **III**, places more emphasis on this risk and even speaks of adaptation as a 'global public good').

Sixth, concerning the logic of fantasy, there is a noticeable overlap between the European and the German policy discourse (**Papers II–IV**). Both emphasise the synergies between adaptation and economic (green) growth through enhancing trade and new business opportunities, uphold a fantasy of more and better knowledge, a

fantasy of control and manageability, and the fantasy of playing a leading international role. Where they differ, however, is when it comes to the European fantasy of reducing costs (**Paper II**), and the German fantasy of a shared sense of place (**Paper IV**). These are both unique to their discourse. Why this might be the case would be an important question for future research; here, I can only speculate. The strong operation of culturally (and nationally) recognisable signifiers in the German case examined is particularly interesting. Stavrakakis (2005) suggests that the absence of everyday experiences of enjoyment offered by European discourses, such as the sense of place fantasy potentially generates for the German public, is a general phenomenon within the EU, which has struggled to gain popular support. Future research might want to investigate whether fantasies of adaptation are commonly connected to a sense of place, and, more generally, what role national enjoyment plays in affective anchor points for other countries' or regions' adaptation policy. It would also be relevant to explore further whether the fantasies embedded in adaptation policy are specific to adaptation. In other words, whether the fantasmatic support structures in adaptation discourses differ from those in other areas of public policy.

Finally, the discourses reviewed in **Papers II** and **IV** call for ever more complete knowledge as a requirement for an effective adaptation. This idea is connected to the premise of rationality and based on the idea of a model of science-policy interaction whereby adaptation planning and implementation directly flows from scientific conclusions. This not only reflects a limited notion of the subject as rationalistic (see point made further below), but also overlooks the reality that adaptation is often not the only, or most important concern of decision- and policymakers (Klein and Juhola 2014), compared to issue areas that are perceived as more immediate such as economic development, unemployment, health, or national security.

(RQ2) What are the political and ideological implications of these constructions?

The second question regards what political and ideological work is done by these particular ways of constructing adaptation; as a simple adjustment, as being sufficiently 'covered' by mainstreaming, as supporting economic growth, as not having negative effects on people, as being a local or national concern disconnected from other places, and as depending primarily on the provision of more knowledge. Here I foreground four insights:

First, all the cases studied assume that existing political, economic and social institutions can implement adaptation sufficiently so that no structural aspects need to be addressed. As the case of German adaptation policy (**Paper IV**) shows, adaptation is incorporated into existing discourses so that it becomes emptied of more radical content and harmless to the social order. In the case of the EU, responses lie within the current spectrum of policy responses and leave existing paradigms unchallenged (**Paper II**). What is at stake are adaptation options within the current

system, but never the system itself. In Swyngedouw's (2013, p. 6) words; '*[d]isagreement is allowed, but only with respect to the choice of technologies, the mix of organizational fixes, the detail of the managerial adjustments, and the urgency of their timing and implementation, not with respect to the socio-political framing of present and future natures*'. In so doing, the discourses seek to preclude broader societal debate about the economic paradigm (based on economic growth and fossil fuel extraction) in which climate change is exacerbated and vulnerability created, and about alternative responses, and thereby prevent more profound, transformative change. To paraphrase Hajer (1997, p. 32), what might have appeared as a threat to the system, in fact, becomes a vehicle for its rejuvenation (Bloom 2016 observed similar discursive processes in response to the global economic crisis).

Second, in all my case examples, adaptation discourses – in academia, policy-making and development cooperation – are at pains to avoid the idea that addressing adaptation requires difficult trade-offs and may entail conflicts between different values, people, opinions and places. The review of international guidance documents and approved funding proposals under major international climate funds shows (**Paper I**), how these even overemphasise positive effects of adaptation, but (deliberately or accidentally) ignore possible adverse redistributive effects. As an extreme example, the (approved) project proposal for an adaptation intervention in Bangladesh estimates a staggering 10.4 million people (equivalent to nearly 7% of the country's total population) to *indirectly benefit* from the proposed intervention (GCF 2015). In the German policy (**Paper IV**), the fantasy of objectivity and reason serves as a means to suggest that 'objective' scientific assessments will give clear indications about '*what can and must be done*' (BMU 2009, p. 33) in regards to adaptation. These examples show that adaptation responses are represented as free of difficult – and therefore political – choices.

Third, the German and European policy discourses (**Papers II** and **IV**) serve to stake out the governments' claim for their important role in adaptation planning and implementation. Both use adaptation as a way to highlight their important role nationally, and beyond the scope of their borders. For instance, the German policy (**Paper IV**) emphasises the country's international leading role within the UNFCCC and the EU and in the development aid context.

Fourth, these insights on the political functions of conventional adaptation discourses lead me to another important point: While, as discussed in the background section, previous research has observed that in many places adaption research and practice is bound to depoliticising movements (Cannon and Müller-Mahn 2010, Eriksen *et al.* 2015, Ojha *et al.* 2015, Schulz and Siriwardane 2015, Smucker *et al.* 2015), my work substantiates these observations, by empirically exploring what discursive practices function as depoliticising building blocks. In the cases examined in this thesis, there are two important ones: First, *the homogenisation of the social space*, by which I mean the disocurses not only gloss over disparities that exist between people (as for instance in the European case, **Paper II**), but also actively

seek to consolidate and reproduce a seemingly homogenous and collective whole (as the German discourse**, Paper IV**, demonstrates). Second, as I discuss in **Paper IV**, upholding the virtue of scientific rationality is in a way another depoliticising move, in that it depicts decisions around adaptation as relatively straightforward and 'politically neutral' *because* they are derived from 'objective' science. Futhermore, drawing on the European discourse, I observe what I call a 'triple depoliticisation' of the responsibility for climate change, of the differentiated impacts and vulnerabilities and of adaptation benefits and costs (**Paper II**).

(RQ3) What are the practical implications of these constrctions?

The third question raised is how these conceptualisations matter for addressing adaptation in the real world. It is worth reiterating here that I have not studied the implementation of the respective adaptation discourses in practice. Nevertheless, the findings emerging from this thesis do point to a number of ways in which the analysed discourses in research, policy and guidance documents will likely have implications for putting adaptation to work in the world.

Even for those not pursuing a transformative agenda, the way in which adaptation is currently conceptualised has at least three concerning implications for its overall effectiveness in preparing societies for the impacts of climate change. First, the case of the EU implies (**Paper II and III**), that the EC articulates adaptation in a way that avoids significant policy shifts and reproduces rather than reforms the status quo, raising questions about whether the weak remedial measures proposed do much to prepare the region for the impacts of climate change. In a similar vein, the German policy inventorises existing action rather than assessing new needs and potential responses (**Paper IV**). These responses reflect an incremental approach to adaptation (Pelling 2011, Kates *et al.* 2012, Gillard *et al.* 2016), even when it is increasingly evident that such an approach will not generate a net positive outcome and is likely to be insufficient as a response to the issues raised.

Second, in the case of adaptation action at the international level, **Paper I** suggests that how adaptation is conceptualised across a wide range of activities that guide adaptation practice might mean that interventions unknowingly redistribute risk and vulnerabilities from one place to another to make some people – likely those not in a position to influence agendas – more vulnerable, rather than leading to a net reduction of vulnerability. This may pose a risk to systemic stability at the global level in the sense that accumulating vulnerabilities amongst some people may eventually 'backfire' on places and people more privileged in the global system, and thus puts the recently declared Global Goal on Adaptation (UNFCCC 2015) into question.[42]

—

[42] To be clear, I am not suggesting to securitise, let alone weaponise, adaptation (Thomas and Warner 2019). The point I am making is merely that ignoring redistributive effects is too risky and means that adaptation interventions remain ineffective.

Third, linked to the premise of rationality and the quest for more and better knowledge (see also Nightingale *et al.* 2019), the adaptation discourses examined here are overconfident in terms of the underlying science that informs them, an aspect that I discuss particularly in the German case (**Paper IV**). This raises the possibility of problematic path dependencies of adaptation responses, where uncertainties in climate projections are overlooked.

(RQ4) How can the discursive construction be investigated and what can we learn from it?

Responding to calls *'for more conceptually embedded research on the political, institutional and normative dimensions of adaptive processes*' (Schulz and Siriwardane 2015, p. 11), the fourth and final question concerns how the politics of adaptation can be investigated with a discourse-theoretical perspective and what insights can be gained from this. While discourse studies have been employed in a number of ways in the context of climate change (Anshelm and Hultman 2015) and environmental studies more broadly (Hajer and Versteeg 2005, Dryzek 2013), most research on adaptation discourses has used the term discourse in a very narrow sense, as something restricted to *language* or *arguments*. There is very limited experience in operationalising the work of discourse theorists like Laclau and Mouffe to the analysis of adaptation (see Manuel-Navarrete and Pelling 2015 for one exception).

Examining the different ways in which adaptation is represented through the conceptual vocabulary of the *logics* has proven a useful heuristic device for capturing different political dimensions of adaptation processes, bringing the politics inherent in adaptation decision-making and the contingent processes of their emergence to light. This provides a number of novel insights for understanding the politics of adaptation. *Social logics* have equipped me with a tool for uncovering implicit and undiscussed assumptions, values and norms that construct adaptation discourses and make up the 'discursive repertoire' from which interventions can be constructed. *Political logics* have helped me understand how meanings and practices around adaptation emerge or become sedimented, and which the silenced or excluded perspectives are. For instance, in the European case (**Paper II**), I discuss how earlier concerns around the cooling of nuclear power plants, the potential for maladaptation and visions for alternative approaches to adaptation, such as ecosystem-based and participatory approaches, have been silenced over time and do not feature in the final strategy document. Showing how aspects of the understanding of adaptation have been changed over time in different policy versions, for instance, can open up space for critical reflection and points to possibilities for how to 'reactivate' elements that have been excluded or concealed in the development of adaptation choices. Finally, *fantasmatic logics* provided me with insights into how specific understandings of adaptation are justified and explained and, importantly, how they affectively attempt to 'win over' their audience. As elaborated above, this is an

aspect that has not gained much attention in adaptation research. In the German case (**Paper IV**), I found that one important place that designates such an affective 'place of identification' in the government's adaptation policy is the construction of a seemingly shared *sense of place* and *way of life*. By suggesting that a deeper engagement with the role of identification and affect is required, this thesis also raises attention to the overly simplistic way in which the subject is conceptualised as individualistic and rationalistic in much of adaptation literature and points to the need for more conceptual work on the role of subject.[43]

And finally, at a more methodological level, the combined analyses also demonstrate that there is a lot of 'politics' going on in the adaptation policies and guidance documents examined (and in the images supporting them), so they can and should be reframed as '*active political sites*' (Bäckstrand and Lövbrand 2016, p. 2) in and of themselves, not simply as outcomes of political processes, and form part of future studies on the politics of adaptation. To the best of my knowledge, **Paper IV** is a first attempt at engaging with visual adaptation material. Future adaptation research may want to pay closer attention to persuasive strategies in other communicative modes besides text and speech. In sum, deconstructing the 'inner workings' of adaptation discourses through PDT and the LA has made the political construction processes and especially their depoliticising building blocks much more visible.

However, as a cautionary remark, while PDT can offer such valuable contributions to critical adaptation research, it is also important to acknowledge that some points of tension might arise with existing scholarship that is influenced by different (philosophical) traditions. This is due to PDT's ontological assumptions – especially the radical contingency of social reality – which might conflict with normative perspectives of calls for transformative adaptation, as its ontological acknowledgement implies that any values on which adaptation responses are based are necessarily contingent and hegemonic. PDT may also conflict with research that seeks to have a more immediate practical application for adaptation and may not see value in delving into questions of theory. This is a common concern, as '*research that takes a critical perspective tends to be eschewed in favour of that which appears to have a more practical application*' (Bulkeley 2019, p. 11).

—

[43] The adaptation literature is inflicted with what Howarth (2005, p. 4) calls '*overly simplistic models of human action and functionalist explanations of structural changes*', where the underlying assumption is that people will adjust in a rationalist and *homo-economicus* kind of way once they are provided with sufficient scientific information about the expected changes in climate. Whereas in many other theoretical fields there has been an increased attention to the role of emotion and affect (the so-called 'affective turn') (e.g. Anderson and Smith 2001, Baum 2015, Gunder 2015); in adaptation research simplistic views on human subjects persist. Such scant attention to the actors of adaptation – human subjects – is especially surprising for a research field that is concerned with the ways in which people prepare for the impacts of climate change and, hence, social change.

Section synthesis: 'Doing something' without doing too much at all

Over the past few decades the figurative call for '*Adaptation Now!*' (Adger *et al.* 2009, Taylor 2015 , Global Commission on Adaptation 2019) has come to occupy a permanent place in scholarly and political debates and has risen as a new development paradigm around which funding increasingly coalesces (Adger *et al.* 2009, Ireland 2012, Weisser *et al.* 2014, Taylor 2015, Watts 2015, Bose 2016, Webber 2016). Adaptation has become an 'urgent matter' and '*there is an almost anonymous* [sic!] *agreement that adaptation is essential in the face of ever advancing climate chang*e' (Bauriedl and Müller-Mahn 2018, p. 275).

Confirming earlier work, the papers gathered in this thesis find, however, that this call appears not to have led to significant responses. The (policy) discourses examined are strong on rhetoric about climate change but actually lacking in substantive suggestions of how to respond to it. This points to a paradox in adaptation practice, in the sense that adaptation makes it onto the political agenda but then becomes emptied of more radical or socially progressive intent and turns largely into reform gestures. The seemingly urgent call for 'Adaptation Now!' turns into a much more tentative 'Adaptation, now?'.

If these kinds of approaches do not help us adapt well for a future under climate change, then, what work are they performing? And why is it that these representations of adaptation persist, why are they '*affectively evocative*' (Kølvraa 2018, p. 1414), or at least not evoking any outspoken opposition or critique? The findings from the four papers tentatively offer two suggestions for why this might be the case, pointing to the way in which adaptation enters the public domain and how adaptation discourses in policy and guidance speak to their audiences. First, while there is some general debate around autonomous, bottom-up and community-based adaptation, current approaches to adaptation planning and implementation largely emerge in a top-down fashion, from *within* established institutions, governments and organisations that are (at least in part) responsible for producing climate change and social vulnerabilities in the first place. By domesticating adaptation into existing discourses of economic development, for instance these established authorities seek to circumnavigate the symbolic dislocation that could arise from the growing awareness that climate change is caused by 'our way of life' and therefore threatens to reveal the contingency of social reality and a system that is addicted to economic growth and fossil fuels. In order to subvert more socially progressive or radical intent and, therefore, the potential activation of (more) political agency they capture the new issue area that is adaptation and absorb it into its existing discursive structure. So they do a little to cover the potential dislocation, but not enough to really change things (this is similar to Dryzek's (2013) observations of responses to environmental issues more generally). As a case in point, the analysis of European policy (**Papers II and III**) demonstrates how adaptation is

discursively domesticated into existing discourses on economic and development discourses. This suggests that adaptation approaches emerging from such established governing bodies are unlikely to question the status quo and promote more systemic changes (unless pushed into action by massive popular demand). These are not likely the places from which profound change will spring. Critical researchers have to stop assuming that radical changes are attainable through the existing authorities (see also Manuel-Navarrete and Pelling 2015).

This appropriation and emptying of radical content by established authorities has in part been made possible by the ambiguity of the term 'adaptation' itself. While the vagueness of the term has been widely acknowledged as a concern (Dupuis and Biesbroek 2013, Tompkins *et al.* 2018), this ambiguity might in fact be an important reason for adaptation's seeming success (to reiterate the current 'coverage' of adaptation policies; 25 of the EU's 28 members have an adaptation strategy). This ambiguity has enabled adaptation to be employed flexibly to mean almost anything (and nothing).

The second suggestion for why certain unambitious approaches to adaptation are so prevalent relates to identification processes. In avoiding the symbolic dislocation caused by climate change, the discourses examined in this thesis provide their subjects with affective forms of identification that serve to reinstitute a threatened sense of identity. The fantasies contained in the German government brochures (**Paper IV**), for instance, operate to retain seeming control over an uncertain future and provide its audience with attractive anchor points for identification such as those of 'the rational German' and a shared sense of place. While it is important to reiterate that I have not empirically studied how those addressed by these fantasies receive them, so far, it seems, the promises made to the wider public and the points of identification offered successfully pacify political challenge. At least we have not reached a moment of 'true' dislocation, where communities across the globe are moved by climate change (not in a physical, but in a symbolic, emotional sense), to such a degree that the established discourses can no longer account for the emerged problem within their own discursive systems.

Both of these discursive mechanisms, domesticating adaptation and providing attractive fantasies, require more detailed empirical analysis, but they are important because they serve to avoid the formation of social groups or other collectives to arise with more bold requests for social and political change. In a first attempt at exploring these mechanisms conceptually, the thesis, therefore, provides important insights on how conventional approaches to adaptation manage to prevail and receive little contestation, despite the stated paradox that they are unlikely to effectively prepare for the impacts of climate change.

Relatedly, the thesis also points to two 'black boxes' of adaptation research, in that there is *something at work* in adaptation discourses that research has not considered seriously: the redistribution of vulnerability, which I argue jeopardises the entire adaptation effort made so far (**Paper I**), and the role of affect and non-

rational investment (**Paper IV**). While, as I discuss above, the first should be concerning for anyone working in the research field, the second black box, as I argue in **Paper IV**, is particularly relevant for research that aims to be critical (Bauriedl and Müller-Mahn 2018, Klepp and Chavez-Rodriguez 2018b). If such critical research is to have an effect on people's and societies' adaptation choices, then it must aim to engage with the notion of the subject beyond an essentialist and rationalist view of human beings where people 'hold' certain values or assumptions, as the '*acceptance of and obedience to [discursive] authority is not reproduced only at the level of knowledge and conscious consent, but also – and importantly – at the level of fantasy*' (Glynos and Stavrakakis 2008, p. 268). While, as discussed in the background section, a growing number of studies examine the discursive dimension of adaptation, few consider the central role that affect plays in adaptation responses to climate change.

What is more, work on fantasy suggests that looking for and 'removing' barriers to more transformative adaptation (Kates *et al.* 2012), considering alternative knowledges (Nightingale *et al.* 2019) or democratising adaptation (Mikulewicz 2018) might not be the way forward – as discourses do not become dominant because they are most rational (Laclau 1994). In the same vein, it suggests that simple critiques of mainstream adaptation do not, in and of themselves, provide sufficient affective purchase to change current trends in adaptation policy development (they may even serve to fortify existing fantasies, see Bedall 2015, and Warner *et al.* 2019). Instead, in order to construe *real alternatives* to techno-managerial adaptation we need *alternative fantasies* that capture people's imagination and provide them with modes of political identification. Critical research might especially explore why alternative approaches to adaptation not explored in this thesis (but elsewhere, see Remling and Veitayaki 2016), such as community-based approaches (CBA), or ecosystem-based approaches, do not seem to make inroads into the main discourse and whether this might be related to a lack in affective energy.

Though I have only explored three cases in this thesis, the observations suggest that the political ends to which adaptation discourses are employed, for instance depoliticising moves and sustaining market logics, might also operate in similar ways in other empirical contexts that are influenced by economic-rationalist thinking. Gillard and colleagues (2016, p. 258) observe that '*the governments and industries of most wealthy countries – and the international institutions they dominate – have predominantly sought to reform rather than rethink the social and economic arrangements responsible for anthropogenic climate change, for example, through ecological modernization and green capitalism*' (see also Waller and Barnett 2015 for examples from Australian adaptation policy). This raises attention to the *ideological character* of the phenomenon of adaptation and the wider context in which it emerges, in that established ways of thinking about adaptation – in academic, policy and development discourse – in different places seem to be surprisingly similar. While this observation requires more empirical research, it might

be that the relatively global phenomenon of a 'capitalist way of life', whose market economies, governments and people are addicted to economic growth and fossil fuels, plays a key role in producing these similarities (the prominent role of the depoliticised notion of adaptation in the IPCC might be another one). In that sense, the thesis project contributes to an enhanced understanding of the discursive context that shapes and constrains adaptation processes in more general terms.

What would more substantial and radical adaptation look like? Stakeholder dialogues and participatory approaches have been suggested as one way forward, but Oels (2019, p. 144) demonstrates how such participations are '*technologies of government*' where more often than not they are a means of containment rather than empowerment. Besides the discussion around transformation (which has been critiqued for its overly simplistic separation between incremental and transformative change, see Fazey *et al.* 2018), more recently, scholars have argued for democratising adaptation (Mikulewicz 2018) and for performative resistance (Oels 2019). Similar to these latter suggestions, the proposition I come to at the end of this thesis is not so much a suggestion for concrete *goals* or *specific forms* of adaptation to be achieved, but rather a suggestion for the *modes* or *strategies* through which to achieve them. If we understand that climate change can no longer be stopped and that severe impacts are inevitable, important question become which values do we want to persist in a climate-changed future, how do we protect that which we value and what might we need to let go.[44]

—

[44] I also acknowledge that there is the possibility of alternatives that are even less desirable than techno-managerial approaches, such as weaponising vulnerability, calls for elite fortification or even 'climate apartheid' (Harvey 2019, Thomas and Warner 2019).

7. Concluding remarks: Making adaptation uncomfortable

Given that climate change is likely to have profound impacts on the planet, its ecosystems and the species relying on them (including us humans), responses to anthropogenic climate change should prompt a reflection on the very assumptions, beliefs and paradigms that lead us to this situation (O'Brien, 2016). Yet, in a climate of immediate urgency, adaptation is often normalised as a necessary response, a problem-free process believed to be politically neutral (O'Brien and Selboe 2015b, Andersson and Keskitalo 2018), without lingering on more fundamental and critical questions about the 'rules of the game' by which responses are imagined, shaped and evaluated, or the implications of the proposed changes for society. This is in stark contrast to mitigation, which has been considered much more controversial and highly political and has, as a result, gained considerable attention by critical scholars (Oels 2005, 2013, Lovell *et al.* 2009, Lövbrand and Stripple 2011, 2012, Randalls 2011, Stephan 2012, Methmann and Rothe 2012, Bettini 2013, Stephan *et al.* 2013, Fleming *et al.* 2014, Methmann and Oels 2015, Stripple and Bulkeley 2015, Bäckstrand and Lövbrand 2016).

Against this background, this thesis set out to analyse and critically explain the discursive political processes by which adaptation is imagined as a topic of concern, by exploring new pathways for conducting such research in a theoretically and methodologically consistent manner. The collective work of this thesis makes case to adaptation scholars for discursive analysis as a significant tool to reinsert politics into current research. This alone cannot, of course, address and solve complicated questions around maladaptation, redistributive effects, or social equity and justice, to name but a few, but my argument is that one direction for such *politicised* adaptation research is to engage with recent developments in social and political theory that provide crucial analytical concepts for understanding the political processes that mediate adaptation policy, planning and implementation.

It is my hope that such (re)politicisation of adaptation can carve out space for more critical reflection and discussion, contestation and confrontation with alternatives, and a widening of social repertoires of action on adaptation. As Keskitalo and Preston (2019a, p. 488) recently proposed, '*[t]his may necessitate rethinking what constitutes and adaptation researcher and what disciplinary traditions are relevant*'. This is something pertinent at a time when many adaptation responses are surprisingly similar (Biesbroek *et al.* 2010) and evidently attempt to escape politics, thereby risking becoming post-political (Swyngedouw 2010, Kenis and Lievens

2014), and – frankly – irrelevant, as they lead into unsustainable futures and not towards more adapted societies.

As others have pointed out for adaptation policy in general (Biesbroek *et al.* 2010), the policies and discourses I have examined here (especially in the EU and in Germany) represent the start of a policy process rather than its final state. However, this does not mean that they should be let off easy. To the contrary, it is these planning processes through which adaptation is imagined, before concrete activities are planned and implemented, that initial ideas take shape, rules are formed and defined that come to represent what adaptation means and how it is put into practice in the world. Given the potential for ineffective and even maladaptive pathways, and that we are at a critical point in the public sense-making with activities currently in their infancy expected to be scaled-up in the years to come, now is high time to intervene.

While I am evidently driven by a commitment to an agenda for change, delving into the discursive politics of adaptation does not automatically and necessarily produce prescriptive guidelines on how to do adaptation 'right'. Nor does it imply that there is one definitive way that will avoid inequitable or unjust outcomes. Unquestionably, climate change poses a significant challenge to the wellbeing of people and requires societal responses and adjustments; however, decisions will always encompass exclusions of certain responses, demands and people. As a result, there will inherently be winners and losers, also in other, more socially progressive or radical ways of preparing societies for the impacts of climate change.

What *is* important is that these dilemmas are not brushed over in the name of urgency, but brought into the limelight by practitioners, scholars and the wider public. I believe that adaptation practice needs to be much more explicit about the inherent politics in order to become relevant. I propose therefore, that adaptation planning and implementation ought to be more openly uncomfortable. By this I mean to say, leaning on Mouffe (2005), that adaptation ought to be thought of in a *political* way, requiring genuine political disagreement and making, sometimes uncomfortable, choices between conflicting alternatives, rather than pretending political questions are mere technical issues to be managed away by experts.

As for research, we need a more *politicised* view on adaptation and to engage with unconventional theories and methods that can help us with the task of making adaptation uncomfortable and openly discuss difficult questions such as what acceptable levels of vulnerability are, who will be vulnerable and to what type of events. Whether we agree with this particular approach of thinking about how science and policy interact or not, in an era of evidence-based policy making the voices of researchers are strong currency. This means that I see a particular ethical responsibility of researchers, who cannot stand independent from political struggles but are always inherently part of them (see also Bendell 2018). Not to engage in critical political analysis, especially in times like these, is to risk committing to practically irrelevant analysis, what Nightingale and colleagues (2019, borrowing from

Ghosh 2016) have called the *Great Derangement* of adaptation research. Climate change is too serious and pressing for that.

Importantly, the approach advocated in this thesis does not require subscribing to a pessimistic perspective or helpless view on the future. To the contrary, with the recognition that both the causes of climate change and the normalised responses to it are socially constructed, comes the realisation that they can be also be deconstructed and (re)politicised (Mouffe 2005). No discourse, no matter how hegemonic, can be completely shielded from contestation, as it is constantly re-articulated and its boundaries continuously redrawn. In the making of meaning people matter and have important political agency (O'Brien 2015), as it is through collective social action performed every day that discourses maintain (or lose) their 'grip' and social order is (re)created. I have pointed to fantasy as one example where such a re-politicising lever might be applied, for through giving energy to alternative political projects they can become powerful vehicles for social change. The recent global climate movements Fridays for Future and Extinction Rebellion might point to some such undisciplined and disruptive ways of rearticulating responses to climate change. People have an '*entangled, collective impact*' (O'Brien 2016, p. 619), and the realisation that there could always be other, potentially different ways of articulating discursive elements can be the basis for more radical political action on adaptation.

Epilogue: How might we imagine adaptation otherwise?

Towards the very end of my PhD journey I came across Bendell's (2018) thought-provoking proposition that the idea of adaptation making any contribution to coping with climate change is a fruitless exercise, and that instead we should prepare ourselves for the '*inevitable collapse, probable catastrophe and possible extinction*' (2018, p. 19) and '*that it is time we consider the implications of it being too late to avert a global environmental catastrophe in the lifetimes of people alive today*' (2018, p. 6). So, what now? What does my thesis mean in light of such a dire outlook, that there is no effective response to climate change?

The accelerating changes in our environment are frightening. I share Bendell's (2018) general contention that we can not 'absorb' the impacts of climate change and carry on as before, largely unchanged as societies, or even capitalise upon the changes through increased crop yields or growing tourism, as some optimistically suggest. For that to happen we would have had to curb emissions decades ago. But I am not quite ready to give up and go into survival mode.

What a climate-changed future will look like is highly uncertain. We don't know what the climate will be in different locations. But what is becoming increasingly clear is that the conventional approach that has persisted the past 15 years or so – 'let's wait and see' – is not enough. Neither are 'playing by the rules' approaches that fear too drastic proposals will only fall on deaf ears and shy away from 'ruffling the feathers' too much in fear of not being invited to play at all. They just serve to legitimise depoliticised and ineffective versions of adaptation. While I evidently focused my analysis on adaptation visions by those in positions of power, it does not seem to be the case that bold action is absent because opponents of change squash attempts at reform (in fact, attempts at reform seem rather moot from where I stand), but rather because the ways in which adaptation gets absorbed into, and subsumed under, existing economic growth discourse subverts more progressive intent.

Yet, I remain hopeful. As I write these lines, an emerging climate activism movement with a newfound boldness, led by young people across the globe, openly challenges the existing paradigm of economic growth. It is disrupting procedures, delegitimising globalised discourses of what it means to develop well and calling for drastic shifts in societal systems, not just slightly greener versions of the same market and economic growth-oriented societies. While it is too early to tell, these passionate movements might just be the social and political contestation and struggle that can help dislocate the status quo, envision alternative social imaginaries and ignite more radical or bold political action for climate change in general,

and for adaptation in particular. As with problems that cannot be fixed with the same mindset that created them, maybe it should not be not up to those in power, who stood by and let climate change unfold, to decide what kind of future we wish to live in.

References

Adger, W.N., Arnell, N.W., and Tompkins, E.L., 2005. Successful adaptation to climate change across scales. *Global Environmental Change*, 15 (2), 77–86.

Adger, W.N., Lorenzoni, I., and O'Brien, K.L., 2009. Adaptation now. *In*: W.N. Adger, I. Lorenzoni, and K.L. OBrien, eds. *Adapting to Climate Change*. Cambridge: Cambridge University Press, 1–22.

Agence France-Presse, 2019. Iceland holds funeral for first glacier lost to climate change. *The Guardian*, 19 Aug.

Anderson, K., 2015. Duality in climate science. *Nature Geoscience*, 8 (12), 898–900.

Anderson, K. and Smith, S.J., 2001. Editorial: Emotional geographies. *Transactions of the Institute of British Geographers*, 26 (1), 7–10.

Andersson, E. and Keskitalo, E.C.H., 2018. Adaptation to climate change? Why business-as-usual remains the logical choice in Swedish forestry. *Global Environmental Change*, 48, 76–85.

Anshelm, J. and Hultman, M., 2015. *Discourses of global climate change: apocalyptic framing and political antagonisms*. Abingdon and New York, Routledge.

Arora-Jonsson, S., 2011. Virtue and vulnerability: Discourses on women, gender and climate change. *Global Environmental Change*, 21 (2), 744–751.

Atteridge, A. and Remling, E., 2013. *The indirect effects of adaptation: Pathways for vulnerability redistribution in the Colombian coffee sector*. Stockholm: Stockholm Environmnent Institute (SEI), SEI Working Paper No. 2013-10.

Bacchi, C., 2000. Policy as Discourse: What does it mean? Where does it get us? *Discourse: Studies in the Cultural Politics of Education*, 21 (1), 45–57.

Bacchi, C., 2009. *Analysing policy: what's the problem represented to be?* Frenchs Forest: Pearson.

Bäckstrand, K. and Lövbrand, E., 2015. *Research Handbook on Climate Governance*. Cheltenham: Edward Elgar Publishing.

Bäckstrand, K. and Lövbrand, E., 2016. The Road to Paris: Contending Climate Governance Discourses in the Post-Copenhagen Era. *Journal of Environmental Policy & Planning*, 1–19.

Barnett, J. and O'Neill, S., 2010. Maladaptation. *Global Environmental Change*, 20 (2), 211–213.

Bassett, T.J. and Fogelman, C., 2013. Déjà vu or something new? The adaptation concept in the climate change literature. *Geoforum*, 48, 42–53.

Baum, H., 2015. Planning with half a mind: Why planners resist emotion. *Planning Theory & Practice*, 16 (4), 498–516.

Bauriedl, S. and Müller-Mahn, D., 2018. Conclusion. The politics in critical adaptation reserch. *In*: S. Klepp and L. Chavez-Rodriguez, eds. *A critical approach to climate change adaptation: discourses, policies, and practices*. London and New York: Routledge/Taylor & Francis Group, 275–287.

Bedall, P.T., 2015. 'Climate justice', 'green economy' or 'a one planet liefestyle'. Hegemonic narratives in transnational NGOs and social movements. *In*: C. Methmann, D. Rothe, and B. Stephan, eds. *Interpretive approaches to global climate governance.* Abingdon and New York: Routledge, 198–216.

Bendell, J., 2018. *Deep Adaptation: A Map for Navigating Climate Tragedy*. Cambridge: Institute of Leadership and Sustainability (IFLAS), IFLAS Occasional Paper 2.

Berglez, P. and Olausson, U., 2014. The Post-political Condition of Climate Change: An Ideology Approach. *Capitalism Nature Socialism*, 25 (1), 54–71.

Bettini, G., 2013. Climate Barbarians at the Gate? A critique of apocalyptic narratives on 'climate refugees'. *Geoforum*, 45, 63–72.

Bettini, G., 2014. Climate migration as an adaption strategy: de-securitizing climate-induced migration or making the unruly governable? *Critical Studies on Security*, 2 (2), 180–195.

Bettini, G., 2015. (In)convenient convergences. 'Climate refugees', apocalyptic discourses and the depoliticization of climate-induced migration. *In*: *Interpretive approaches to global climate governance. (De)constructing the greenhouse*. London: Routledge, 122–136.

Biagini, B., Bierbaum, R., Stults, M., Dobardzic, S., and McNeeley, S.M., 2014. A typology of adaptation actions: A global look at climate adaptation actions financed through the Global Environment Facility. *Global Environmental Change*, 25, 97–108.

Biesbroek, R., Swart, R.J., Carter, T.R., Cowan, C., Henrichs, T., Mela, H., Morecroft, M.D., and Rey, D., 2010. Europe adapts to climate change: Comparing National Adaptation Strategies. *Global Environmental Change*, 20 (3), 440–450.

Birkenholtz, T., 2012. Network political ecology: Method and theory in climate change vulnerability and adaptation research. *Progress in Human Geography*, 36 (3), 295–315.

Bisaro, A., Wolf, S., and Hinkel, J., 2010. Framing climate vulnerability and adaptation at multiple levels: Addressing climate risks or institutional barriers in Lesotho? *Climate and Development*, 2 (2), 161–175.

Blaikie, N.W.H., 2009. *Designing social research: the logic of anticipation*. 2nd ed. Cambridge and Malden: Polity Press.

Bloom, P., 2016. Back to the capitalist future: Fantasy and the paradox of crisis. *Culture and Organization*, 22 (2), 158–177.

BMU - Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, 2009. *Dem Klimawandel begegnen. Die Deutsche Anpassungsstrategie*. Berlin: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU).

BMU - Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, 2012. *Aktionsplan Anpassung der Deutschen Anpassungsstrategie an den Klimawandel*. Berlin: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU).

Bose, P.S., 2016. Vulnerabilities and displacements: adaptation and mitigation to climate change as a new development mantra. *Area*, 48 (2), 168–175.

Bringer, J.D., Johnston, L.H., and Brackenridge, C.H., 2004. Maximizing Transparency in a Doctoral Thesis: The Complexities of Writing About the Use of QSR*NVIVO Within a Grounded Theory Study. *Qualitative Research*, 4 (2), 247–265.

Brown, K., 2011. Sustainable adaptation: An oxymoron? *Climate and Development*, 3, 21–31.

Bulkeley, H., 2019. Navigating climate's human geographies: Exploring the whereabouts of climate politics. *Dialogues in Human Geography*, 9 (1), 3–17.

Cameron, E.S., 2012. Securing Indigenous politics: A critique of the vulnerability and adaptation approach to the human dimensions of climate change in the Canadian Arctic. *Global Environmental Change*, 22 (1), 103–114.

Cannon, T. and Müller-Mahn, D., 2010. Vulnerability, resilience and development discourses in context of climate change. *Natural Hazards*, 55 (3), 621–635.

Castree, N., Adams, W.M., Barry, J., Brockington, D., Büscher, B., Corbera, E., Demeritt, D., Duffy, R., Felt, U., Neves, K., Newell, P., Pellizzoni, L., Rigby, K., Robbins, P., Robin, L., Rose, D.B., Ross, A., Schlosberg, D., Sörlin, S., West, P., Whitehead, M., and Wynne, B., 2014. Changing the intellectual climate. *Nature Climate Change*, 4 (9), 763–768.

CAT - Climate Action Tracker , 2018. *Warming Projections Global Update*. Berlin: Climate Analytics and New Climate Institute. Available from: https://climateactiontracker.org/documents/507/CAT_2018-12-11_Briefing_WarmingProjectionsGlobalUpdate_Dec2018.pdf [Accessed 9 Sep 2019]

Chandler, D. and Reid, J., 2016. *The neoliberal subject: resilience, adaptation and vulnerability*. London: Rowman & Littlefield International.

Clouser, R., 2016. Nexus of Emotional and Development Geographies. *Geography Compass*, 10 (8), 321–332.

de Coninck, H., Revi, A., Babiker, M., and Bertoldi, P., 2018. Strengthening and Implementing the Global Response. *In*: V. Masson- Delmotte, P. Zhai, and H.-O. Pörtner, eds. *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Cambridge: Cambridge University Press.

Death, C., 2014. Critical, environmental, political: an introduction. *In*: C. Death, ed. *Critical environmental politics*. London and New York: Routledge, Taylor & Francis Group, 1–12.

Dewulf, A., 2013. Contrasting frames in policy debates on climate change adaptation. *Wiley Interdisciplinary Reviews: Climate Change*, 4 (4), 321–330.

Dodman, D. and Mitlin, D., 2014. The national and local politics of climate change adaptation in Zimbabwe. *Climate and Development*, 1–12.

Dryzek, J., 2013. *The Politics of the Earth: Environmental Discourses*. 3. ed. Oxford: Oxford University Press.

Dupuis, J. and Biesbroek, G.R., 2013. Comparing apples and oranges: The dependent variable problem in comparing and evaluating climate change adaptation policies. *Global Environmental Change*, 23 (6), 1476–1487.

EC - European Commission, 2018. *Report on the implementation of the EU Strategy on adaptation to climate change*. Brussels: European Commission, Report from the European Commission to the European Parliament and the Council.

Eguavoen, I., Schulz, K., Wit, S. de, Weisser, F., and Müller-Mahn, D., 2013. *Political dimensions of climate change adaptation. Conceptual reflections and African examples.* Bonn: Center for Development Research (dept. ZEFa), Working Paper 120.

Eriksen, S. and Brown, K., 2011. Sustainable adaptation to climate change. *Climate and Development*, 3 (1), 3–6.

Eriksen, S.H., Nightingale, A.J., and Eakin, H., 2015. Reframing adaptation: The political nature of climate change adaptation. *Global Environmental Change*, 35, 523–533.

European Union, 2019. *Closer to the Citizens, closer to the ballot. Spring Eurobarometer 2019*. Brussels: Public Opinion Monitoring Unit withinthe Directorate–General for Communication (DG COMM) of the European Parliament.

Fairclough, N., 2003. *Analysing discourse: textual analysis for social research*. London: Routledge.

Fairclough, N., 2013. Critical discourse analysis and critical policy studies. *Critical Policy Studies*, 7 (2), 177–197.

Fazey, I., Moug, P., Allen, S., Beckmann, K., Blackwood, D., Bonaventura, M., Burnett, K., Danson, M., Falconer, R., Gagnon, A.S., Harkness, R., Hodgson, A., Holm, L., Irvine, K.N., Low, R., Lyon, C., Moss, A., Moran, C., Naylor, L., O'Brien, K., Russell, S., Skerratt, S., Rao-Williams, J., and Wolstenholme, R., 2018. Transformation in a changing climate: a research agenda. *Climate and Development*, 10 (3), 197–217.

Feindt, P.H. and Oels, A., 2005. Does discourse matter? Discourse analysis in environmental policy making. *Journal of Environmental Policy & Planning*, 7 (3), 161–173.

Feola, G., 2015. Societal transformation in response to global environmental change: A review of emerging concepts. *Ambio*, 44 (5), 376–390.

Ferguson, J., 1994. *The anti-politics machine: 'development,' depoliticization, and bureaucratic power in Lesotho*. Minneapolis: University of Minnesota Press.

Few, R., Morchain, D., Spear, D., Mensah, A., and Bendapudi, R., 2017. Transformation, adaptation and development: relating concepts to practice. *Palgrave Communications*, 3 (1), 17092.

Fleming, A., Vanclay, F., Hiller, C., and Wilson, S., 2014. Challenging dominant discourses of climate change. *Climatic Change*, 127 (3–4), 407–418.

Fløttum, K. and Gjerstad, Ø., 2016. Narratives in climate change discourse. *Wiley Interdisciplinary Reviews: Climate Change,* 8, e429.

Flyvbjerg, B., 2001. *Making Social Science Matter: Why social inquiry fails and how it can succeed again*. Cambridge: Cambridge University Press.

Forsyth, T., 2003. *Critical political ecology: the politics of environmental science*. London and New York: Routledge.

Forsyth, T., 2011. Politicizing Environmental Explanations. What can Ecology learn from Sociology and Pilosophy of Science? *In*: M.J. Goldman, ed. *Knowing nature conversations at the intersection of political ecology and science studies*. Chicago: Univ. of Chicago Press, 31–46.

Forsyth, T., 2013. The Politics of Environmental Science: Recent Trends and Important Questions. *In*: J. Bandyopadhyay, K.R. Chopra, and N. Ghosh, eds. *Environmental governance: approaches, imperatives and methods*. London and New Delhi: Published for the Indian Society for Ecological Economics by Bloomsbury Pub. India, 17–31.

Friedlingstein, P., Andrew, R.M., Rogelj, J., Peters, G.P., Canadell, J.G., Knutti, R., Luderer, G., Raupach, M.R., Schaeffer, M., van Vuuren, D.P., and Le Quéré, C., 2014. Persistent growth of CO2 emissions and implications for reaching climate targets. *Nature Geoscience*, 7 (10), 709–715.

Friman, M., 2015. Building legitimacy. Consensus and conflict over historic responsibility for climate change. *In*: C. Methmann, D. Rothe, and B. Stephan, eds. *Interpretive approaches to global climate governance*. Abingdon and New York: Routledge, 198–216.

Fünfgeld, H. and McEvoy, D., 2014. Frame divergence in climate change adaptation policy: insights from Australian local government planning. *Environment and Planning C: Government and Policy*, 32 (4), 603–622.

Füssel, H.-M., 2007. Vulnerability: A generally applicable conceptual framework for climate change research. *Global Environmental Change-Human and Policy Dimensions*, 17 (2), 155–167.

Füssel, H.-M., 2009. *Development and Climate Change. Background note to the World Development Report 2010. Review and Quantitative Analysis of Indices of Climate Change Exposure Adaptive Capacity, Sensitivity and Impacts*. Potsdam: Potsdam Institute for Climate Impact Research.

Gallopín, G.C., 2006. Linkages between vulnerability, resilience, and adaptive capacity. *Global Environmental Change-Human and Policy Dimensions*, 16 (3), 293–303.

GCF - Green Climate Fund, 2015. *Consideration of funding proposals – Addendum Funding proposal package for FP004 (Bangladesh)*. Incheon (Seoul): The Green Climate Fund (GCF), Green Climate Fund Funding Proposal No. GCF/B.11/04/Add.04.

Geels, F.W., McMeekin, A., Mylan, J., and Southerton, D., 2015. A critical appraisal of Sustainable Consumption and Production research: The reformist, revolutionary and reconfiguration positions. *Global Environmental Change*, 34, 1–12.

GEF, 2019. New commitments to scaling up climate adaptation investment. *Global Environment Facility*, 10 Jul.

Gillard, R., Gouldson, A., Paavola, J., and Van Alstine, J., 2016. Transformational responses to climate change: beyond a systems perspective of social change in mitigation and adaptation. *Wiley Interdisciplinary Reviews: Climate Change*, 7 (2), 251–265.

Global Commission on Adaptation, 2019. *Adapt Now: A Global Call for Leadership on Climate Resilience*. Rotterdam and Washington: The Global Centre on Adaptation and the World Resources Institute.

Glynos, J., 2001. The grip of ideology: A Lacanian approach to the theory of ideology. *Journal of Political Ideologies*, 6 (2), 191–214.

Glynos, J., 2014. Hating government and voting against one's interests: Self-Transgression, enjoyment, critique. *Psychoanalysis, Culture & Society*, 19 (2), 179–189.

Glynos, J. and Howarth, D., 2007. *Logics of critical explanation in social and political theory*. London: Routledge.

Glynos, J., Howarth, D., Norval, A., and Speed, E., 2009. *Discourse Analysis: Varieties and Methods*. National Centre for Research Methods, No. NCRM/014.

Glynos, J., Klimecki, R., and Willmott, H., 2015. Logics in policy and practice: a critical nodal analysis of the UK banking reform process. *Critical Policy Studies*, 9 (4), 393–415.

Glynos, J., Speed, E., and West, K., 2014. Logics of marginalisation in health and social care reform: Integration, choice, and provider-blind provision. *Critical Social Policy*, 35 (1), 45–68.

Glynos, J. and Stavrakakis, Y., 2008. Lacan and Political Subjectivity: Fantasy and Enjoyment in Psychoanalysis and Political Theory. *Subjectivity*, 24 (1), 256–274.

Griggs, S., Hall, S., Howarth, D., and Seigneuret, N., 2017. Characterizing and evaluating rival discourses of the 'sustainable city': Towards a politics of pragmatic adversarialism. *Political Geography*, 59, 36–46.

Griggs, S. and Howarth, D., 2013. *The politics of airport expansion in the United Kingdom: hegemony, policy and the rhetoric of 'sustainable aviation'*. Manchester: Manchester University Press.

Griggs, S. and Howarth, D., 2017. Discourse, policy and the environment: hegemony, statements and the analysis of U.K. airport expansion. *Journal of Environmental Policy & Planning*, 1–15.

Gunder, M., 2015. The Role of Fantasy in Public Policy Formation. *In*: R. Beunen, K. Van Assche, and M. Duineveld, eds. *Evolutionary Governance Theory*. Cham: Springer International Publishing, 143–154.

Hajer, M., 1997. *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford University Press.

Hajer, M. and Versteeg, W., 2005. A decade of discourse analysis of environmental politics: Achievements, challenges, perspectives. *Journal of Environmental Policy & Planning*, 7 (3), 175–184.

Hajer, M. and Versteeg, W., 2011. Voices of Vulnerability: The Reconfiguration of Policy Discourses. *In*: J.S. Dryzek, R.B. Norgaard, and D. Schlosberg, eds. *Oxford handbook of climate change and society*. Oxford and New York: Oxford University Press.

Hannigan, J.A., 2006. *Environmental sociology*. 2nd ed. London and New York: Routledge.

Harvey, F., 2019. Adaptation isn't enough. We've got to throw everything at the climate crisis. *The Guardian*, 11 Sep.

Henstra, D., 2015. The tools of climate adaptation policy: analysing instruments and instrument selection. *Climate Policy*, 1–26.

Howarth, D., 2004. Conclusion: Applying Discourse Theory: The Method of Articulation. *In*: *Discourse Theory in European Politics*. Basingstoke: Palgrave Macmillan.

Howarth, D., 2005. Applying Discourse Theory: the Method of Articulation. *In*: D. Howarth and J. Torfing, eds. *Discourse Theory in European Politics: Identity, Policy and Governance*. London: Palgrave Macmillan, 316–349.

Howarth, D. and Stavrakakis, Y., 2000. Introducing discourse theory and political analysis. *In*: D. Howarth, A. Norval, and Y. Stavrakakis, eds. *Discourse theory and political analysis: identities, hegemonies, and social change*. Manchester and New York: Manchester University Press, 1–23.

Howarth, D. and Torfing, J., 2004. *Discourse Theory in European Politics*. Basingstoke: Palgrave Macmillan.

Hulme, M., 2011. Reducing the Future to Climate: A Story of Climate Determinism and Reductionism. *Osiris*, 26 (1), 245–266.

Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, Cambridge University Press.

IPCC, Field, C.B., and Barros, V.R., eds., 2014. *Climate change 2014: impacts, adaptation, and vulnerability: Working Group II contribution to the fifth assessment report of the Intergovernmental Panel on Climate Change*. New York, Cambridge University Press.

Ireland, P., 2012. Climate change adaptation: Business-as-usual aid and development or an emerging discourse for change? *International Journal of Development Issues*, 11 (2), 92–110.

Ireland, P. and Keegan, P., 2013. Climate change adaptation: Challenging the mainstream. *In*: L. Sygna, K.L. O'Brien, and J. Wolf, eds. *A changing environment for human security: transformative approaches to research, policy and action*. London and New York: Routledge, 176–182.

Ireland, P. and McKinnon, K., 2013. Strategic localism for an uncertain world: A postdevelopment approach to climate change adaptation. *Geoforum*, 47, 158–166.

Jørgensen, M. and Phillips, L., 2002. *Discourse analysis as theory and method*. London: Sage Publications.

Joseph, J., 2014. The EU in the Horn of Africa: Building Resilience as a Distant Form of Governance: The EU in the Horn of Africa. *JCMS: Journal of Common Market Studies*, 52 (2), 285–301.

Joseph, J., 2016. Governing through Failure and Denial: The New Resilience Agenda. *Millennium: Journal of International Studies*, 44 (3), 370–390.

Juhola, S., Glaas, E., Linnér, B.-O., and Neset, T.-S., 2016. Redefining maladaptation. *Environmental Science & Policy*, 55, 135–140.

Juhola, S., Keskitalo, E.C.H., and Westerhoff, L., 2011. Understanding the framings of climate change adaptation across multiple scales of governance in Europe. *Environmental Politics*, 20 (4), 445–463.

Kates, R.W., 2000. Cautionary Tales: Adaptation and the Global Poor. *Climatic Change*, 45, 5–11.

Kates, R.W., Travis, W.R., and Wilbanks, T.J., 2012. Transformational adaptation when incremental adaptations to climate change are insufficient. *Proceedings of the National Academy of Sciences*, 109 (19), 7156–7161.

Kenis, A. and Lievens, M., 2014. Searching for 'the political' in environmental politics. *Environmental Politics*, 23 (4), 531–548.

Keskitalo, E.C.H. and Preston, B.L., 2019a. Conclusions: climate change adaptation policy research and its role in understanding climate change. *In*: E.C.H. Keskitalo and B.L. Preston, eds. *Research handbook on climate change adaptation policy*. Cheltenham, Edward Elgar Publishing, 475–491.

Keskitalo, E.C.H. and Preston, B.L., eds., 2019b. *Research handbook on climate change adaptation policy*. Cheltenham, Edward Elgar Publishing.

Klein, R.J.T. and Juhola, S., 2014. A framework for Nordic actor-oriented climate adaptation research. *Environmental Science & Policy*, 40, 101–115.

Klepp, S. and Chavez-Rodriguez, L., eds., 2018a. *A critical approach to climate change adaptation: discourses, policies, and practices*. London and New York: Routledge/Taylor & Francis Group.

Klepp, S. and Chavez-Rodriguez, L., 2018b. Governing climate change. The power of adaptation discourses, policies and practices. *In*: S. Klepp and L. Chavez-Rodriguez, eds. *A critical approach to climate change adaptation: discourses, policies, and practices*. London and New York: Routledge/Taylor & Francis Group, 3–34.

Kolankiewicz, M., 2012. Where discourse ends: The discursive and the non-discursive in Laclau and Mouffe's discourse theory and in Fairclough's critical discourse analysis. *In*: *Pondering on methods A variety of methodological concerns*. Lund: Faculty of Social Sciences, Lund Univeristy, 123–136.

Kress, G.R. and Van Leeuwen, T., 2001. Multimodal discourse: the modes and media of contemporary communication. London and New York: Arnold/Oxford University Press.

Kølvraa, C., 2018. Psychoanalyzing Europe? Political Enjoyment and European Identity. *Political Psychology*, 39 (6), 1405–1418.

Kølvraa, C. and Ifversen, J., 2017. The attraction of ideology: discourse, desire and the body. *Journal of Political Ideologies*, 22 (2), 182–196.

Laclau, E., 1990. *New Reflections on the Revolution of Our Time*. London and New York: Verso.

Laclau, E., 1991. Intellectual Strategies; Memorandum to PhD Students in the IDA Programme.

Laclau, E., 1994. Introduction. *In*: E. Laclau, ed. *The Making of Political Identities*. London and New York: Verso, 1–8.

Laclau, E., 2005. *On Populist Reason*. London and New York: Verso.

Laclau, E. and Mouffe, C., 1987. Post-Marxism Without Apologies. *New Left Review*, (166), 79–106.

Laclau, E. and Mouffe, C., 2001 [1985]. *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. 2nd ed. London: Verso.

Leichenko, R. and O'Brien, K., 2008. *Environmental Change and Globalization*. Oxford, Oxford University Press.

Lesnikowski, A., Ford, J., Biesbroek, R., Berrang-Ford, L., Maillet, M., Araos, M., and Austin, S.E., 2016. What does the Paris Agreement mean for adaptation? *Climate Policy*, 1–5.

Lesnikowski, A.C., Ford, J.D., Berrang-Ford, L., Barrera, M., and Heymann, J., 2015. How are we adapting to climate change? A global assessment. *Mitigation and Adaptation Strategies for Global Change*, 20 (2), 277–293.

Lindegaard, L.S., 2018. Adaptation as a political arena: Interrogating sedentarization as climate change adaptation in Central Vietnam. *Global Environmental Change*, 49, 166–174.

Lövbrand, E. and Stripple, J., 2011. Making climate change governable: accounting for carbon as sinks, credits and personal budgets. *Critical Policy Studies*, 5 (2), 187–200.

Lövbrand, E. and Stripple, J., 2012. Disrupting the public–private distinction: excavating the government of carbon markets post-Copenhagen. *Environment and Planning C: Government and Policy*, 30 (4), 658–674.

Lovell, H., Bulkeley, H., and Owens, S., 2009. Converging agendas? Energy and climate change policies in the UK. *Environment and Planning C: Government and Policy*, 27 (1), 90–109.

Magnan, A.K. and Ribera, T., 2016. Global adaptation after Paris. *Science*, 352 (6291), 1280–1282.

Manuel-Navarrete, D. and Pelling, M., 2015. Subjectivity and the politics of transformation in response to development and environmental change. *Global Environmental Change*, 35, 558–569.

Massey, E., 2016. *Innovations in policy: The emergence of climate adaptation as a new policy field*. Amsterdam: Vrije Universiteit.

Massey, E. and Huitema, D., 2013. The emergence of climate change adaptation as a policy field: the case of England. *Regional Environmental Change*, 13 (2), 341–352.

Massey, E., Huitema, D., Garrelts, H., Grecksch, K., Mees, H., Rayner, T., Storbjörk, S., Termeer, C., and Winges, M., 2015. Handling adaptation policy choices in Sweden, Germany, the UK and the Netherlands. *Journal of Water and Climate Change*, 6 (1), 9–24.

McEvoy, J. and Wilder, M., 2012. Discourse and desalination: Potential impacts of proposed climate change adaptation interventions in the Arizona–Sonora border region. *Global Environmental Change*, 22 (2), 353–363.

McGray, H., Hammill, A., and Bradley, R., 2007. *Weathering the Storm. Options for Framing Adaptation and Development*. Washington, DC: World Resources Institute.

McLaughlin, P., 2011. Climate Change, Adaptation, and Vulnerability: Reconceptualizing Societal-Environment Interaction Within a Socially Constructed Adaptive Landscape. *Organization & Environment*, 24 (3), 269–291.

Mert, A., 2015. *Environmental governance through partnerships: a discourse theoretical study*. Cheltenham: Edward Elgar Publishing.

Mert, A., 2016. The trees in Gezi Park: environmental policy as the focus of democratic protests. *Journal of Environmental Policy & Planning*, 1–15.

Methmann, C., 2010. 'Climate Protection' as Empty Signifier: A Discourse Theoretical Perspective on Climate Mainstreaming in World Politics. *Millennium - Journal of International Studies*, 39 (2), 345–372.

Methmann, C., 2014. We are all green now. Hegemony, governmentality and fantasy in the global climate polity. Unpublished Ph.D. thesis. Univeristy of Hamburg, Hamburg.

Methmann, C. and Oels, A., 2015. From 'fearing' to 'empowering' climate refugees: Governing climate-induced migration in the name of resilience. *Security Dialogue*, 46 (1), 51–68.

Methmann, C. and Rothe, D., 2012. Politics for the day after tomorrow: The logic of apocalypse in global climate politics. *Security Dialogue*, 43 (4), 323–344.

Mikulewicz, M., 2018. Politicizing vulnerability and adaptation: on the need to democratize local responses to climate impacts in developing countries. *Climate and Development*, 10 (1), 18–34.

Mimura, N., Pulwarty, R., Duc, D., Elshinnawy, I., Redsteer, M., Huang, H., Nkem, J., and Sanchez Rodriguez, R., 2014. Adaptation planning and implementation. *In*: C.B. Field and V.R. Barros, eds. *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. New York, Cambridge University Press, 869–898.

Moore, F.C., 2010. 'Doing Adaptation': The Construction of Adaptive Capacity and its Function in the International Climate Negotiations. *St Antony's International Review*, 5 (2), 66–88.

Moses, J.W. and Knutsen, T.L., 2012. *Ways of knowing: competing methodologies in social and political research*. 2nd ed. Basingstoke and New York: Palgrave Macmillan.

Mouffe, C., 2005. *On the Political*. London and New York: Routledge.

Mouffe, C., 2013. *Agonistics: thinking the world politically*. London and New York: Verso.

Nagoda, S., 2015. New discourses but same old development approaches? Climate change adaptation policies, chronic food insecurity and development interventions in northwestern Nepal. *Global Environmental Change*, 35, 570–579.

Nalau, J., Preston, B.L., and Maloney, M.C., 2015. Is adaptation a local responsibility? *Environmental Science & Policy*, 48, 89–98.

NASA - National Aeronautics and Space Administration, 2019. Global Temperature. *NASA Global Climate Change and Global Warming: Vital Signs of the Planet*. Available from: https://climate.nasa.gov/vital-signs/global-temperature [Accessed 9 Aug 2019].

Nightingale, A.J., 2017. Power and politics in climate change adaptation efforts: Struggles over authority and recognition in the context of political instability. *Geoforum*, 84, 11–20.

Nightingale, A.J., Eriksen, S., Taylor, M., Forsyth, T., Pelling, M., Newsham, A., Boyd, E., Brown, K., Harvey, B., Jones, L., Bezner Kerr, R., Mehta, L., Naess, L.O., Ockwell, D., Scoones, I., Tanner, T., and Whitfield, S., 2019. Beyond Technical Fixes: climate solutions and the great derangement. *Climate and Development*, 1–10.

Noble, I., 2019. The evolving interactions between adaptation research, international policy and development practice. *In*: E.C.H. Keskitalo and B.L. Preston, eds. *Research handbook on climate change adaptation policy*. Cheltenham, Edward Elgar Publishing, 21–48.

Noble, I., Huq, S., Anokhin, Y., Carmin, Y., Goudou, D., Lansigan, F., Osman-Elasha, B., and Villamizar, A., 2014. Adaptation Needs and Options. *In*: C.B. Field and V.R. Barros, eds. *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. New York: Cambridge University Press, 833–868.

Norval, A., 2000. The Things We Do with Words - Contemporary Approaches to the Analysis of Ideology. *British Journal of Political Science*, 30 (2), 313–346.

Nyamwanza, A.M. and Bhatasara, S., 2015. The utility of postmodern thinking in climate adaptation research. *Environment, Development and Sustainability*, 17 (5), 1183–1196.

Oberthür, S. and Roche Kelly, C., 2008. EU Leadership in International Climate Policy: Achievements and Challenges. *The International Spectator*, 43 (3), 35–50.

O'Brien, K., 2012. Global environmental change II: From adaptation to deliberate transformation. *Progress in Human Geography*, 36 (5), 667–676.

O'Brien, K., 2015. Political agency: The key to tackling climate change. *Science*, 350 (6265), 1170–1171.

O'Brien, K., 2016. Climate change and social transformations: is it time for a quantum leap? *Wiley Interdisciplinary Reviews: Climate Change*, 7 (5), 618–626.

O'Brien, K., Eriksen, S., Nygaard, L.P., and Schjolden, A., 2007. Why different interpretations of vulnerability matter in climate change discourses. *Climate Policy*, 7 (1), 73–88.

O'Brien, K. and Selboe, E., 2015a. Social Transformation: The Real Adaptive Challenge. *In*: K. OBrien and E. Selboe, eds. *The Adaptive Challenge of Climate Change*. Cambridge: Cambridge University Press, 311–324.

O'Brien, K. and Selboe, E., 2015b. *The Adaptive Challenge of Climate Change*. London: Cambridge University Press.

Oels, A., 2005. Rendering climate change governable: From biopower to advanced liberal government? *Journal of Environmental Policy & Planning*, 7 (3), 185–207.

Oels, A., 2013. Rendering climate change governable by risk: From probability to contingency. *Geoforum*, 45, 17–29.

Oels, A., 2015. Security. *In*: K. Bäckstrand and E. Lövbrand, eds. *Research Handbook on Climate Governance*. Cheltenham: Edward Elgar Publishing, 458–469.

Oels, A., 2019. The promise and limits of participation in adaptation governance: moving beyond participation towards disruption. *In*: E.C.H. Keskitalo and B.L. Preston, eds. *Research handbook on climate change adaptation policy*. Cheltenham: Edward Elgar Publishing, 138–156.

Ojha, H.R., Ghimire, S., Pain, A., Nightingale, A., Khatri, D.B., and Dhungana, H., 2015. Policy without politics: technocratic control of climate change adaptation policy making in Nepal. *Climate Policy*, 1–19.

Oppermann, E., 2011. The discourse of adaptation to climate change and the UK Climate Impacts Programme: De-scribing the problematization of adaptation. *Climate and Development*, 3 (1), 71–85.

Paschen, J.-A. and Ison, R., 2014. Narrative research in climate change adaptation—Exploring a complementary paradigm for research and governance. *Research Policy*, 43 (6), 1083–1092.

Pelling, M., 2011. *Adaptation to Climate Change: From Resilience to Transformation*. London: Routledge.

Pielke Jr, R., Prins, G., Rayner, S., and Sarewitz, D., 2007. Lifting the taboo on adaptation. *Nature*, 445, 597–598.

Popke, J., Curtis, S., and Gamble, D.W., 2014. A social justice framing of climate change discourse and policy: Adaptation, resilience and vulnerability in a Jamaican agricultural landscape. *Geoforum*, 73, 70-80.

Preston, B.L., Mustelin, J., and Maloney, M.C., 2015. Climate adaptation heuristics and the science/policy divide. *Mitigation and Adaptation Strategies for Global Change*, 20 (3), 467–497.

Randalls, S., 2011. Broadening debates on climate change ethics: beyond carbon calculation: Broadening debates on climate change ethics. *The Geographical Journal*, 177 (2), 127–137.

Remling, E., forthcoming. Migration as climate adaptation? Exploring discourses amongst development actors in the Pacific Island Region. (*currently under review with a peer-reviewed journal*).

Remling, E. and Veitayaki, J., 2016. Community-based action in Fiji's Gau Island: a model for the Pacific? *International Journal of Climate Change Strategies and Management*, 8 (3), 375–398.

Ribot, J., 2010. Vulnerability Does Not Fall from the Sky: Toward Multiscale, Pro-Poor Climate Policy. *In*: R. Mearns and A. Norton, eds. *Social Dimensions of Climate Change. Equity and Vulnerability in a Warming World*. Washington The International Bank for Reconstruction and Development /The World Bank, 47–74.

Rutland, T. and Aylett, A., 2008. The Work of Policy: Actor Networks, Governmentality, and Local Action on Climate Change in Portland, Oregon. *Environment and Planning D: Society and Space*, 26 (4), 627–646.

Scheffran, J. and Remling, E., 2013. The social dimensions of human security under a changing climate. *In*: M.R. Redclift and M. Grasso, eds. *Handbook on climate change and human security*. Cheltenham and Northampton: Edward Elgar, 137–163.

Schulz, K. and Siriwardane, R., 2015. *Depoliticised and technocratic? Normativity and the politics of transformative adaptation*. Lund: Earth System Governance Project, No. Earth System Governance Working Paper No. 33.

Selin, H. and VanDeveer, S.D., 2015. Broader, Deeper and Greener: European Union Environmental Politics, Policies, and Outcomes. *Annual Review of Environment and Resources*, 40 (1), 309–335.

Smit, B. and Wandel, J., 2006. Adaptation, adaptive capacity and vulnerability. *Global Environmental Change-Human and Policy Dimensions*, 16 (3), 282–292.

Smucker, T.A., Wisner, B., Mascarenhas, A., Munishi, P., Wangui, E.E., Sinha, G., Weiner, D., Bwenge, C., and Lovell, E., 2015. Differentiated livelihoods, local institutions, and the adaptation imperative: Assessing climate change adaptation policy in Tanzania. *Geoforum*, 59, 39–50.

Sovacool, B.K. and Linnér, B.-O., 2016a. Insights from Political Economy for Adaptation Policy and Practice. In: B.K. Sovacool and B.-O. Linnér, eds., *The Political Economy of Climate Change Adaptation*. London: Palgrave Macmillan UK, 162–179.

Sovacool, B.K. and Linnér, B.-O., eds., 2016b. *The Political Economy of Climate Change Adaptation*. London: Palgrave Macmillan UK.

Stavrakakis, Y., 2005. Passions of Identification: Discourse, Enjoyment, and European Identity. *In*: D.R. Howarth and J. Torfing, eds. *Discourse theory in European politics: identity, policy, and governance*. New York: Palgrave Macmillan, 68–92.

Stephan, B., 2012. Bringing discourse to the market: the commodification of avoided deforestation. *Environmental Politics*, 21 (4), 621–639.

Stephan, B., 2014. Not seeing the forest for the carbon in the trees? The role of fighting tropical deforestation in global climate governance. Universität Hamburg, Fakultät Wirtschafts- und Sozialwissenschaften, Hamburg.

Stephan, B., Methmann, C., and Rothe, D., 2013. Third Side of the Coin: Hegemony and Governmentality in Global Climate Politics. *In*: J. Stripple and H. Bulkeley, eds. *Governing the Climate*. New York: Cambridge University Press, 59–76.

Stevenson, H. and Dryzek, J.S., 2012a. The discursive democratisation of global climate governance. *Environmental Politics*, 21 (2), 189–210.

Stevenson, H. and Dryzek, J.S., 2012b. The legitimacy of multilateral climate governance: a deliberative democratic approach. *Critical Policy Studies*, 6 (1), 1–18.

Stripple, J. and Bulkeley, H., eds., 2013. *Governing the Climate: New Approaches to Rationality, Politics and Power*. New York: Cambridge University Press.

Stripple, J. and Bulkeley, H., 2015. Governmentality. *In*: K. Bäckstrand and E. Lövbrand, eds. *Research Handbook on Climate Governance*. Cheltenham and Northampton: Edward Elgar Publishing, 49–59.

Swyngedouw, E., 2010. Apocalypse Forever?: Post-political Populism and the Spectre of Climate Change. *Theory, Culture & Society*, 27 (2–3), 213–232.

Swyngedouw, E., 2013. The Non-political Politics of Climate Change. *An International Journal for Critical Geographies*, 12 (1), 1–8.

Symons, K., 2014. Anti-politics, Apocalypse and Adaptation in Kenya's National Climate Change Response Strategy. *Scottish Geographical Journal*, 130 (4), 266–278.

Tanner, T. and Allouche, J., 2011. Towards a New Political Economy of Climate Change and Development. *IDS Bulletin*, 42 (3), 1–14.

Taylor, M., 2013. Climate change, relational vulnerability and human security: rethinking sustainable adaptation in agrarian environments. *Climate and Development*, 5 (4), 318–327.

Taylor, M., 2015. *The political ecology of climate change adaptation: livelihoods, agrarian change and the conflicts of development*. London and New York: Routledge.

Thomas, K.A. and Warner, B.P., 2019. Weaponizing vulnerability to climate change. *Global Environmental Change*, 57, 101928.

Tompkins, E.L., Vincent, K., Nicholls, R.J., and Suckall, N., 2018. Documenting the state of adaptation for the global stocktake of the Paris Agreement. *Wiley Interdisciplinary Reviews: Climate Change*, 9 (5), e545.

Torfing, J., 2005. Discourse Theory: Achievements, Arguments, and Challenges. *In*: D. Howarth and J. Torfing, eds. *Discourse Theory in European Politics: Identity, Policy and Governance*. London: Palgrave Macmillan, 1–32.

Tracy, S.J., 2010. Qualitative Quality: Eight "Big-Tent" Criteria for Excellent Qualitative Research. *Qualitative Inquiry*, 16 (10), 837–851.

Tschakert, P., 2012. From impacts to embodied experiences: tracing political ecology in climate change research. *Geografisk Tidsskrift-Danish Journal of Geography*, 112 (2), 144–158.

UNEP, 2018. *The Adaptation Gap Report 2018*. Nairobi: United Nations Environment Programme (UNEP).

UNFCCC, 2015. *Paris Agreement*. Bonn: United Nations Framework Convention on Climate Change (UNFCCC) Secretariat.

Vink, M.J., Benson, D., Boezeman, D., Cook, H., Dewulf, A., and Termeer, C., 2015. Do state traditions matter? Comparing deliberative governance initiatives for climate change adaptation in Dutch corporatism and British pluralism. *Journal of Water and Climate Change*, 6 (1), 71–88.

Waller, S. and Barnett, J., 2015. The Challenge of Governing Adaptation in Australia. *In*: *The Adaptive Challenge of Climate Change*. London: Cambridge University Press, 81–97.

Warner, J., Jomantas, S., Jones, E., Ansari, Md., and de Vries, L., 2019. The Fantasy of the Grand Inga Hydroelectric Project on the River Congo. *Water*, 11 (3), 407.

Watts, J., 2018. Arctic warming: scientists alarmed by 'crazy' temperature rises. *The Guardian*, 27 Feb.

Watts, M., 2015. Now and then: the origins of political ecology and the rebirth of adaptation as a form of thought. *In*: T.A. Perreault, G. Bridge, and J. McCarthy, eds. *Routledge Handbook of Political Ecology*. Abingdon and New York: Routledge, 19–50.

Webber, S., 2016. Climate Change Adaptation as a Growing Development Priority: Towards Critical Adaptation Scholarship. *Geography Compass*, 10 (10), 401–413.

Weisser, F., Bollig, M., Doevenspeck, M., and Müller-Mahn, D., 2014. Translating the 'adaptation to climate change' paradigm: the politics of a travelling idea in Africa. *The Geographical Journal*, 180 (2), 111–119.

Weisser, F. and Müller-Mahn, D., 2017. No Place for the Political: Micro-Geographies of the Paris Climate Conference 2015: No Place for the Political. *Antipode*, 49 (3), 802–820.

Welsh, M., 2014. Resilience and responsibility: governing uncertainty in a complex world: Resilience and responsibility. *The Geographical Journal*, 180 (1), 15–26.

West, K., 2011. Articulating discursive and materialist conceptions of practice in the logics approach to critical policy analysis. *Critical Policy Studies*, 5 (4), 414–433.

Wise, R.M., Fazey, I., Stafford Smith, M., Park, S.E., Eakin, H.C., Archer Van Garderen, E.R.M., and Campbell, B., 2014. Reconceptualising adaptation to climate change as part of pathways of change and response. *Global Environmental Change*, 28, 325–336.

Woroniecki, S., Krüger, R., Rau, A., Preuss, M.S., Baumgartner, N., Raggers, S., Niessen, L., Holländer, L., Beyers, F., Rathgens, J., Wagner, K.C., Habigt, L., Krause, T., Wamsler, C., von Wehrden, H., and Abson, D., 2019. The framing of power in climate change adaptation research. *Wiley Interdisciplinary Reviews: Climate Change*, wcc.617.

Yin, R.K., 2011. *Qualitative research from start to finish*. New York: Guilford Press.

Žižek, S., 1997. The Seven Veils of Fantasy. *In*: *The Plague of Fantasy*. London: Verso, 3–44.

Sammanfattning (Summary in Swedish)

Vi ser allt starkare bevis på att de antropogena klimatförändringarna, trots internationella ansträngningar att begränsa utsläppen av växthusgaser, troligen kommer att överstiga tvågradersmålet. Detta kommer att leda till omfattande förändringar av vår livsmiljö, vilket i sin tur kommer att kräva betydande åtgärder för anpassning. Intresset för klimatanpassning har ökat på lokala, nationella och internationella politiska dagordningar, samtidigt som forskningen på området har intensifierats. Men trots att besluten om implementering av specifika åtgärder i grunden är politiska, har klimatanpassningen ofta betraktats som en ”problemfri” process, eller en ”tam” utmaning. Hittills har endast en relativt liten del av forskningen analyserat den pågående debatten om anpassningen, samt hur de dominerande diskurserna och de föreslagna lösningarna är sammanlänkade med frågor om makt och politik.

Den här avhandlingen sätter de socio-politiska dimensionerna av klimatanpassningen i fokus och undersöker empiriskt och teoretiskt hur själva fenomenet ”klimatanpassning” uppstår, tolkas och används som ett begrepp inom forskning, politik och praktik. Med avstamp i poststrukturalistisk diskursteori – och i synnerhet det så kallade logikperspektivet (även kallat *Logics of Critical Explanation*, eller *the logics approach*) – vidareutvecklas här ett analytiskt ramverk som syftar till att undersöka anpassningspolitiken på ett konsekvent och transparent sätt. Med utgångspunkt i empiriska analyser av officiella anpassningsdiskurser på internationell nivå, europeisk nivå (EU) och nationell nivå i Tyskland undersöks hur olika diskursiva logiker möjliggör eller begränsar förutsättningarna för politiskt handlande.

Avhandlingens bidrag är alltså såväl empiriska som begreppsliga och metodologiska. Empiriskt bidrar den med kritiska insikter och visar hur de vanligast förekommande samtida anpassningsdiskurserna innehåller viktiga avpolitiserande aspekter (till exempel genom att inkorporeras i en nyliberal marknadsdiskurs). Dess viktigaste teoretiska bidrag till det växande fältet av kritiska anpassningsstudier är för det första en diskussion om hur den ökande sammankopplingen mellan människor och platser gör det omöjligt att veta om arbetet för anpassning på specifika platser verkligen minskar den totala sårbarheten eller om det bara förflyttar sårbarheten någon annanstans. Att bortse från sådana omfördelningseffekter kan få betydande konsekvenser och kommer troligen att leda till ohållbara strategier – och därmed i längden till missanpassning snarare än anpassning. För det andra visar avhandlingen att icke-rationella och affektiva (känsloladdade) dimensioner är centrala

i anpassningspolitiken och att det är viktigt att vara uppmärksam på dem för att förstå och förändra de nuvarande teknik- och managementorienterade anpassningsstrategierna. Avhandlingen bidrar även med metodologiska insikter till forskningsfältet ”kritiska policystudier” genom att utveckla ett nytt analytiskt ramverk för poststrukturalistisk policyanalys.

Acknowledgements and thanks

I would like to acknowledge the many people who have accompanied me on this intellectual journey. Some helped more than others, but others helped more than they may have realised.

First of all, my two supervisors deserve great thanks, I have been so incredibly lucky to have you on board on this adventure. You were not only highly competent to advise me on the topic, with each of you bringing your unique and invaluable perspective to the project, but also genuinely interested in my work and my well-being, both as a researcher and a person. Thank you, Jenny Gunnarsson-Payne. Ever since we first met you've made me feel comfortable in my PhD skin. For your unquestioned support and encouragement to follow my 'hunches' I am forever grateful. Thank you for answering all my 'nerdy questions' and for trusting me to work from the many different places that life over the past five years has taken me. Thank you Åsa Persson, you've (maybe unknowingly?) been an important mentor ever since I joined SEI fresh out of university. You made me realise that there are indeed women in academia that are eager and successful but who also have a heart and a life besides work. Thank you for your valuable guidance and advice during this research and your patient and critically constructive comments.

Several other people have engaged with my work over the course of this journey. I am most grateful for reactions and suggestions from my four discussants at the halftime and pre-dissertation seminars; Eva Lövbrand and Fred Saunders, and Angela Oels and Madeleine Bonow, who while being encouraging and supportive also challenged me to rethink what I had planned and to sharpen my theoretical approach. I thank those who have read and commented on different drafts of the papers and the summarising chapter: Aaron Atteridge, Pernilla Andersson, Ellinor Hamrén and Sophie Adams. Thank you to Karen O'Brien who encouraged me to pursue my poststructuralist take on adaptation, and Jason Glynos, Florence Fröhlig and Ann Runfors for their interest in my methodological pursuits.

Carrying out scientific labour can be a lonely and frustratingly slow process (Are you still working on that same paper?). I feel incredibly lucky to have been part of a wonderful community of fellow travellers at Södertörn. My fellow PhD cohort, especially Sophie, Eva, Vasileios P., deserve a big shout out for all the joy, laughter, tears and frustrations shared covering everything from research dilemmas, to family life and everyday puzzles (How to win the gingerbread competition?), to downward-facing dogs. Thank you Pernilla for being my PDT-partner in crime. Sussing out early ideas with you made me realise that I was not the only one with an obsession for

deconstruction in our department. Thank you, Erika and Mathilde (my chocolate and biscuit fairies!), Kajsa-Stina (also for reminding me to read less white, male authors!), Natalya, Ralph, Linn, Christian, Lena, Therese, Igne and Olena. Towards the end of my journey Erika, Mathilde and Sophie provided me with a fair bit of emotional support and welcome distractions. Thank you also for 'workshopping' my thesis' aim and research questions with me at a time when I felt utterly confused, and for not only deconstructing them but helping me put them back together again. And finally, Karin, who lured me back from Fiji, without whom I would have never embarked on this PhD journey at Södertörn in the first place.

Being somewhat of an 'outlier' in my department in terms of my research focus and theoretical interests, being connected to a network of likeminded researchers in other places has meant a lot to me. Thank you to Sophie Webber, Morgan Scoville-Simonds and Ayşem Mert. A special thank you goes to Sophie Adams, my PhD 'soul sister'. It was so exciting to meet you back in Newtown on that hot January evening and discover that there was another 'satellite' out there thinking, struggling, questioning the same issues related to adaptation as me. Thank you for all the stimulating discussions, comments and conversations and for making my research visit to UNSW happen.

For the beautiful front cover a big *Dankeschön* to Seb Danta.

~

But, of course, the real debt is to my family and friends who co-create the lifeworld from which the energy for such a thesis can spring. They have accompanied and encouraged me on this journey (even if I have been unable to really explain to you what it is that I am doing). Danke Memi und Helene, Johannes und Renate, meme Christina, Geli und meine liebe Emmi.

Thanks to my Australian family, Sue, Melanie, Neil, Amelia, Eva, Holly and Jorja who during this journey have made my European winters bearable and always make me feel at home amongst the gum trees.

Danke Imke and Hanna, ihr, die mich nun schon so lange durch dick und dünn begleitet seit wir das erste Mal einen Hörsaal von innen sahen. Nun, da wir alle verantwortungsvolle Erwachsene sind, sind wir uns zwar geografisch fern aber dennoch wunderbar nah.

Thanks to my Stockholm friends who make me feel at home away from home: Toby and Jamila, Magnus and Rebekka, Vanessa and Gavin, Karin and Jon, Maria and Mats, Anneli, Johanna and Ariane. Thank you to Nicola and Jonas, for letting us camp out in your home in the first weeks after landing back in Stockholm, and for bringing a bit of Kiwi-bling into our lives.

And finally, vinaka to you Aaron. You let me drag you away from our view over the coral reefs to Beqa back to Riddarfjärden, which you had perhaps hoped to turn your back on forever. Thank you for your ideas, your input and patience and for

reading many different parts of my thesis at different stages. Thank you for having my back in these past intense months while I was flat out (and you were too). Thank you for being – as always – my most honest critic and for reminding me to get this PhD finished. I now have.

Paper I

DOI: 10.1002/wcc.500

Overview

Is adaptation reducing vulnerability or redistributing it?

Aaron Atteridge[1] and Elise Remling[2]*

Edited by Maria Carmen Lemos, Domain Editor, and Mike Hulme, Editor-in-Chief

As globalization and other pressures intensify the economic, social and biophysical connections between people and places, it seems likely that adaptation responses intended to ameliorate the impacts of climate change might end up shifting risks and vulnerability between people and places. Building on earlier conceptual work in maladaptation and other literature, this article explores the extent to which concerns about vulnerability redistribution have influenced different realms of adaptation practice. The review leads us to conclude that the potential for adaptation to redistribute risk or vulnerability is being given only sparse—and typically superficial—attention by practitioners. Concerns about 'maladaptation', and occasionally vulnerability redistribution specifically, are mentioned on the margins but do not significantly influence the way adaptation choices are made or evaluated by policy makers, project planners or international funds. In research, the conceptual work on maladaptation is yet to translate into a significant body of empirical literature on the distributional impacts of real-world adaptation activities, which we argue calls into question our current knowledge base about adaptation. These gaps are troubling, because a process of cascading adaptation endeavors globally seems likely to eventually re-distribute risks or vulnerabilities to communities that are already marginalized and vulnerable. We conclude by discussing the implications that the potential for vulnerability redistribution might have for the governance of adaptation processes, and offer some reflections on how research might contribute to addressing gaps in knowledge and in practice.

How to cite this article:
WIREs Clim Change 2017, e500. doi: 10.1002/wcc.500

INTRODUCTION

Attention to the imperative for communities, businesses, and governments worldwide to prepare for the impacts of climate change has been steadily growing. The concept of 'adaptation' garners attention in the international political discussions about climate change, in the community of development finance institutions and support agencies, and among the research community. In 2015, Parties to the United Nations Framework Convention on Climate Change (UNFCCC) agreed on a 'global adaptation goal' (under Article 7.1 of the Paris Agreement). While the practical focus of this goal remains unclear, at least outside of its role in the political context of UNFCCC negotiations, it raises a number of important questions about adaptation as a global endeavor. Adaptation is often described and implemented as a local concern,[1] yet a wide literature on the topic of globalization draws attention to the fact that there are very few 'locals' that are not intricately woven into much broader national, regional and global networks. Local livelihoods in even the remotest regions of the poorest countries are hooked into,

*Correspondence to: elise.remling@sh.se

[1]Stockholm Environment Institute (SEI), Stockholm, Sweden

[2]School of Natural Science, Technology and Environmental Studies, Södertörn University, Huddinge, Sweden

Conflict of interest: The authors have declared no conflicts of interest for this article.

and exposed to the dynamics of, global markets. The physical movement of people between rural and urban, and between one country and another, is constantly re-shaping social structures. Human interventions interfere with and alter the flows of natural resources like water. Food security for many becomes increasingly dependent on supply chains that extend around the world.

It seems inescapable that such interconnectedness will redistribute the impacts of climate change from one place to others, meaning for instance that less rainfall *here* is likely to have consequences both *here* and *there*.[2] Just as significant, though perhaps less obvious, is the fact that climate adaptation—the way we, as individuals and groups, respond to the risks that climate change poses, or reduce our vulnerability to its actual or perceived impacts—might at the same time redistribute risk or vulnerability to other people and places.

If adaptation activity is simply shifting risks and vulnerabilities around the board, the effectiveness and sustainability of such endeavors is questionable. It is therefore pertinent—and the purpose of this paper—to explore whether, and how deeply, this possibility is being considered by different actors across the spectrum of adaptation practice.

That adaptation might end up, as often as not, redistributing risk and vulnerability between people and places is a concern flagged in earlier literature, including that on 'maladaptation'. This treatment we summarize in the following section. We then review how concerns about potential redistributive effects have influenced various activities that make up adaptation practice, specifically: knowledge synthesis, the preparation of adaptation guidance materials, policy formulation, the operation of adaptation funds and the design of individual projects, and finally monitoring and evaluation frameworks designed to assess the outcomes of interventions. By looking across this spread of activities, the paper offers insight into whether an awareness in the academic literature of the potential for vulnerability redistribution has translated into meaningful consideration of this in practice. Following the empirical review, which reveals that only sparse attention has been given to this risk by practitioners, we reflect on what this might mean for adaptation research and practice, suggesting a number of ways we think conventional approaches to both should be challenged.

CONCERNS ABOUT ADAPTATION REDISTRIBUTING RISK AND VULNERABILITY IN A GLOBALIZED WORLD

The Unintended Effects of Adaptation

The potential for adaptation interventions to create unintended effects, including outcomes that increase risk or vulnerability for other groups or ecosystems, is the key theme of the slowly growing literature on 'maladaptation'. As one of the earliest and most widely referenced contributions, Barnett and O'Neill[3] define maladaptation as 'action taken ostensibly to avoid or reduce vulnerability to climate change that impacts adversely on, or increases the vulnerability of, other systems, sectors or social groups' (Ref 3, p. 211). They describe five 'pathways to maladaptation'; through actions that (1) increase GHG emissions; (2) disproportionally burden the most vulnerable; (3) have high opportunity costs; (4) reduce incentives to adapt; and/or (5) set paths that limit choices available to future generations.[3,4] Eriksen et al.[5] argue that adaptation is not exclusively positive or neutral, and will inevitably imply trade-offs, and possibly feedbacks and negative consequences. Brown[6] and Eriksen and Brown,[7] in considering the notion of sustainable adaptation, add the important observation that such effects may not only be displaced over *time* but also *space*.

Adger et al.[8] (referring to insights from Kates[9]) note that adaptation to climate change is 'inextricably intertwined with the political economy of natural resource use' (Ref 8, p. 191) and that investments in adaptation will thus inevitably generate winners and losers. Burton[10] suggests that investments in adaptation may be offset by maladaptive policies in other sectors. Scheraga et al.[11] argue that some adaptation strategies aimed at protecting human health could increase risks to other systems or social goals. Previous work has also flagged geographic 'downstream effects'[12] and long-term effects for communities and societies when adaptations are undertaken by individuals with regard to their own interest (so-called 'autonomous' adaptation).[13]

As a case in point, Warner and Kuzdas[15] describe how adaptation action by politically and economically powerful stakeholders in the agricultural sector, including for instance increased use of agro-technology as a response to droughts, will introduce new risks to the rural poor by changing both physical and institutional contexts. This concept the authors describe as 'manufactured risk,' and they argue it will ultimately prevent the sector as a whole

from becoming more resilient to climate change even though it may improve adaptation outcomes for the more powerful individuals.

A few papers draw attention to and begin to trace so-called 'spatial spillovers,' referring specifically to effects that may occur in spaces distant from the original adaptation intervention. The term was coined in Adger et al.[12] in reference to the prospect of actions taken in one place triggering changes in risk and vulnerability elsewhere, the authors offering as an example a new flood embankment that protects one community yet increases the hazard for other communities downstream. Continuing this theme, Adger[16] argues that measures of vulnerability should be sensitive to possible changes in the distribution of risk, such that as some people/places reduce their overall vulnerability to stressors, the vulnerability of other people/places is inadvertently increased. Using an example of coastal adaptation measures, Klein et al.[17] also point at this possibility. Eakin et al.[18] (citing Young et al.[19]; Leichenko and O'Brien[14]) argue that environmental, political and economic connections between distant households mean that changes in one place are transmitted to—and influence—others. In a similar vein, Adger et al.[20] argue that 'increased interdependence creates novel and difficult to foresee vulnerabilities in social-ecological systems, which often appear unrelated and which may have considerable geographical distance between them' (Ref 20, p. 151). Leichenko and O'Brien[14] argue that the processes of environmental change and globalization intersect and 'interact in numerous ways, creating linkages, feedbacks, and synergies across both space and time' (Ref 13, p. 104), and flag the possibility that adaptation 'may—via globalization processes—have unintended consequences for some individuals and communities' (Ref 13, p. 110). Summarizing some of these discussions, Juhola et al.[21] propose distinguishing between three types of maladaptation: (1) those that create negative consequences for the implementing actors or target beneficiaries themselves, (2) those that create negative consequences for one or more external actors (what the authors call 'shifting vulnerability'), and (3) negative feedbacks on a global scale.

A number of papers attempt to show this redistribution of vulnerability in practice and provide useful conceptualizations of the phenomenon, although they also reveal that measuring or attributing vulnerability changes in complex systems is empirically difficult. Both Eakin et al.[18] and Adger et al.[20] offer examples from within the coffee sector, describing how the actions of one group of coffee growers may have created new vulnerabilities for farmers in other parts of the world. Such spatial maladaptive effects have in part also been taken up in the literature on 'societal teleconnections'[20,22] 'telecoupling,'[23] 'systemic risk,'[24,25] and 'transboundary negative effects'.[26]

Despite the growing use of the term maladaptation in academic literature, Magnan et al.[27] observe that it remains poorly articulated in, and integrated into, adaptation practice. The authors point to the transfer of risk across spatial scales as one form of maladaptation, and argue that adaptation interventions that reduce climate pressures in one place by 'displacing them onto another connected system—that is, neighboring or ecologically/socio-economically connected ones' (Ref 27, p. 654)—should be considered maladaptive (as opposed to adaptive). Dilling et al.[28] raise concerns about the 'complicated nature of the dynamics of vulnerability' (Ref 28, p. 414) and stress a need for more transparent assessment of the trade-offs inherent in adaptation choices. Barnett and O'Neill[4] lament that few descriptions of how maladaptive practices actually arise are to be found in the literature. This theme continues in Granberg and Glover,[29] who point out that there are 'no widely accepted criteria, no suitable yardsticks against which to adjudge the adaptation measures' (Ref 29, p. 150). In a recent review Juhola et al.[21] find the maladaptation concept still to be 'elusively defined and sparingly used, and therefore difficult to apply' (Ref 21, p. 135).

It is therefore useful to look at a wider literature focusing on various features of globalization, which underpins some of the scholarly work above, since this offers further clarity on the mechanisms, or pathways, by which adaptation interventions might redistribute risk or vulnerability between people and places.

Economic, Social and Biophysical Pathways for Vulnerability Redistribution

Interconnectedness is not new to the modern era (see Hopkins[30] for perspectives on globalization throughout world history). However, even among scholars with a longer historical view on world development, certain features of contemporary globalization tend to be singled out as novel. They describe firstly an *increasing number of connections* between livelihood outcomes in different places and even between producers of different commodities.[24] Secondly, an *increasing speed* by which a change in one part of the market is transferred to other places as an impact of some kind.[19,31] Thirdly, an *increasing diversity* in the way connections are formed has also been

highlighted, including between actors at different geographic scales.[19] These descriptions relate to the notions of 'time–space compression'[32,33] and to what Reynolds[34] calls the 'multiplier effect' created by modern technology. This literature highlights that individuals, households, communities and ecosystems are complexly—and increasingly—interconnected across different scales through *economic*, *social* and *biophysical* pathways.

Livelihoods seem for people in most parts of the world to be increasingly influenced by a deepening *economic* integration of communities into a global market economy. Economic theory on the 'fallacy of composition' (see Mayer[35] for an overview of the extensive literature) argues that as many developing countries pursue export-oriented development strategies, they start competing directly with one another in ways that may undermine their respective goals for economic growth. The Organisation for Economic Co-operation and Development (OECD) highlights a concern that as a result of global economic integration, policies implemented in one country (or set of countries) can negatively affect the growth and development prospects of other countries, citing as an example the export restrictions introduced by emerging economies during the 2007–2008 food crisis that resulted in other developing countries being unable to source imports to alleviate their own food shortages.[36] Kates[9] discusses how the Green Revolution that transformed agricultural production in Asia since the 1960s has had indirect effects for those who were not the 'beneficiaries.' As a result of what the author calls the 'social costs in failing to adjust' (Ref 9, p. 12) (or, failing to adapt to the fact that others are adapting), interventions that have boosted farm productivity in certain areas have actually increased inequality between farmers in different regions, while also lowered market prices for all producers. This is a problem also described in the global coffee sector,[37,38] and by extension prompts a concern about whether specific kinds of adaptation activities focused on export commodities in developing countries, for instance, might be counterproductive to the livelihoods of other producers of the same commodity. Centeno et al.[25] illustrate the way connectedness through trade and finance creates the likelihood of systemic risks at the global scale. At the same time, the emergence of new forms of market institution and engagement—increasing 'financialization' for instance—is changing the character of global markets[39,40] and widening the range of factors that influence market behavior and thus 'reworking' local livelihood outcomes.[41]

Social connections and institutions, too, extend across scales and between places. These connections are being forged and re-worked continuously in response to, for instance, the physical movement of people or the evolution of institutions that are designed to manage people's health, security, economic and other livelihood needs. Migration responses are a topical example. Migration is sometimes discussed as a strategy for adapting to climate change,[42] promoted by international institutions and occasionally governments, and its potential to be a maladaptive strategy for migrants themselves is described.[4] At the same time, an influx of migrants could conceivably affect people and ecosystems in places where migrants end up. Such impacts could be positive including the arrival of new skills in the labor market, or negative such as greater strain on public health systems or demands on local environmental resources.

Biophysical connections across different scales are increasingly prominent within the globalization discourse. Environmental disturbances at the local level aggregate to produce regional changes such as urban air pollution, as well as global changes such as rising atmospheric concentrations of greenhouse gases, while global changes can cascade back down to the local level, for instance in the form of altered rainfall patterns, more intense storms, or in the deposition of chemical contamination. The potential for conflicting objectives to emerge in the management of natural resources is high, as seen in India's plans to respond to severe droughts by diverting some of the region's major rivers and the subsequent concerns expressed by downstream Bangladesh[43] and in the many other similar documented cases of environmental resource conflicts (see e.g., the cases collated in the ECC Factbook[44]). The possibility of such conflicts are the foundations of a plethora of international governance frameworks and agreements designed to manage shared environmental services, such as for climate change (e.g., the UNFCCC), trans-boundary waters (e.g., the United Nations Economic Commission for Europe's Convention on the Protection and Use of Transboundary Watercourses and International Lakes) or fisheries resources (e.g., the Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest).

Many of the examples in the literature above are analogues for adaptation interventions, and suggest how economic (including financial), social and biophysical connections are likely to act as pathways by which risk or vulnerability might be redistributed between people and places. The review by Juhola

et al.[21] shows a tendency within the maladaptation literature to focus most often on what are essentially biophysical pathways (e.g., risks created by new infrastructure such as roads or coastal protection measures), while social and economic pathways appear to be much less problematized.

As noted above, within the literature on climate adaptation there is very little empirical analysis of maladaptation cases, and particularly of the phenomenon of vulnerability redistribution.[21] Among the most cited examples is the risk that coastal infrastructure designed to reduce impacts from storm surge and erosion may negatively affect neighboring coastal areas,[45,46] or the local ecology.[47] Similarly, measures that reduce flood risks may negatively affect ecosystem services and the livelihoods these sustain.[48] Interestingly, Gibbs[49] highlights how an awareness among policy makers of the distributional impacts of an adaptation response, in their example in the coastal sector, may actually discourage any adaptation action from being taken at all. There are also a few examples in the agriculture and water sectors. Christian-Smith et al.[50] demonstrate how drought responses by agricultural producers in California, specifically groundwater extraction and interbasin water transfers, shifted vulnerability to other groups and ecosystems: water extractions increased risks for the environment and food security, while transfers reduced hydropower generation and resulted in higher costs paid by electricity consumers and health impacts from air pollution caused by more electricity generation from natural gas. Examining the use of desalination as a response to water shortages in the US-Mexico border region, McEvoy and Wilder[51] highlight an 'uneven distribution of costs and benefits' and the likelihood of this technology exacerbating existing social inequalities. Averchenkova et al.[52] note a paucity of empirical analysis on the outcomes of adaptation by private actors, but also that the actions of multinational corporations to reduce their exposure to climate risks by relocating or changing their supply chain can result in adverse outcomes for communities along the supply chain.

In each of these examples, the adaptation responses of one set of actors results in a transfer of vulnerability—in the form of increased risk/exposure or diminished adaptive capacity—to other households, ecosystems, businesses and/or to the state.

The Need to Consider Redistributive Effects Arising from Adaptation

There are valid reasons for being particularly concerned about whether and how adaptation may be introducing new risks or vulnerabilities for some people and places, since simply shifting risk and vulnerability around does not seem like an effective strategy for building resilience collectively to climate change (or any notion of a global goal, as included the Paris Agreement).[53] There are also important equity dimensions to where risks and vulnerabilities are likely to end up.

While this is a concern shared by previous literature, we observe there to be no common terminology across this body of work. Some terms such as 'telecoupling' or 'teleconnections' refer to the interconnectedness that might lead to vulnerability redistribution. 'Spatial spillovers' or 'manufactured risks' refer more specifically to the redistribution of risks or vulnerabilities, although the former raises questions about where to draw the boundary of the system and the utility of spatial distance as the key defining factor. 'Maladaptation' includes all negative side effects of an activity, so is broader in scope than the risk we are interested in here.

Therefore, in this paper we refer to changes in risk or vulnerability arising from an adaptation intervention for people or ecosystems other than its intended beneficiaries as redistributive effects.

REVIEW OF REDISTRIBUTIVE EFFECTS IN ADAPTATION PRACTICE

Concerns about redistributive effects have for some time been visible in the practice of *mitigation*, that is, responses to reduce greenhouse gas emissions. For instance, concerns about 'carbon leakage' have been raised extensively in relation to carbon pricing policies,[54–58] about indirect land use change in response to policies such as the EU Renewable Energy Directive,[59,60] and about land access in discussion on the design of the REDD+ mechanism.[61] Even the Cancun Agreement (Decision 1/CP.16) acknowledges potentially negative effects of mitigation responses, referring mainly to instances involving cross-border investments such as under the Clean Development Mechanism.[62]

To explore whether the potential for vulnerability redistribution is being meaningfully considered in *adaptation* practice, here we examine its treatment within various different processes, or stages, that make up the practice of adaptation. Our empirical approach is an eclectic one, in that it looks at examples across a diverse range of 'practice', and for the purposes of our review we feel this is both acceptable and justified. Our aim is to offer a first exploration of this question, hence our review preferences

breadth (i.e., covering different stages and types of practitioners involved in adaptation) rather than depth.

The review is structured so as to cover the following: (1) scientific synthesis of adaptation research, specifically by the Intergovernmental Panel on Climate Change (IPCC); (2) key international guidance frameworks, including several under the UNFCCC; (3) a number of regional adaptation policies; (4) the guiding frameworks of several international adaptation funds; (5) some of the individual project proposals that have been approved for funding; and (6) a suite of monitoring and evaluation frameworks that have emerged to provide learning about the outcomes of adaptation interventions. In each case we review *whether the potential for vulnerability redistribution is recognized* in the way adaptation is presented, and if so *how this affects the way adaptation is conceptualized* or designed.

Vulnerability Redistribution in Knowledge Synthesis Exercises

Knowledge synthesis plays an important function, bridging academic research with different kinds of adaptation practitioners as a basis for decision making. The IPCC is the premier body tasked, in its Assessment Reports, with synthesizing the state of knowledge about climate change including adaptation, hence we reviewed the treatment of vulnerability redistribution in the most recent IPCC synthesis report (Fifth Assessment, AR5).

The report mentions the potential for unintended and unanticipated consequences of adaptation to arise,[63–65] and the need to avoid maladaptation which it defines as 'actions, or inaction that may lead to increased risk of adverse climate-related outcomes, increased vulnerability to climate change, or diminished welfare, now or in the future' (Ref 65, p. 857). It acknowledges that maladaptation is 'a cause of increasing concern to adaptation planners' (Ref 65, p. 859), and in a few places also alludes to concepts of 'risk transfer' and 'external costs' (e.g., in the AR5 glossary[66]). When discussing possible 'screening for maladaptation' Noble et al.[65] refer to Barnett and O'Neill's[4] five pathways as 'useful pointers' (Ref 65, p. 858). Yet despite these acknowledgments of the potential for adaptation to redistribute risk or vulnerability, or for maladaptation more generally, they do not seem to have substantively changed the way the concept of adaptation itself is presented. It has not for instance led to the promotion of new ways of planning, stressed the importance of new actors (or *more* actors) in the planning process, of tools that might be used to evaluate redistributive effects, or even stressed the necessity of doing so. The consequences of maladaptation, and particularly the potential for vulnerability redistribution, appear to have little or no impact on the wider discussion about what the adaptation process should look like, or how it might be organized or governed.

Vulnerability Redistribution in International Adaptation Guidance

In the international policy realm, Parties come together under the UNFCCC to set up governance and resourcing frameworks for responding to climate change and countries provide financial resources to other countries (either directly or through multilateral institutions like the World Bank) to implement adaptation. Key adaptation-related institutions under the UNFCCC are the Nairobi Work Program (NWP), the Cancun Adaptation Framework (CAF) and the Adaptation Committee.

The NWP was set up to support countries and other actors to improve understanding and assessment of climate impacts, vulnerability and adaptation. In 2011 the NWP published an overview of approaches to assessing the costs and benefits of adaptation options[67] according to which planners need 'not only to consider *net benefits* but also to consider the *distribution of the costs and benefits* of adaptation options' (Ref 67, p. 11, our emphasis). This could be done, the NWP suggests, either via a 'technical assessment' to weight outcomes for different stakeholders or by ensuring policy makers have access to information about distributional impacts (which effectively amount to variations of the same approach). A key underlying assumption here is that an individual adaptation planner has some reason or responsibility to care about redistributive impacts, which could be a problematic one given that the effects will, by definition, occur outside their sphere of concern.

The CAF[62] has the objective of 'enhancing action on adaptation, including through international cooperation and coherent consideration of matters relating to adaptation under the convention' (Ref 62, paragraph 13). The CAF makes no reference to maladaptation, or to the need for considering the possibility of risk or vulnerability redistribution. Oblique recognition of this risk is only visible in its invitation to strengthen action on '[m]easures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional and international levels'

(Ref 62, paragraph 14(f)). The Adaptation Committee, established under the CAF[68] is the 'only Committee under the Convention and the UN at large that comprehensively addresses adaptation' (Ref 68, p. 3) and is supposed to enhance coordination of adaptation internationally.[69] In the Committee's 2015 annual report[68] maladaptation is mentioned twice, and there only in reference to depletion of assets *locally* rather than effects in distant places.

Under the CAF countries are encouraged to prepare national adaptation plans. The UNFCCC Least Developed Country Expert Group's technical guidelines for the development of such plans[70] suggest appraising 'whether [adaptation] strategies would have negative or positive impacts on other sectors or systems, including on vulnerable populations or the environment/ecosystems, or synergies with other multilateral environmental agreements' (Ref 70, p. 74). This is a noteworthy prompt, although all of the examples they describe are of *positive* effects.

Looking beyond UNFCCC institutions, the Global Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA), developed under the United Nations Environment Program (UNEP), does not mention the possibility of adaptation creating indirect effects on people other than those in the same location as the intended beneficiaries (i.e., again, *locally*).[71] The PROVIA guidance document even explicitly mentions that it does not discuss maladaptation (Ref 71, p. 3), which suggests it is comfortable approaching adaptation as something supposedly separate from maladaptation.

Vulnerability Redistribution in Adaptation Policy

To explore how the potential for vulnerability redistribution has been considered in adaptation policy, we selected various regional (multi-country) policies that have been developed in the European context—for the Mediterranean, the Baltic Sea Region, the Danube catchment area, and the European Union respectively. Regional policy examples were chosen because they are cross boundary, hence one might expect redistributive effects—at least between the countries involved—to have been a topic of interest during development of the strategies.

The Regional Climate Change Adaptation Framework endorsed by 16 Mediterranean countries and the European Community in February 2016, mentions the risk of maladaptation and the need to 'avoid' and 'minimize the scope' of such outcomes[72], but without providing specific guidance on how to screen for maladaptation nor how this might be coordinated. The Baltic[73,74] and Danube strategies[75] more clearly highlight the risk of producing outcomes that shift vulnerability between people and places and also hint at possible governance implications, in both cases suggesting some form of cross-actor coordination, yet in neither case do these observations translate into a concrete strategy for dealing with the identified risks. The proposed Strategy for Adaptation to Climate Change in the Baltic Sea Region[73] and its associated Action Plan[74] both acknowledge the possibility of adaptation creating adverse side effects between sectors, and the Strategy suggests that '[m]acro-regional cooperation is needed to ensure inclusion in national strategies of issues where [climate change] or climate adaptation in one state has consequences in other [Baltic Sea Region] states or for the Baltic Sea' (Ref 73, p. 33). Yet while the Action Plan proposes criteria for evaluating different adaptation actions it makes no mention of how to assess for potential redistributive effects, how the possibility of vulnerability redistribution might influence what type of actions are chosen, nor how cooperation might be set up to resolve these situations.

The Climate Adaptation Strategy for the Danube River Basin[75] emphasizes that 'adaptation measures in one sector may have retroactive, positive or negative effects on one or more other sectors' (Ref 75, p. 29) and that compared to the effects of climate change itself it is 'more likely that indirect pressures arising from human response to climate change will have a greater impact (such as elevated water abstractions for irrigated agriculture, or new flood defense infrastructure)' (Ref 75, p. 36). It makes a general call for 'cross-sectoral, interdisciplinary and integral approaches' (Ref 75, p. 29) and as part of its guiding principles recommends to assess 'over a range of timescales, direct influences of climate change and indirect influences where pressures are created due to human activities adapting to climate change' (Ref 75, p. 33). While this is a noteworthy difference to the other regional policy frameworks, how such an assessment could be operationalized is left unclear.

Finally, during the process of drafting the European Union's Strategy on adaptation to climate change,[76] references to maladaptation appeared only in the second version (White Paper) but were then omitted from the final strategy. Further, while the earlier versions (Green and White papers) of the policy referred to the possibility of redistributive effects through trade pathways from *beyond* the EU's borders, there is no mention of the related problem of creating potential spillover effects *within* or *between*

EU member countries, even though the strategy covers 28 highly interconnected member countries.

Vulnerability Redistribution in Climate Finance Mechanisms and Adaptation Projects

Along with general guidance frameworks and government policies, of which examples are described above, the policies and guiding frameworks of finance institutions and climate funds also play a role in shaping how adaptation is designed and implemented. Under the UNFCCC, several climate funds have been established to support developing countries in implementing their adaptation priorities. Here, we reviewed the frameworks used by two of the main funds, the Green Climate Fund (GCF) and the Adaptation Fund (AF).

The GCF's guide for applicants[77] does not specifically encourage project developers to consider the maladaptive potential of their projects, either generally or the specific risk of shifting vulnerability or risks to other people or places. The role of the fund's environmental and social safeguards[78] is to 'avoid, reduce or compensate for negative effects of activities' (Ref 78, p. 5), and require project developers to consider impacts on: Labor and Working Conditions; Resource Efficiency and Pollution Prevention; Community Health, Safety, and Security; Land Acquisition and Involuntary Resettlement; Biodiversity Conservation and Sustainable Management of Living Natural Resources; Indigenous Peoples; and Cultural Heritage. However, in the objectives specified for each of these risks, the implied emphasis is on *local* impacts; proponents are not prompted to look at effects further afield. The GCF's 'Results Management Framework'[79] encourages proponents to consider indirect *beneficiaries* of each project but does not similarly emphasize that interventions might indirectly harm other people.

The AF's Results Framework and Baseline Guidance[80] provides both a set of general principles to guide the work of the Fund's Board as well as guidelines for the design of individual projects. In its introduction, the document defines 'impact' as '[p]ositive *and negative* long-term effects on identifiable population groups produced by a development intervention. These effects can be economic, socio-cultural, institutional, environmental, technological or of other types' (Ref 80, p. 4, our emphasis). Maladaptation is not mentioned, and the only mention of potential negative effects in the 123 page document is a prompt to '[w]here relevant, consider the potential negative impacts on the environment in assessing the effectiveness of financed initiatives' (Ref 80, p. 93). The framework mentions that 'evaluation… can make overall judgments about intended and unintended results (e.g., increased resilience, decreased vulnerability, improved cost- effectiveness)' (Ref 80, p. 21), although here the examples given are only positive effects. Moreover, the indicators the guideline suggests using to do this evaluation are related only to *intended* outcomes which in practice renders *unintended* outcomes invisible.

Through the climate funds, we are also able to review the way project developers may be considering the possibility of vulnerability redistribution, by looking at the proposal documents of approved projects. This we have done in detail for the first 18 adaptation-related proposals approved by the GCF since it began operation in October 2015, as a representative sample. These were projects designed by different organizations and located in different countries—Bangladesh, Eastern Africa, the Maldives, Fiji, Gambia, Malawi, Mali, Morocco, Namibia (2), Pakistan, Peru, Senegal (2), Sri Lanka, Tajikistan and Uzbekistan, Tuvalu and Vietnam.[81] For each project document, we used keyword searches for 'indirect', 'negative', 'maladaptation' and 'risk', and then examined the passages of text around each of the search terms. In the case of 'risk', we concentrated on identifying where risks arising from the project on other people or ecosystems were flagged, rather than risks to the execution of the project itself.

The GCF project templates require project proponents to report on indirect *beneficiaries*, and also on environmental, social or other *risks*. Each of the project proposals clearly identifies the number (and in some cases the location and/or gender) of indirect beneficiaries. For example, a Senegalese project[82] identifies precisely '109,035 indirect beneficiaries' (Ref 82, p. 32), the Peruvian proposal[83] vaguely asserts '[t]he indirect beneficiaries are estimated to number more than twice those directly covered by the project' (Ref 83, p. 25) and for Bangladesh the Kreditanstalt für Wiederaufbau (KfW) estimates those benefiting indirectly from the proposed adaptation intervention to be 10.4 million people, equivalent to nearly 7% of the country's total population.[84]

This contrasts with the way potential negative effects are treated, which can be found within project documents in the section on risk management. Overall, most of the approved projects classify themselves as falling under the Fund's environmental and social category 'C', which means activities are deemed to pose minimal or no adverse environmental and/or social risks or impacts. The Peruvian proponents

even go so far as to claim that '[t]he project will not generate adverse environmental and social impacts and risks' (Ref 83, p. 49), and that 'indirect impacts are all of a positive nature' (Ref 83, p. 84). Only one (Senegal) classifies itself in category 'A' as involving significant risks. 'Maladaptation' is mentioned in only two proposals (Namibia and Tuvalu). In the section on risks, most of the risks identified are to project implementation. In a few cases, project proposals give at least cursory consideration to potential risks arising as a result of the project. Here we observe that the risks highlighted tend to be of a certain kind: For instance, none relate to redistributing risks through financial or *economic* pathways; they are instead mainly *biophysical* impacts (e.g., changes in water access, human wildlife conflict, local pollution) and mainly in the vicinity of the project sites. None highlight impacts beyond national borders.

This reflects a wider observation: Virtually all risks that are identified are deferred to some kind of project risk management plan, while very few projects explain that consideration of these risks has led to changes in the design of the project itself (examples of the latter are Tuvalu and the Gambia, which both explain that selection of the project's location will avoid areas where these risks might be higher, such as sensitive ecosystems or communities with unclear land tenure arrangements). In other words, project proposals generally do not identify risks or indirect effects that cannot be 'managed' or 'mitigated' through implementation of a relevant project plan. This seems unlikely to reflect the real extent of negative, unintended effects arising from these projects, particularly as some are complex interventions that affect the supply of market commodities or community ownership of land or access to water resources, or involve construction of coastal infrastructure in sensitive environments or even the involuntary resettlement of communities.

Overall, we observe proponents typically amplifying the indirect benefits ('millions of people' in Bangladesh) and severely limiting or localizing the types of negative impacts and risks identified. The positive effects are at times spurious and unjustified, while the negative effects are limited to risks that can be managed within the project itself.

Vulnerability Redistribution in Monitoring and Evaluation Frameworks for Adaptation

Finally, as a last important stage in adaptation practice, monitoring and evaluation (M&E) frameworks are tools by which to assess the outcomes of adaptation interventions. Here we draw initially on reviews of M&E frameworks published by others, adding to these our own review of several more recent frameworks.

Bours et al.[85] and more recently Bours et al.[86] reviewed in total 22 M&E frameworks, and describe that most mention maladaptation once or twice without meaningfully incorporating this into the evaluation (see for instance Brooks and Fisher[87] and GIZ[88]). Across these 22 frameworks, the authors conclude that accounting for maladaptive consequences of adaptation interventions remains one of two key gaps in M&E frameworks (the other one being whether or not climate adaptation initiatives actually 'fit' adaptation needs).[86]

Based on our own review, most frameworks acknowledge the difficulty of dealing with uncertainty in a *temporal* sense (e.g., shifting baselines in terms of both climate impacts and adaptive capacities) and thus the possibility of unintended impacts emerging beyond the life of the project. However, none appear to actively look beyond the project's *geographic* scale at the possibility for wider economic and societal effects. Some frameworks, such as Villanueva[89] and Pringle[90], mention the need to consider unintended consequences on other groups or sectors, but do not articulate how wide to set the lens when looking for these consequences or provide insights into how to do this in practice. Several more recent M&E frameworks (e.g., Nepal's Environment Friendly Local Governance Monitoring Framework[91]) consider up- and downward linkages between the local and other scales, yet limit their focus to what might be experienced at the national level. In the Adaptation Fund's M&E framework[68], assessing impacts of adaptation projects on broader socio-economic and ecological systems is acknowledged as important for seeking coherence between different geographical scales—local, community, regional and national—although it too subsequently delimits such an assessment to the nation-state level.

DISCUSSION: A SYSTEMIC NEGLECT OF VULNERABILITY REDISTRIBUTION IN ADAPTATION?

Vulnerability Redistribution Matters

That adaptation will generate unintended and indirect effects is, by nature of increasing global interconnectedness, inevitable. Yet the review presented here highlights that even though various strands of academic literature have given attention to the potential for vulnerability redistribution, this appears not to have translated into a genuine

concern for understanding and avoiding this in adaptation practice. This gap seems to be systemic, in that the concern is not meaningfully addressed by *any* of the different communities of practice across different stages in the adaptation process—from those involved in the synthesis of scientific knowledge to those preparing guidance, designing projects, allocating funding, and evaluating outcomes. We also observe that where adaptation project developers and climate funds allude to indirect effects, explicitly or implicitly, these tend to be only the positive effects that an adaptation intervention might have.

This is troubling for a number of reasons. If adaptation is allowed to simply redistribute risk or vulnerability, it is likely that *the greatest risks and vulnerabilities will end up accumulating among people and communities who are already the most marginalized*, because they are least involved in planning decisions and have a low capacity to redirect risks and vulnerabilities (see also arguments made by Warner and Kuzdas[15]). These same groups are often described as already being the most vulnerable. This is not only an equity issue, but also—as others have argued—may present a risk to systemic stability or resilience at the global level.[25]

Further, by not paying attention to the difference between adaptation and maladaptation, the *investments and adaptation decisions being made today may in fact be making things worse rather than better*. We often see references to the mobilization of adaptation finance internationally[92,93] and arguments that more investment is needed to address an 'adaptation gap,'[94] but what if the investment happening in the name of adaptation is actually widening the gap? At the moment, neither researchers or practitioners appear to be even asking this question.

These concerns also have implications for the politically sensitive discussions in the UNFCCC about the accounting of adaptation finance (i.e., how much is being delivered), and its effectiveness. If increasing risks or vulnerabilities for other people or places is understood as a maladaptive outcome, then finance already spent on adaptation might need reassessing, and more importantly the allocation of future resources might need re-thinking. The present practice of simply counting all funding that is labeled adaptation towards international commitments for climate finance is flawed if no account is being taken of actual outcomes, including outcomes beyond the intended beneficiaries.

Implications for the Governance and Process of Adaptation

In practice, it seems impossible to avoid redistributive effects altogether, thus accepting some form of adaptation trade-off seems equally unavoidable (also argued in Magnan et al.[27]). There are some important questions we should be asking here, particularly pertinent to those interested in adaptation governance: When is a trade-off to be accepted, as opposed to re-thinking the adaptation approach? What is an 'acceptable' trade-off? Does this depend on the number of impacted people (positively versus negatively), who they are (rich or poor) or where they are (in 'our' community, in another country)? And who is in a position to decide the answers to these questions? In other words, who is, or should be, responsible for assessing and managing the distributional impacts of adaptation and at different scales?

As others have pointed out[95], not all actors have an incentive to take account of the vulnerability redistribution outcomes resulting from their own actions, and we might not expect individuals, businesses or even nation states to be concerned about effects arising indirectly from their adaptation responses. Typically, the further away the impact the less likely we might expect decision makers to either be able to predict effects or, frankly, to care. This however does not diminish the importance of having some way of coordinating or managing the net risk or vulnerability outcomes at the 'system' scale, or at different scales.

Some actors are involved with the planning, funding and implementation of adaptation in different places simultaneously—and thus presumably have a vested interest in understanding potentially counterproductive interactions between discrete interventions—so perhaps among this group we might see a concern and practical guidance emerge. This includes the various international climate funds, development banks, UN agencies and bilateral development organizations that are financing and designing adaptation initiatives in different parts of the world. The UNFCCC's Adaptation Committee seems well placed to take a lead here, since it is tasked with supporting coordination internationally and promoting cohesion in adaptation policy, and has been explicitly requested to develop methodologies for assessing the effectiveness of the global effort.[69]

For the research community, this implies giving more attention to forms of governance that might track and manage the bigger picture. Lessons might be drawn from other fields where the need to manage

potential negative externalities has stimulated various governance 'solutions.' These range from cross-boundary frameworks for water or fisheries management, to arrangements to reduce the price effects of commodity competition in the global economy (such as establishment of the International Coffee Organization). In such examples, the establishment of cross-actor and cross-scale forums seems to be a common ambition, and their political maintenance a common challenge. Some of the discussion around policy coherence within the post-2015 agenda, and its implementation of the Sustainable Development Goals (among which 'Policy and Institutional Coherence' is itself one of the 17 goals), seems likely to also be of relevance for adaptation practitioners.

A broader point here is that a concern for vulnerability redistribution might lead to reconsidering the adaptation planning process. So far, as a concept 'adaptation' appears not to have practically changed the way societies plan for the future, but instead promoted the addition of just another set of (climate-related) risks into traditional planning approaches. This is exemplified by the increasingly popular concepts of 'mainstreaming' and 'climate–proofing'.[96] To be able to foresee its redistributive effects, adaptation planning likely needs a more holistic lens—cross-sector, cross-boundary, and cross-discipline—and to meaningfully involve a wide range of actors simultaneously, including groups that are not traditionally included in decision making by international institutions, governments and the private sector.

Mal/Adaptation Revisited

The literature on maladaptation offers divided impressions about whether adaptation and maladaptation can be products of the same intervention, or alternatively whether the intervention itself is either one or the other. Some suggest that what is adaptation for some is maladaptation for others (see e.g., Ref 5), thus allowing coexistence; others define maladaptation as the creation of negative impacts *per se* (see e.g., Ref 3, p. 25), thus suggesting an intervention is either one or the other. This partly links to the question about trade-offs, in that if we consider any negative effects as maladaptation—and not simultaneously as successful adaptation—then we do not accept trade-offs.

In either case, we suggest a need to revisit most of what we think we know about the implementation of adaptation to date. Without knowledge of the way adaptation has been redistributing vulnerability, our empirical knowledge base may in fact not be about 'adaptation' at all but actually maladaptation, and without us knowing it. Distributional impacts are rarely analyzed in the reams of discrete adaptation case studies, or in exercises to 'track adaptation progress' at the global level.[97] In the absence of a body of empirical literature documenting and analyzing these outcomes, it is impossible to know whether adaptation efforts have been improving resilience or reducing vulnerability, and if so for who and at whose expense, and if progress has really been made towards some kind of global goal.

That vulnerability might be redistributed, and globally, should also prompt us to question the norm that 'adaptation is local'. This echoes earlier suggestions that a local or national level focus on adaptation is too restrictive.[95] We need to know more about adaptation as a collective endeavor; that is, where outcomes are evaluated at multiple scales rather than just the local impacts for the intended beneficiaries. A central concern should be to what extent the sum of all adaptation responses is either supporting or undermining adaptation of the system as a whole (i.e., at larger scales). This implies a research agenda that, instead of studying and evaluating adaptation based on discrete choices and actions, places much more emphasis on understanding how vulnerability or adaptive capacity at different scales is simultaneously affected by different kinds of responses.

CONCLUSION: BRINGING VULNERABILITY REDISTRIBUTION INTO ADAPTATION THINKING

Goldin and Mariathasan[24] suggest that 'systemic risk cannot be removed because it is endemic to globalisation… [i]t is a process to be managed, not a problem to be solved' (Ref 24, p. XIII). While vulnerability redistribution might be impossible to avoid entirely as adaptation progresses around the world, it is nevertheless important to properly consider how adaptation may be generate redistributive effects, in order to make interventions as sustainable as possible.[5,6] Without an understanding of *whether* and *how* these are being produced, it is not possible to conclude whether the strategies and activities being invested in are generating net benefits or instead simply redistributing vulnerability around the board.

To make proper judgments about the effectiveness of particular responses we need to understand who wins and who loses as a result,[12] which means analysis of distributional impacts needs to become more normalized in the adaptation process. We agree with the argument made by Magnan et al.[27] that what is needed are ways of evaluating the possibility

of maladaptation, including vulnerability redistribution, *ex ante* in order to be able to reduce their occurrence. Although prediction and attribution are likely to remain difficult, practical tools or approaches that can assist in visualizing potential pathways for vulnerability redistribution could help decision makers to analyze trade-offs between different social objectives and different geographies. As an example, 'decision scaling' approaches have been suggested in impacts research,[98] and perhaps offer ideas for how to anticipate indirect effects during adaptation planning. 'Heuristic coherence frameworks' might also be a useful start; the OECD[99] for instance proposes a broad framework—for application in thinking about development outcomes—which identifies coherence between 'diverse actions of multiple actors and stakeholders' (Ref 99, p. 15) as one of the five coherence needs for implementing sustainable development.

Assessment is important *ex poste* too. Most M&E is presently project-based, but more programmatic and longer-term M&E is likely to be needed to properly consider the cumulative effects of adaptation interventions both over different geographies and over time.

These concerns are not merely academic. In preparing for the future, as we make deliberate choices to adjust our practices or physical environments, an awareness of maladaptation outcomes of all kinds should be guiding us just as much as the notion of addressing climate risks is. At the moment, adaptation decision making features only the latter. Although identifying or predicting different kinds of unintended effects remains a challenge, particularly where these occur in places distant from the adaptation site itself, this makes it all the more important that these risks start to be acknowledged and addressed in research on adaptation, and across different stages of practice. Not doing so, we fear, may undermine the integrity of the whole enterprise.

REFERENCES

1. Nalau J, Preston BL, Maloney MC. Is adaptation a local responsibility? *Environ Sci Policy* 2015, 48:89–98 https://doi.org/10.1016/j.envsci.2014.12.011.
2. Benzie M, Hedlund J, Carlsen H. *Introducing the Transnational Climate Impacts Index: Indicators of Country-Level Exposure – Methodology Report*. Stockholm: Stockholm Environment Institute; 2016.
3. Barnett J, O'Neill S. Maladaptation. *Glob Environ Change* 2010, 20:211–213 https://doi.org/10.1016/j.gloenvcha.2009.11.004.
4. Barnett J, O'Neill S. Minimising the risk of maladaptation: a framework for analysis. In: Palutikof J, Boulter SL, Ash AJ, Smith MS, Parry M, Waschka M, Guitart D, eds. *Climate Adaptation Futures*. Oxford: John Wiley & Sons; 2013, 87–93.
5. Eriksen S, Aldunce P, Sekhar Bahinipati C, D'Almeida MR, Isaac MJ, Nhemachena C, O'Brien K, Olorunfemi F, Park J, Sygna L, et al. When not every response to climate change is a good one: identifying principles for sustainable adaptation. *Clim Dev* 2011, 3:7–20 https://doi.org/10.3763/cdev.2010.0060.
6. Brown K. Sustainable adaptation: an oxymoron? *Clim Dev* 2011, 3:21–31 https://doi.org/10.3763/cdev.2010.0062.
7. Eriksen S, Brown K. Sustainable adaptation to climate change. *Clim Dev* 2011, 3:3–6 https://doi.org/10.3763/cdev.2010.0064.
8. Adger WN, Saleemul H, Katrina B, Conway D, Hulme M. Adaptation to climate change in the developing world. *Prog Dev Stud* 2003, 3:179–195 https://doi.org/10.1191/1464993403ps060oa.
9. Kates RW. Cautionary Tales: Adaptation and the Global Poor. *Clim Change* 2000, 45:5–11.
10. Ian B. Vulnerability and adaptive response in the context of climate and climate change. *Clim Change* 1997, 36:185–196.
11. Scheraga JD, Ebi KL, Furlow J, Moreno AR. From science to policy: developing responses to climate change. In: *Climate Change and Human Health - Risks and Responses. Summary*. Geneva: World Health Organization; 2003, 237–266.
12. Adger WN, Arnell NW, Tompkins EL. Successful adaptation to climate change across scales. *Glob Environ Change* 2005, 15:77–86 https://doi.org/10.1016/j.gloenvcha.2004.12.005.
13. Fazey I, Pettorelli N, Kenter J, Wagatora D, Daniel S. Maladaptive trajectories of change in Makira, Solomon Islands. *Glob Environ Change* 2011, 21:1275–1289 https://doi.org/10.1016/j.gloenvcha.2011.07.006. The Guardian 2016, 18 May.
14. Leichenko R, O'Brien K. *Environmental Change and Globalization*. Oxford: Oxford University Press; 2008.
15. Warner BP, Kuzdas C. Manufactured global-change risk pathways in industrial-based agrarian

development. *Clim Dev* 2016, 8:385–396 https://doi.org/10.1080/17565529.2015.1085359.

16. Adger WN. Vulnerability. *Glob Environ Change Hum Policy Dimens* 2006, 16:268–281 https://doi.org/10.1016/j.gloenvcha.2006.02.006.
17. Klein RJT, Nicholls RJ, Ragoonaden S, Capobianco M, Aston J, Buckley EN. Technological options for adaptation to climate change in coastal zones. *J Coast Res* 2001, 17:531–543.
18. Eakin H, Winkels A, Sendzimir J. Nested vulnerability: exploring cross-scale linkages and vulnerability teleconnections in Mexican and Vietnamese coffee systems. *Environ Sci Policy* 2009, 12:398–412 https://doi.org/10.1016/j.envsci.2008.09.003.
19. Young OR, Berkhout F, Gallopin GC, Janssen MA, Ostrom E, Sander v d L. The globalization of socio-ecological systems: an agenda for scientific research. *Glob Environ Change* 2006, 16:304–316 https://doi.org/10.1016/j.gloenvcha.2006.03.004.
20. Adger WN, Eakin H, Winkels A. Nested and teleconnected vulnerabilities to environmental change. *Front Ecol Environ* 2009, 7:150–157 https://doi.org/10.1890/070148.
21. Juhola S, Glaas E, Linnér B-O, Neset T-S. Redefining maladaptation. *Environ Sci Policy* 2016, 55:135–140 https://doi.org/10.1016/j.envsci.2015.09.014.
22. Moser SC, Hart JAF. The long arm of climate change: societal teleconnections and the future of climate change impacts studies. *Clim Change* 2015, 129:13–26 https://doi.org/10.1007/s10584-015-1328-z.
23. Liu J, Hull V, Batistella M, DeFries R, Dietz T, Fu F, Hertel TW, Izaurralde RC, Lambin EF, Li S, et al. Framing sustainability in a telecoupled world. *Ecol Soc* 2013, 18:1–17 https://doi.org/10.5751/ES-05873-180226.
24. Goldin I, Mariathasan M. *The Butterfly Defect: How Globalization Creates Systemic Risks, and What To Do About It*. Princeton: Princeton University Press; 2014.
25. Centeno MA, Nag M, Patterson TS, Shaver A, Windawi AJ. The Emergence of Global Systemic Risk. *Ann Rev Sociol* 2015, 41:65–85 https://doi.org/10.1146/annurev-soc-073014-112317.
26. Magnan A, Ribera T, Treyer S. *National Adaptation Is also a Global Concern*. Paris: IDDRI - Institut du développement durable et des relations internationales; 2015.
27. Magnan AK, Schipper ELF, Burkett M, Bharwani S, Burton I, Eriksen S, Gemenne F, Schaar J, Ziervogel G. Addressing the risk of maladaptation to climate change. *WIREs Clim Change* 2016, 7:646–665 https://doi.org/10.1002/wcc.409.
28. Dilling L, Daly ME, Travis WR, Wilhelmi OV, Klein RA. The dynamics of vulnerability: why adapting to climate variability will not always prepare us for climate change. *WIREs Clim Change* 2015, 6:413–425 https://doi.org/10.1002/wcc.341.
29. Granberg M, Glover L. Adaptation and maladaptation in Australian national climate change policy. *J Environ Policy Plan* 2014, 16:147–159 https://doi.org/10.1080/1523908X.2013.823857.
30. Hopkins AG, ed. *Globalization in World History*. New York: Norton; 2002.
31. Held D, McGrew A, Goldblatt D, Perraton J. *Global Transformations: Politics, Economics and Culture*. Stanford: Stanford University Press; 1999.
32. Harvey D. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Oxford/Cambridge, MA: Blackwell; 1989.
33. Massey DSA. Global Sense of Place. *Marxism Today* 1991, 38:24–29.
34. Reynolds D. American globalism: mass, motion and the multiplier effect. In: Hopkins AG, ed. *Globalization in World History*. New York: Norton; 2002, 243–260.
35. Mayer J. The fallacy of composition: a review of the literature. In: Presented at United Nations Conference on Trade and Development: UNCTAD Discussion Paper No 166; 2003.
36. OECD. *Policy Coherence for Inclusive and Sustainable Development*. Paris: Organisation for Economic Co-operation and Development; n.d.
37. Baffes J, Lewin B, Varangis P. Coffee: market setting and policies. In: Aksoy MA, Beghin JC, eds. *Global Agricultural Trade and Developing Countries*. Washington, DC: The World Bank; 2005, 297–309.
38. Bacon C. Confronting the coffee crisis: can fair trade, organic, and specialty coffees reduce small-scale farmer vulnerability in Northern Nicaragua? *World Dev* 2005, 33:497–511 https://doi.org/10.1016/j.worlddev.2004.10.002.
39. Bellamy FJ. The financialization of capitalism. *Monthly Rev* 2007, 58:1–12.
40. Lapavitsas C. Theorizing financialization. *Work Employ Soc* 2011, 25:611–626 https://doi.org/10.1177/0950017011419708.
41. Bebbington AJ, Batterbury SPJ. Transnational livelihoods and landscapes: political ecologies of globalization. *Cult Geogr* 2001, 8:369–380 https://doi.org/10.1177/096746080100800401.
42. Black R, Bennett SRG, Thomas SM, Beddington JR. Migration as adaptation. *Nat Clim Change* 2011, 478:447–449 https://doi.org/10.1038/478477a.
43. Doshi V. India set to start massive project to divert Ganges and Brahmaputra rivers. The *Guardian*, 18 May, 2016.
44. adelphi research gemeinnützige GmbH. Environment, Conflict and Cooperation (ECC) Factbook. Dashboard; 2017. Available at: https://www.ecc-platform.org (accessed August 28, 2017).

45. Hanak E, Moreno G. California coastal management with a changing climate. *Clim Change* 2012, 111:45–73 https://doi.org/10.1007/s10584-011-0295-2.

46. Macintosh A. Coastal climate hazards and urban planning: how planning responses can lead to maladaptation. *Mitig Adapt Strat Glob Change* 2013, 18:1035–1055 https://doi.org/10.1007/s11027-012-9406-2.

47. Airoldi L, Abbiati M, Beck MW, Hawkins SJ, Jonsson PR, Martin D, Moschella PS, Sundelöf A, Thompson RC, et al. An ecological perspective on the deployment and design of low-crested and other hard coastal defence structures. *Coast Eng* 2005, 52:1073–1087 https://doi.org/10.1016/j.coastaleng.2005.09.007.

48. Verburg PH, Koomen E, Hilferink M, Pérez-Soba M, Lesschen JP. An assessment of the impact of climate adaptation measures to reduce flood risk on ecosystem services. *Landsc Ecol* 2012, 27:473–486 https://doi.org/10.1007/s10980-012-9715-6.

49. Gibbs MT. Why is coastal retreat so hard to implement? Understanding the political risk of coastal adaptation pathways. *Ocean Coast Manag* 2016, 130:107–114 https://doi.org/10.1016/j.ocecoaman.2016.06.002.

50. Christian-Smith J, Levy MC, Gleick PH. Maladaptation to drought: a case report from California, USA. *Sustain Sci* 2015, 10:491–501 https://doi.org/10.1007/s11625-014-0269-1.

51. McEvoy J, Wilder M. Discourse and desalination: potential impacts of proposed climate change adaptation interventions in the Arizona–Sonora border region. *Glob Environ Change* 2012, 22:353–363 https://doi.org/10.1016/j.gloenvcha.2011.11.001.

52. Averchenkova A, Crick F, Kocornik-Mina A, Leck H, Surminski S. Multinational and large national corporations and climate adaptation: are we asking the right questions? A review of current knowledge and a new research perspective: multinational and large national corporations and climate adaptation. *WIREs Clim Change* 2016, 7:517–536 https://doi.org/10.1002/wcc.402.

53. Lesnikowski A, Ford J, Biesbroek R, Berrang-Ford L, Maillet M, Araos M, Austin SE. What does the Paris Agreement mean for adaptation? *Clim Policy* 2016, 17:825–831 https://doi.org/10.1080/14693062.2016.1248889.

54. Oliveira-Martins J, Burniaux JM, Martin JP. *Trade and the effectiveness of unilateral CO2 abatement policies: evidence from GREEN*. Paris: Organisation for Economic Cooperation and Development (OECD); 1992.

55. Felder S, Rutherford TF. Unilateral CO_2 reductions and carbon leakage: the consequences of international trade in oil and basic materials. *J Environ Econ Manage* 1993, 25:162–176 https://doi.org/10.1006/jeem.1993.1040.

56. Coppel J. *International Conference on the Economics of Climate Change. Implementing a Global Abatement Policy: Some Selected Issues*. Paris: Organisation for Economic Cooperation and Development (OECD; 1993.

57. Babiker M. Climate change policy, market structure, and carbon leakage. *J Int Econ* 2005, 65:421–445.

58. Barker T, Bashmakov I. Alharthi. Mitigation from a cross-sectoral perspective. In: Metz B, Davidson O, Bosch P, Dave R, Meyer L, eds. *Climate change 2007: Mitigation of Climate Change: Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press; 2007, 619–690.

59. Bird DN, Zanchi G, Pena N. A method for estimating the indirect land use change from bioenergy activities based on the supply and demand of agricultural-based energy. *Biomass Bioenergy* 2013, 59:3–15 https://doi.org/10.1016/j.biombioe.2013.03.006.

60. Ostwald M, Henders S. Making two parallel land-use sector debates meet: carbon leakage and indirect land-use change. *Land Use Policy* 2014, 36:533–542 https://doi.org/10.1016/j.landusepol.2013.09.012.

61. Ghazoul J, Butler RA, Mateo-Vega J, Koh LP. REDD: a reckoning of environment and development implications. *Trends Ecol Evol* 2010, 25:396–402 https://doi.org/10.1016/j.tree.2010.03.005.

62. UNFCCC. Decision 1/CP.16. The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention. In: *Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010 Addendum. Part Two: Action taken by the Conference of the Parties at its sixteenth session*; 2011.

63. Chambwera M, Heal G, Dubeux C, Hallegatte S, Leclerc L, Markandya A, McCarl B, Mechler R, Neumann J. Economics of adaptation, Climate change 2014: impacts, adaptation, and vulnerability. part a: global and sectoral aspects. In: Field CB, Barros VR, eds. *Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. New York: Cambridge University Press; 2014, 945–977.

64. Klein RJ, Midgley G, Preston B, Alam M, Berkhout F. Adaptation opportunities, constraints, and limits, Climate change 2014: impacts, adaptation, and vulnerability. Part a: global and sectoral aspects. In: Field CB, Barros VR, eds. *Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. New York: Cambridge University Press; 2014, 899–943.

65. Noble I, Huq S, Anokhin Y, Carmin Y, Goudou D, Lansigan F, Osman–Elasha B, Villamizar A. Adaptation needs and options. In: Field CB, Barros VR, eds. *Climate Change 2014: Impacts, Adaptation, and*

Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. New York: Cambridge University Press; 2014, 833–868.

66. IPCC. Annex II. Glossary. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability: Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. New York: Cambridge University Press; 2014, 1757–1776.
67. UNFCCC. Assessing the costs and benefits of adaptation options. An overview of approaches. The Nairobi work programme on impacts. In: *Vulnerability and Adaptation to Climate Change*. Bonn: UNFCCC Secretariat; 2011.
68. Adaptation Committee. Enhancing coherent action on adaptation 2012–2015. 2015 Overview Report. Bonn, Germany: United Nations Climate Change Secretariat; 2015.
69. UNFCCC. Adoption of the Paris Agreement. Conference of the Parties Twenty-first session, Paris, 30 November to 11 December 2015, Agenda item 4 (b) Durban Platform for Enhanced Action (decision 1/CP.17) Adoption of a protocol, another legal instrument, or an agreed outcome with legal force under the Convention applicable to all Parties. Bonn: UNFCCC Secretariat; 2015.
70. UNFCCC. *Least Developed Countries National Adaptation Plans. Technical Guidelines for the National Adaptation Plan Process*. Bonn: UNFCCC Secretariat; 2012.
71. Hinkel J, Bharwani S, Bisaro A, Carter TR, Cull T, Davis M, Klein RJT, Lonsdale K, Rosentrater L, Vincent K. *PROVIA Guidance on Assessing Vulnerability, Impacts and Adaptation to Climate Change: Consultation Document*. Nairobi: United Nations Environment Programme; 2013.
72. UNEP/MAP. *Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas*. Athens: United Nations Environment Programme/Coordinating Unit for the Mediterranean Action Plan; 2016.
73. Andersson L. *Baltadapt Strategy for Adaptation to Climate Change in the Baltic Sea region. A Proposal Preparing the Ground for Political Endorsement Throughout the Baltic Sea Region*. Copenhagen: Danish Meteorological Institute; 2013.
74. Altvater S, Stuke F. *Baltadapt Action Plan. Recommended Actions and Proposed Guidelines for Climate Change Adaptation in the Baltic Sea Region*. Copenhagen: Danish Meteorological Institute; 2013.
75. ICPDR River Basin Management Expert Group. *ICPDR Strategy on Adaptation to Climate Change*. Vienna: International Commission for the Protection of the Danube River; 2013.
76. European Commission. *An EU Strategy on Adaptation to Climate Change*. Brussels: The European Commission; 2013.
77. Green Climate Fund. *Concept Note User's Guide*. Incheon (Seoul): The Green Climate Fund; 2015.
78. Green Climate Fund. Environmental and social safeguards at the green climate fund. In: *Green Climate Fund Handbook*. Incheon (Seoul): The Green Climate Fund; 2015.
79. Green Climate Fund. *Further Development of the Initial Results Management Framework*. Incheon (Seoul): The Green Climate Fund; 2014.
80. Adaptation Fund. Results Framework and Baseline Guidance – Project-level. Adaptation Fund 2011. Available at: https://www.adaptation-fund.org/document/results-framework-and-baseline-guidance-project-level/. Accessed May 24, 2017.
81. Green Climate Fund. Approved projects and programmes. Green Climate Fund, 2017. Available at: http://www.greenclimate.fund/projects/browse-projects. Accessed May 24, 2017.
82. Green Climate Fund. *Consideration of Funding Proposals – Addendum Funding Proposal Package for FP003 (Senegal)*. Incheon (Seoul): The Green Climate Fund; 2015.
83. Green Climate Fund. *Consideration of Funding Proposals – Addendum Funding Proposal Package for FP001 (Peru)*. Incheon (Seoul): The Green Climate Fund; 2015.
84. Green Climate Fund. *Consideration of Funding Proposals – Addendum Funding proposal package for FP004 (Bangladesh)*. Incheon (Seoul): The Green Climate Fund; 2015.
85. Bours D, McGinn C, Pringle C. *Monitoring & Evaluation for Climate Change Adaptation: A Synthesis of Tools, Frameworks and Approaches*. Phnom Penh, Cambodia; Oxford: SEA Change Community of Practice and UKCIP; 2013.
86. Bours D, McGinn C, Pringle P. *Monitoring & Evaluation for Climate Change Adaptation and Resilience: A Synthesis of Tools, Frameworks and Approaches*. 2nd ed. Oxford: SEA Change Community of Practice and UKCIP; 2014.
87. Brooks N, Fisher S. *Tracking Adaptation and Measuring Development: A Step-by-Step Guide*. London: International Institute for Environment and Development; 2014.
88. GIZ. *Monitoring and Evaluating Adaptation at Aggregated Levels: A Comparative Analysis of Ten Systems*. Bonn and Eschborn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH; 2013.
89. Villanueva Paula Silva. Learning to ADAPT: Monitoring and Evaluation Approaches in Climate Change Adaptation and Disaster Risk Reduction – Challenges,

Gaps and Ways Forward. Strengthening Climate Resilience. SCR Discussion Paper 9; 2011.

90. Pringle P. *AdaptME: Adaptation Monitoring and Evaluation*. Oxford: UKCIP; 2011.
91. Sharma Chakra Pani. Building Community Resilience through Environment Friendly Local Governance Indicators and Monitoring Framework Nepal's Initiative. Government of Nepal, Ministry of Federal Affair and Local Development; 2013.
92. Buchner B, Trabacchi C, Mazza F, Abramskiehn D, Wang D. *Global Landscape of Climate Finance 2015*. Venice: Climate Policy Initiative; 2015.
93. Asian Development Bank. 2015 Joint Report on Multilateral Development Banks' Climate Finance. Mandaluyong City: Asian Development Bank; 2016.
94. UNEP. *Adaptation Finance Gap Report 2016*. Nairobi: United Nations Environment Programme (UNEP); 2016.
95. Magnan AK, Ribera T. Global adaptation after Paris. *Science* 2016, 352:1280–1282 https://doi.org/10.1126/science.aaf5002.
96. Methmann CP. "Climate protection" as empty signifier: a discourse theoretical perspective on climate mainstreaming in world politics. *Millennium J Int Stud* 2010, 39:345–372 https://doi.org/10.1177/0305829810383606.
97. Lesnikowski A, Ford J, Biesbroek R, Berrang-Ford L, Heymann SJ. National-level progress on adaptation. *Nat Clim Change* 2015, 6:261–264 https://doi.org/10.1038/nclimate2863.
98. Brown C, Ghile Y, Laverty M, Li K. Decision scaling: Linking bottom-up vulnerability analysis with climate projections in the water sector. *Water Resour Res* 2012, 48:1–12 https://doi.org/10.1029/2011WR011212.
99. OECD. Better Policies for Development *2014*: *Policy Coherence and Illicit Financial Flows*. Paris: Organisation for Economic Co-operation and Development; 2014.

Paper II

DOI: 10.1080/09644016.2018.1429207

ENVIRONMENTAL POLITICS, 2018
https://doi.org/10.1080/09644016.2018.1429207

Routledge
Taylor & Francis Group

RESEARCH ARTICLE

Depoliticizing adaptation: a critical analysis of EU climate adaptation policy

Elise Remling

School of Natural Science, Technology and Environmental Studies, Södertörn University, Huddinge, Sweden

ABSTRACT

The ways in which climate adaptation is understood in the European Union is examined via three key policy documents: the Strategy on adaptation and the Green and White Papers that preceded it. Drawing on Poststructuralist Discourse Theory, light is shed on the implicit values and assumptions that underpin this recent policy initiative. The findings demonstrate a tension between the declared ambition to act on adaptation and implicit suggestions that nothing really has to change, and the challenge can be addressed by market and technological innovations, and by mainstreaming adaptation into existing sectoral policies. The policy discourse effectively serves to depoliticize choices societies make in response to climate change, presenting adaptation as a non-political issue. Insight into European adaptation discourse enables deeper understanding of recent policy developments and opens up possible entry points for critique.

KEYWORDS Climate change adaptation; European Union; Poststructuralist Discourse Theory; Logics of Critical Explanation; depoliticization; policy discourse

Introduction

In 2013, the European Commission (hereafter the Commission) published its Climate Adaptation Strategy, setting out 'a framework and mechanisms for bringing the European Union's (EU) preparedness for the current and future impacts of climate change up to a new level' (European Commission 2013, 11). It is one of the first European-level attempts to provide common guidelines for adaptation.

Despite increasing analysis of national and global adaptation discourses (e.g. Methmann 2010, Juhola *et al.* 2011, Oppermann 2011, Termeer *et al.* 2012, Massey *et al.* 2014, Vink *et al.* 2015), there has been little systematic discursive analysis at the EU level. This is remarkable given that the EU is not only an agenda setter for its 28 member states (MS), but, as a major hub for development and climate aid worldwide (Selin and VanDeveer 2015), it can also diffuse ideas about adaptation to geographically distant places. To

CONTACT Elise Remling elise.remling@sh.se

address this gap, I critically examine the discourse of climate adaptation as represented in the EU's core policy documents on adaptation to date.

Adaptation is a nascent field of public policy (Moore 2010, Dewulf *et al.* 2015, Massey 2016) and the term itself lacks a widely accepted definition beyond those put forward by the Intergovernmental Panel on Climate Change (IPCC 2014). While I aim to problematize how adaptation is conceptualized, the term needs a preliminary working definition. I take it broadly to refer to *any deliberate social adjustment that aims to safeguard against actual or expected harmful impacts associated with climate change*.

Decisions aimed to solve climate change challenges are deeply political (Tanner and Allouche 2011, Eriksen *et al.* 2015, Smucker *et al.* 2015). They influence social relations, involve substantive redistribution of authority and resources and what may seem as 'good' adaptation in one place may lead to negative effects elsewhere (Eriksen *et al.* 2015). Adaptation policies are intrinsically bound to how people and policymakers interpret adaptation and the unspoken assumptions and goals they have in mind. Consequently, it becomes relevant to understand what choices are made and why, and to examine how these choices may affect the practical solutions likely to emerge. Reflecting this, recent scholarship calls for more critical and interpretative research on adaptation and increased attention to particularly its socio-political dimensions (Eriksen *et al.* 2015, O'Brien and Selboe 2015). While visible in mitigation research (Bäckstrand and Lövbrand 2016, Oels 2005, 2015, Rutland and Aylett 2008, Lovell *et al.* 2009, Lövbrand and Stripple 2011, 2012, Randalls 2011, Stripple and Bulkeley 2013), such approaches have featured less prominently in adaptation scholarship.

Against this backdrop, I investigate the ways in which adaptation is conceptualized as a topic of concern and rendered practical to policy intervention in the EU, as illustrated by the Strategy on adaptation, and the Green and White Papers preceding it (hereafter the policies).[1] I focus particularly on understanding and deconstructing the inner workings, or *logics*, guiding EU adaptation policymaking, and on critically interrogating the political ends to which they are employed.

After presenting my discourse-theoretical framework and outlining the methodological strategy, I provide a brief contextual background to the development of EU adaptation policy. Then, I critically analyse the EU's policy discourse in terms of its inner logics. I conclude by summarizing the effects of the discourse, arguing that it depoliticizes the *causes, consequences* and *responses* to climate change. This effectively protects the status quo and allows Europe's socio-economic development to continue largely unaffected.

A logics approach to climate adaptation

A growing literature recognizes the socially constructed character of adaptation. Conceptually, contributions have built on the notions of *frames/framings* (see e.g. Juhola *et al.* 2011, Dewulf 2013; Fünfgeld and McEvoy 2014, Smucker *et al.* 2015), *heuristics* (Preston *et al.* 2015) and *narratives* (Paschen and Ison 2014, Fløttum and Gjerstad 2016). I extend this field further, focusing empirically on the EU and moving beyond these more linguistic analyses towards an exploration of how understandings emerge and what tacit *political, ideological* and *affective* work they do. Drawing on the Logics Approach to Poststructuralist Discourse Theory (PDT), I understand *discourse* as productive. This notion extends beyond a narrow understanding of discourse as text, beliefs or words that describe an underlying reality, by understanding it as 'a constitutive dimension of social relations' (Griggs and Howarth 2013, 17). Recognizing the discursive nature of adaptation means related policy reforms are not simply responding to external and material threats but constitute these in the first place. This constitution occurs through discursive practices that articulate – link together – a set of elements that are in no way intrinsically related.

The discursive strategies used to assign meaning are the articulation of *equivalence* and *difference* (Laclau and Mouffe 2001 [1985]; also Glynos and Howarth 2007). *Equivalence* denotes the strategy of creating an association between disparate elements, asserting some form of unity between them against a common Other. *Difference* describes the strategy of disarticulating elements from the common chain.

Acknowledging the constitutive workings of discourse implies that the *locus* of politics is not a particular site (such as the state). Rather, it is understood in ontological terms, as this articulatory struggle over the forming of ideas, associations and borders.[2] As the establishment of meaning involves the contingent articulation of similarities and differences, the discourse that emerges is always a social construction and its outcome inherently political (Laclau and Mouffe 2001). Imagining adaptation – for instance through the construction of policy – then becomes an unavoidably political act.

Social, political and fantasmatic logics

To analyse the EU's policy discourse, I utilize a set of three conceptual tools: social, political and fantasmatic logics (Glynos and Howarth 2007). *Social logics* help characterize and describe routinized rules and norms of a social practice (Griggs and Howarth 2013). They constitute the unsaid background, those 'rules of the game' that are socially accepted and generally remain unquestioned. To determine how to characterize social logics in

written policy documents, I supplement the Logics Approach with the concept of *assumptions*, developed within Critical Discourse Analysis (Fairclough 2003).[3] These represent the 'common ground' taken as given and therefore usually remain implicit in a text. *Political logics* help understand how a discursive formation evolves, functions and how its different elements connect with one another. Building on the articulatory strategies of equivalence and difference, they not only describe what is included within or excluded from a discourse but also reveal moments of *contestation* and *institution* of new meanings and practices (Glynos and Howarth 2007). Such contestation can openly challenge the status quo or – often the case in policy reform processes – encompass more subtle, marginalizing moves as a means to pre-emptively defend against alternative policy visions (Glynos *et al.* 2015). To trace these more implicit, marginalizing political logics, I examine how the three iterations of policy differ. This gives insight into discursive permanence and change.[4]

Finally, *fantasmatic logics* sustain discourses. These are appeals that 'grip' subjects of a discourse, structuring their desires, providing them with forms of identification and promising the enjoyment of a 'fullness-to-come' (Glynos and Howarth 2007, Glynos and Stavrakakis 2008). By creating an 'illusion of necessity' (Hawkins 2015, 143), fantasies provide a rationale for why a certain order is the way it is (or should be) and what might happen if this order was abolished (or disrespected). The deployment of fantasy functions to naturalize social practices, thereby concealing their inherent contradictions and hence their radical contingency. This serves to preclude alternative ways of thinking and offset possible contestation. Its analysis illuminates the conditions that make a particular discourse seem appealing and capture its audience.

Glynos and Howarth (2007) distinguish two sides to a fantasy, which often operate alongside one another – a beatific and a horrific dimension. The *beatific dimension* promises an enjoyment of a desired future, intended to act as a motivational 'spur to action'. The *horrific dimension* entails an alarming prospect about the future if a proposed path is not followed. This often describes an apocalyptic imaginary, a looming disaster, which invokes fear and danger amongst its subjects. In the climate change context, such dystopian imageries are commonly evoked around future mass-migrations and associated conflicts. Table 1 illustrates how these analytical categories relate to concrete empirical questions.

The Logics strand within PDT has three major advantages over more widely used Foucauldian (Bäckstrand and Lövbrand 2016, Oels 2005, 2015, Rutland and Aylett 2008, Lovell *et al.* 2009, Lövbrand and Stripple 2011, 2012, Randalls 2011, Stripple and Bulkeley 2013) and Habermasian (Dryzek 2013) approaches. First, the central concept of *articulation*, with its two strategies of equivalence and difference, offers

Table 1. Analytical framework for the study of EU adaptation policy discourse.

Logics	'Sublogics'	Questions
Social logics	–	What characterizes EU adaptation policy? What 'facts' does this policy discourse rest on, what appears as natural or given? What is considered 'legitimate' adaptation, what must responses look like to be acceptable?
Political logics	Logic of equivalence Logic of difference	What discursive strategies (equivalence/difference) does the policy discourse employ and how is coherence among different elements established? What meanings and courses of action are put forward or excluded? Where are borders drawn, and which ideas have been closed off or marginalized in the policy reform process?
Fantasmatic logics	Beatific dimension Horrific dimension	How is this policy discourse sustained, what makes it 'tick'? What outcome(s)/enjoyment does it promise or warn against? What ideological work do the policies do, and to what end?

Source: Own framework, based on Glynos and Howarth (2007).

theoretically powerful tools for conceptualizing both discursive permanence and change. Drawing on Gramsci's notion of hegemony, these concepts account for the dynamic and antagonistic processes by which discourses and their borders change, something that Foucauldian approaches, which often treat governmentalities as rather stable and uniform formations, cannot capture fully (Stephan *et al.* 2013). Second, the notion of *fantasmatic logics*, which builds on Lacan's psychoanalytic theory, crucially accounts for the emotional, non-rational investment of subjects into a particular discourse. It recognizes that what enables discourses to become objects of long-term identification, and hence discursive fixity, is precisely what 'sticks' to and fuels identification processes in discursive subjects (Glynos and Stavrakakis 2008). This extends beyond conceptions of the subject found in other discourse approaches that account poorly for emotion, affect and passion. The approach's third distinctive feature is, more practically, its threefold *typology of explanatory logics*. This provides a methodological programme for applying discourse theory to empirical analysis, giving the Logics Approach a critical advantage over other discursive approaches which often overlook such methodological aspects (Glynos and Howarth 2007).

Methodological strategy

To pursue this agenda, I take a qualitative approach, selecting and analysing in-depth a set of three consecutive public policy documents produced by the Commission. These are available on the EUR-Lex website (the reference list provides the full URL):

- The Green Paper 'Adapting to climate change in Europe – options for EU action' (2007);
- The White Paper 'Adapting to climate change: Towards a European framework for action' (2009) and
- 'An EU Strategy on adaptation to climate change' (2013).

Whilst other empirical material (e.g. related EU policies, news coverage, parliamentary debates, consultation reports) might yield relevant insights, I focus on these texts since they follow the temporal progression of the Commission's understanding of adaptation over a 6-year period. Accordingly, they provide insight into the emerging discourse's key characteristics and the changes it has undergone. Although the selected documents may not fully capture all nuances of how EU actors understand and address adaptation, they represent the Commission's official stance on adaptation. While they are non-legislative policies, or 'soft law' (to date no directives or laws have been put forward), they are the most authoritative EU level documents that exist on adaptation. Following my theoretical approach, I view them as political sites in themselves (rather than mere outputs of political processes) that actively build and contest what adaptation means.

For in-depth analysis and coding of the documents, I used qualitative data analysis software (MAXQDA). I first read the documents in their entirety and recorded emerging key themes. Together with the theoretical literature, these provided the initial codes used to analyse the content systematically at the second reading. Alternating between theoretical and empirical work, I repeated this cycle several times and gradually refined and narrowed the codes used in the fourth and final close reading. I then extracted and systematically analysed the coded segments in order to identify the social, political and fantasmatic logics. Finally, I compared the documents for similarities and differences. Throughout the analysis, I present illustrative quotes from the three policy documents. Rather than reflect all nuances and ideas the documents contain, these serve to raise important aspects of the logics and represent patterns identified in the qualitative coding process.

Adaptation in the EU: an emerging policy concern

The early days of European climate policy, in the late 1980s and 1990s, saw most focus on reducing greenhouse gas (GHG) emissions (Jordan *et al.* 2010b, Oberthür and Roche Kelly 2008). Mirroring responses elsewhere, adaptation was considered urgent in vulnerable developing countries but remained somewhat taboo for European nations (Rayner and Jordan 2010). There was also concern that embracing adaptation as a policy option might

weaken political will for tackling GHG emissions (Rayner and Jordan 2010) and could reflect badly on the EU for being 'too soft' on mitigation (Jordan *et al.* 2010a, 2010b). Perhaps, the most important hurdle for a regional adaptation policy has been the MS' reluctance to delegate additional competence to the EU (Oberthür and Kelly 2008, Rayner and Jordan 2010). Despite some local and national efforts to push for more coordinated adaptation responses at European level, support within the Commission remained weak and adaptation a marginal interest (Rayner and Jordan 2010, Dewulf *et al.* 2015).

This attitude only began to change in the 2000s; researchers partly attribute this to the 2001 publication of the third IPCC report, which emphasizes adaptation as an imperative for industrialized and industrializing countries alike (Rayner and Jordan 2010, 147). The widely cited 'Stern Review' also emphasized that, compared with the cost of potential damage, both mitigation *and* adaptation action would be economically beneficial. Finally, two extreme weather events – the 2002 floods in Central Europe and the 2003 heat wave – stimulated enough interest in questions of climate vulnerability to move adaptation onto the regional agenda (Rayner and Jordan 2010).

Since 2007, the Commission issued a series of non-legislative forms of policy around adaptation. When the first, the Green Paper, was drafted in the mid-2000s, EU-level policy mechanisms already existed for some of the more climate-sensitive sectors, including agriculture, water, biodiversity, energy and fisheries. This facilitated the development of a regional adaptation policy. Led by the DG Environment's Water Unit, the Commission reworked the Green Paper into a (significantly shorter) White Paper in 2009. In 2013, the Commission published its final Adaptation Strategy (European Commission 2013). Beyond these documents, the Commission developed two subregional adaptation strategies for the Baltic Sea and the Danube. Today, governance scholars see the EU as the vanguard of climate governance (Jordan *et al.* 2010b).

Analysis of EU adaptation policy discourse

Social logics

The European adaptation policy discourse can be read as structured by an underlying social logic of *economic rationality*. This emphasizes many synergies between adaptation and economic growth. Economic arguments provide the major motivating factor for why the EU should engage in adaptation action. They take two forms: first, early action avoids economic damage, saves on future costs and is thus the most cost-effective path. Second, adaptation leads to the development of new

markets and will enhance 'trade in sustainable goods and services' (European Commission 2007, 23). The Strategy, for instance, promises to 'help the EU move towards a low-carbon and climate-resilient economy, and will promote sustainable growth, stimulate climate resilient investment and create new jobs' (European Commission 2013, 5). When considering the 'rules of the game' that adaptation responses ought to abide by, words that stand out are *efficiency* and *cost effectiveness*. Additional ideas are *competitiveness*, technological and market *innovation* and (green) *growth*. Moreover, *climate proofing* and *mainstreaming* are presented as opportunities for 'EU industry and services' sectors [...] to bring to market the products and services to assist this [adaptation] process' (European Commission 2007, 15). Policy instruments based on such market-based forces carry the assumption that MS and other stakeholders will act if sufficiently motivated through economic incentives and disincentives. Although the non-binding nature of these documents means they do not provide concrete and enforceable policy instruments, they do indicate what kind of practices would contribute to adaptation. Actions proposed are primarily *mainstreaming*, which means integrating adaptation objectives into existing sector policies such as land-use planning, agriculture, forestry, water, transport and migration (see European Commission 2013); and second, the *climate proofing* of buildings, transport and other infrastructure, and financial investments. It currently remains unclear who would be responsible for overseeing these processes, as the documents do not include clearly defined responsibilities. While climate proofing and policy mainstreaming are common features found in adaptation policies, an increasing body of literature questions these solutions as being overly technocratic and managerial (Methmann 2010, Uittenbroek *et al.* 2014, Schulz and Siriwardane 2015, Smucker *et al.* 2015). The main critique posits that such approaches pursue solutions that lie within the current spectrum of policy responses, leave existing paradigms largely unchallenged and aim to 'maintain business-as-usual development paths' (Schulz and Siriwardane 2015, 8).

With mainstreaming and climate proofing as the central proposals for action comes an emphasis on *knowledge generation*. According to the European Commission (2013, 7), 'substantive knowledge gaps need to be filled' in order to pursue 'better informed decision-making'. This makes 'investing in excellent science and promoting innovation' (2013, 7) an act of adaptation in itself, as it contributes to the 'EU's preparedness for current and future impacts of climate change' (2013, 11). The underlying assumption is that MS and other stakeholders will adapt if knowledgeable about risks and the efficacy of early, planned responses. Scholars have pointed out that such calculative practices and numerical forms of knowledge are far from being neutral or objective but deliberately deployed to support specific

policy justifications (Rutland and Aylett 2008, Lövbrand and Stripple 2012, Dalby 2013).

In summary, seen through the lens of social logics, the Commission's approach to adaptation is wedded to an economic rationality where the economy becomes the metabolism of everything – including solving the adaptation challenge. Promises of green technology, market innovation and science promise the enjoyment of a future that is environmentally sustainable yet follows a path to economic growth (Gómez-Baggethun and Naredo 2015). Addressing adaptation becomes a difficult but manageable 'challenge for planning authorities in Europe' (European Commission 2007, 12), requiring no significant changes to the system itself. These observations resonate with earlier work on governmentality (Lövbrand and Stripple 2011), identity and subject formation (Dowling 2010), geopolitics (Dalby 2013) ethics (Randalls 2011) and urban climate change programmes (Rice 2014), which identified market-based and neoliberal approaches as an increasingly prevalent form of governing responses to climate change. In what follows, I examine the means by which these social logics are instigated and sustained.

Political logics

The documents connect adaptation to other contemporary policy issues, such as disaster risk management, energy security and economic competitiveness. Tailored to induce acceptance amongst MS and EU institutions, they link adaptation to widely accepted problems and promote synergies between adaptation and these other policy agendas. Consequently, the policies not only legitimize adaptation to audiences that might otherwise be critical of this emerging agenda but also downplay adaptation's novelty by suggesting it overlaps with accepted policy domains and does not differ significantly from what is already happening across the region. Aligning new issues like adaptation with established and well-accepted policy domains is a strategy commonly drawn on by acclaimed and powerful institutions to safeguard against the emergence of alternative policy visions (Glynos and Howarth 2007).

While the assertion of equivalences dominates in the documents, exclusionary logics are also present. The documents mention some policy alternatives – autonomous or nationally driven adaptation – but present them as lacking effectiveness and therefore necessitating an 'integrated and coordinated approach at EU level' (European Commission 2009, 6). This move paves the way for a central task; the pursuit of an EU-level intervention on adaptation and the harmonization of adaptation efforts *under the Commission's lead*.

As climate change impacts will cut across jurisdictions, administrative scales and ecosystem boundaries, the policies argue that adaptation requires *deeper EU collaboration*. While the documents recognize differences between MS in some instances, they effectively create the impression that all Europeans are 'in the same boat', thereby glossing over possible disparities between communities, regions and countries. The EU's role 'in any efficient adaptation strategy' is foregrounded at the expense of MS, regional and local authorities whose 'prominent role' (both quotes European Commission 2007, 3) is acknowledged but played down. By demonstrating how it has the responsibility for, and ability to, plan, guide and manage the identified challenges, the Commission actively asserts itself as the central authority on adaptation. Other researchers have observed this trend – of foregrounding the Commission's and EU institutions' involvement in European activities and backgrounding the state level – in relation to climate policy since the mid-2000s (Jordan *et al.* 2010b), disaster response and resilience-building measures (Joseph 2014), and environmental policy more broadly (Selin and VanDeveer 2015).

The analysis reveals a number of conflicting claims. These expose important discursive (and therefore political) struggles, where the discourse seeks to incorporate elements that do not function according to its overarching logic, exposing to view where the unsettled borders of the discourse lie. One such evident tension is the incorporation of *ecosystem-based approaches* (EBAs) in adaptation. While the Green Paper (2007, 17) suggests that ecosystems should 'lie at the centre of any adaptation policy', the subsequent documents do not make this a central concern. The Strategy mentions EBA in three instances, but only as a side note. Another tension arises around the *solidarity* principle, referred to several times, but only in connection to responsibility for the less fortunate regions within the EU: '[a]daptation will require solidarity among EU Member States to ensure that disadvantaged *regions* and regions most affected by climate change will be capable of taking the measures needed to adapt' (European Commission 2009, 6). The documents do not acknowledge anywhere that existing inequalities at the *local* level might be exacerbated or new vulnerabilities introduced.

Another aspect worth highlighting is that the policies acknowledge the possibility of adaptation responses beyond the EU's borders creating social or environmental externalities on the EU, for example through trade responses. The Green Paper suggests that the EU should 'recognize the external dimension of impacts and adaptation and to build a new alliance with its partners all around the world' (European Commission 2007, 13). However, the policies do not mention the potential for creating externalities *within* or *between* MS. Therefore, despite the declared ambition to '[seek]

EU wide cooperation and coherence' (European Commission 2013, 6), adaptation planners are not prompted to consider how adaptation decisions might affect adaptation prospects at other scales or in other sectors within the EU.

Following the policies' development over time reveals a number of changes in the discourse. For instance, *energy security* specifically related to potential problems with cooling nuclear power plants is an explicit concern in the Green Paper but loses importance in the White Paper and the Strategy. Another important change is the *definition of adaptation*. While the Green Paper's opening page features a definition box 'What is adaptation?' (European Commission 2007, 3), the subsequent documents do not contain any definition. The risk of *maladaptation* describes responses that cause adverse consequences in a way that outweigh any adaptation gain. This concern, prevalent in academia, only appears twice in the White Paper – and both times reinforcing the key argument as to why EU-level action is needed: 'some adaptation actions that are taken may increase vulnerability rather than reduce it' (European Commission 2009, 6), wherefore '[a]ttention should be paid to ensuring that public funding and state aid do not foster mal-adaptation' (European Commission 2009, 13). The most recent document does not mention maladaptation anywhere. This is troubling given that research identifies neoliberal approaches to adaptation, of which the EU policies are a paradigmatic example, as being particularly prone to the risk of maladaptation (Granberg and Glover 2014, O'Brien and Selboe 2015). Fourth, engaging with *civil society and public participation* becomes less of a concern over time. The Green Paper places significant emphasis on the need for participatory and inclusive approaches by designating '[i]nvolving European Society' (European Commission 2007, 26) as one of its 'four pillars'. The White Paper promises that its Impact and Adaptation Steering Group will 'consult with representatives from civil society and the scientific community' (European Commission 2009, 14). Finally, the Strategy still (on the opening page) upholds the value of 'participatory approaches' (European Commission 2013, 2), but the remainder of the document only vaguely mentions discussing, cooperating, consulting and working with 'stakeholders'. What it means to be a stakeholder is not stated explicitly. 'Civil society' now only appears in one instance, in direct connection to the marginalized issue of EBA.

Fantasmatic logics

The analysis of fantasmatic logics illustrates the coexistence of utopian alongside dystopian narratives. The *beatific dimension* promises cohesion and prosperity for the EU. It has four supporting narratives that are present in all three documents and intimately tied to the social logic of economic

rationalism: generating *business advantages, saving costs*, the *omnipotence of management* and *international leadership*. First, the documents promise prosperity if the EU implements adaptation correctly (i.e. in accordance with the Commission's proposal). Adaptation 'will bring new market opportunities and jobs' and, by moving fast, 'European companies [...] can be early first movers in developing climate-resilient products and services and grasp business opportunities worldwide' (European Commission 2013, 5). In this fantasy, mainstreaming and climate proofing become opportunities for economic competitiveness, with expanding markets for EU firms to export green technology.

The second beatific dimension promises the enjoyment of multiple economic benefits by *reducing costs* and bringing 'clear economic, environmental and social benefits' (European Commission 2009, 5). The Strategy contains a battery of statistics that underscore the positive economic significance of adaptation (and the potential horrific economic implications of failing to adapt). By generating new profit frontiers, adaptation ultimately becomes a business opportunity.

Third, by identifying 'knowledge gaps' (European Commission 2013, 7) that need to – and supposedly can – be filled, and by relying on 'solid scientific and economic analysis' (2009, 8), the policies suggest regaining control over endangered 'EU territory' (2013, 2). The appeal that climate change can be brought under control and managed by relying on evidence is a classic fantasmatic example of 'images of omnipotence' (Glynos and Howarth 2007, 147). The policies effectively introduce an illusion of control by implying that climate change is a phenomenon that is measurable, quantifiable, predictable and ultimately manageable (see also Rutland and Aylett 2008, Lövbrand and Stripple 2011, Dalby 2013). Thus rendered, the problem of adaptation can then be indexed and addressed in technical and managerial terms.

Finally, the Green Paper offers a fourth beatific dimension, namely that the EU can offer valuable lessons to the rest of world, suggesting it has the ambition of playing a leading international role (e.g. European Commission 2007, 3). This mirrors earlier EU initiatives in relation to mitigation (Jordan *et al.* 2010a) and environmental politics (Selin and VanDeveer 2015). However, neither the White Paper nor the Strategy mentions these ambitions anywhere.

The horrific dimension operates on three levels. First, the policies paint a grim picture of *climate change impacts*, followed by scenarios relating to the possible *failure of mitigation*. Finally, they stress the high future costs of inaction, which would occur if suggested adaptation *measures are not followed*. These apocalyptic imaginaries are quite daunting. Particularly, the Green Paper provides a grim outlook, a world with reduced access to drinking water, where, 'once it disappears', over a billion people will be forced to

move to other regions 'causing local or even global upheaval and insecurity' (both quotes European Commission 2007, 4). There are warnings about an impending disaster triggered by no or slow action on adaptation, or uncoordinated MS efforts. A common theme is the threat of social upheaval and insecurity, globally and in the EU. The documents therefore not only construct adaptation as key to saving the EU from climate impacts, economic decline and horrendous financial costs, but '[f]ailing to act or delaying action may put pressure on EU cohesion' (European Commission 2013, 3). Failure to implement the proposed measures would undermine and threaten the EU's very essence and generate new social divisions. The policies represent climate change as an urgent and largely external obstacle threatening EU cohesion and security.

Interpreting EU adaptation policy discourse: logics of depoliticization

The analysis of social, political and fantasmatic logics leads me to conclude that EU adaptation policy has particular *depoliticizing effects*. Depoliticization 'involves all counter-strategies which seek to conceal the contingency of reality, sew the gaps in hegemonic discourses and channel dislocations in such a way that fundamental social structures remain untouched' (Stephan *et al.* 2013, 70). Consequently, the discourse not only obscures questions about the *why* of climate change but also asserts that the Commissions' policy agenda is indisputable, masking alternative interpretations of what it might mean *to do* adaptation.

Depoliticization pervades the policies in three forms: first, externalizing and universalizing the *responsibility* for anthropogenic climate change. Whilst the documents acknowledge the EU's responsibility in contributing to climate change and recognize the need for mitigation, there is a parallel process of neutralizing the causes and objectifying climate change as an *external* threat to European stability. Importantly, climate change is not recognized as a 'symptom of certain socio-cultural and political circumstances' (Manuel-Navarrete 2010, 5), nor do the documents mention economic growth or a carbon-based economy as important climate change contributors. Rather than frame economic growth as a culprit, the policies instead frame it as a necessary prerequisite for any viable adaptation response (see also Dalby 2013). They present an undifferentiated picture ('we are all partly responsible') that does not pay sufficient attention to both the geographical and economic roots of GHG emissions (see also Oels 2013, Methmann and Oels 2015).

Second, the policies depoliticize *differentiated impacts and vulnerabilities*. Limiting the definition of vulnerability to *sectors* and *regions* generalizes and universalizes, making questions about social, economic and political

root causes of vulnerability more difficult to identify (Taylor 2013). For instance, nowhere do the documents raise the social inequalities within the European region, despite the Commission recognizing 'mounting evidence that those who have fewer resources are more vulnerable to climate change effects' (European Commission 2009, 9). Yet, in no instance do the policies raise questions as to *why* certain people are disadvantaged and whether this question needs addressing for the region as a whole to become more climate prepared. By rendering vulnerability largely as the result of negative impacts of GHG emissions, both vulnerability and adaptive capacity become essentially apolitical concepts.

Third, the policies effectively depoliticize *adaptation benefits and costs*. Framing adaptation as an environmental (rather than a potentially controversial social or political) problem invites technocratic and managerial solutions. Singling out the parts of the social sphere that need adaptation or 'climate proofing' – health, jobs and quality of life of low-income groups – precludes attempts to structure the emerging debate around normative or political questions and forecloses more profound transformative action (O'Brien and Selboe 2015). Moreover, by promoting 'win-win, low-cost and no-regret adaptation options' (European Commission 2013, 5), the Commission creates the impression that the proposed measures will benefit everyone, which is unlikely (Eriksen *et al.* 2015, Smucker *et al.* 2015).

This *triple depoliticization* renders social issues invisible in the adaptation discourse. It prevents the emergence of alternative visions and the solutions to achieve them. Consequently, climate change and adaptation become non-political.

Discussion: is EU adaptation policy about adaptation?

These observations raise important questions about the function and purpose of EU adaptation policy. Rather than seeing adaptation as requiring social or economic change, the documents suggest the 'the challenge of adaptation' (European Commission 2007, 3) can be solved by having faith in markets and technological innovation, incorporating adaptation into existing EU-level policies and operations and promoting further research. Following Hengstra (2015), such suggestions correspond to governing choices that are non-coercive, not resource intensive, face low ideological and financial constraints and are unlikely to face serious political opposition (see also Rice 2014). The EU's discourse constructs climate change as a problem 'serious enough to warrant attention, but not serious enough to demand fundamental changes in the way society is organised' (Dryzek 2013, 89). We can interpret this as avoiding significant policy shifts and reproducing, rather than challenging, the status quo, raising questions about whether the policies were ever intended to

generate meaningful change and boost the region's adaptive capacity. Essentially, the policies suggest proceeding on the business-as-usual trajectory, building on a (green) growth, (low) carbon-based, and consumption-driven economy.

These observations present a paradox: the Commissions' declaration that 'Europe must adapt' and that this 'adaptation must [...] start now' (both quotes 2007, 9) seems strikingly void of content. While earlier scholars concluded, 'the EU has emerged as an important, coherent and active source of climate policy innovation, both within the EU and in the international arena' (Jordan *et al.* 2010b, 265), the present analysis questions whether that is the case. At least, the adaptation domain demonstrates rather little novelty and instead offers *more of the same*. These findings resonate with research on the adaptation governance in western Europe; rather than creating room for experimentation and new forms of governance, 'in many cases, governance of climate change adaptations [sic] takes the form of what governments are used to' (Dewulf *et al.* 2015, 6).

This being said, expecting adaptation policy to introduce radical changes to the European project is perhaps overly optimistic. The EU's lack of fiscal capacity restricts its ability to delineate specific objectives, resources and stand-alone policy instruments. Challenges also arise due to insufficient jurisdiction and decision-making competences, and the weighing up of competing, more highly prioritized policy domains. More generally, the subsumption of policy measures to economic ends is not unique to adaptation policy but symptomatic of larger neoliberal trends in (environmental) governance (Rice 2014). Consequently, suggestions to fundamentally change EU operations through adaptation policy would face considerable resistance. Nevertheless, there is a mismatch between the declared ambition to act on adaptation, and the strong rhetoric about potentially devastating climate change impacts on the EU, and the weak remedial measures proposed that arguably do little to prepare the region.

How then might one start to understand this contradiction? Faced with the dilemma of increasing evidence about climate impacts, especially after the 2002 and 2003 extreme weather events and the emergence of nascent ideas about 'adaptation', it became important for the Commission to make a decision on two aspects: first, whether to leave the discursive playing field to others or take ownership of it; second, whether to face the troubling social, economic and political implications of climate change by reshaping or even transforming the current modus operandi or instead to 'domesticate' adaptation into existing practices. My analysis illustrates that by the Commission choosing to take ownership of the adaptation agenda and incorporating and subsuming it into existing discourses, the notion of adaptation has been emptied of more radical or transformative possibilities. Importantly, by representing it as something that does not fundamentally

question or challenge the social, political or economic status quo, the Commission effectively controls and minimizes change. Political debate, including on questions of equity, equality, social justice or an unsustainable market-driven economy, becomes disarmed.[5] The European apparatus as a whole, including its institutions, practices and paradigms, can go on working in the same way as previously.

The bias towards economically rationalist policy responses and depoliticizing tendencies is not unique to adaptation policy or the European context; Waller and Barnett (2015) have identified similar tendencies in Australia; others highlight the same in EU climate policy (Swyngedouw 2010, Dalby 2013, Stephan *et al.* 2013) and environmental policy (Coffey 2016) more broadly. If climate change is a field where important battles over the direction of broader social and economic order occur (Swyngedouw 2010), future research might investigate what role adaptation policy plays in facilitating or disarming debate about these wider economic logics.

Concluding remarks

Acknowledging the methodological limitations of taking a concentrated sample of three policy iterations to examine the EU's approach to adaptation, the findings make conceptually and empirically important contributions to adaptation scholarship. The notion of *political logics* unravels the alternative visions the policies argue against and have quietly dismissed. The focus on *fantasmatic logics* elucidates the imagery that the Commission employs to make its particular adaptation vision appealing. I also explored reasons why the Commission might have taken on the role of facilitating an adaptation reform process devoid of concrete content. By making visible the political and ideological work submerged in the policies, the analysis opens up space for a critical evaluation and possible re-articulation of the EU's conception of adaptation and the wider social practices maintained through the discourse. This move is particularly relevant at a time when many climate change responses attempt to escape politics (Swyngedouw 2010, Randalls 2011).

My empirical focus on these strategic policy documents did not address the political processes surrounding their emergence, or the broader EU adaptation landscape. The analysis also left out parallel national and international processes (e.g. under the IPCC) that may have influenced the EU's perspective. This wider context in which the European discourse emerged requires more detailed empirical investigation, including possible arenas of controversy and disagreement, and the reasons why alternative approaches, such as involving more non-government actors or ecosystem-based thinking, do not feature prominently in the final policy iteration.

It is too early to tell whether the Commissions' particular understanding of adaptation will become widely institutionalized, for instance via replication in different MS, or how it will evolve in the planned revision of the Strategy in 2018. Time will tell whether the Commission will succeed in precluding substantive debate on alternative responses and preventing more profound, transformative change. At a time when the European project has endured increasing criticism, not least in the handling of the economic crisis, it will be important to observe whether the imagining and construction of adaptation enables broader societal debate about the economic paradigm in which climate change is exacerbated and vulnerability created. While this might pose the Commission a challenge, it might be good news for imagining and potentially realizing more sustainable climate adaptation responses.

Notes

1. Following Bacchi (2009), I understand these strategic documents as *policies*. They are statements of intent in which the Commission formally states its position on adaptation and sets common objectives, aiming to influence how the issue is understood in EU MS and institutions. For Bacchi, the term policy 'includes but extends beyond laws and legislation' (2009, ix), meaning it covers both binding (e.g. laws, directives, regulations, decisions) *and* non-binding documents (e.g. communications, Green and White Papers, guidance notes, recommendations), what is often differentiated into 'hard' and 'soft' law. This is in line with the European Commission and European Environment Agency's (2017) own understanding: on its Climate-ADAPT website, it categorizes the latest document from 2013 as 'EU adaptation policy' despite being entitled a 'Strategy'.
2. Laclau, Mouffe and other poststructuralist discourse theorists distinguish *politics* from *the political*. The former connotes the normal form of decision-making *within* a naturalized social order or system. *The political* is an ontological condition of social reality. It becomes visible in 'moments where routinized proceedings are interrupted' (Hajer, 1997, p. 60), for instance after a dislocatory event, in which a subject makes decisions *about* the structure.
3. For a more detailed explanation of the methodological strategy, specifically the combination of PDT and Critical Discourse Analysis, and its application see Remling (2017).
4. This is inspired by the notion of *genre chains* (Fairclough 2003) and developed in more detail in Remling (2017).
5. While these questions may be taken up in other official EU documents, their analysis goes beyond the scope of this article. The 'flagship policies' analysed here do not detail these aspects.

Acknowledgements

This work owes much to discussions with Jenny Gunnarsson Payne, Åsa Persson and Aaron Atteridge. I would like to thank them and three anonymous reviewers for their helpful comments on earlier drafts. Thanks also to Anthony Zito for support and advice during the review process.

Disclosure statement

No potential conflict of interest was reported by the author.

References

Bacchi, C., 2009. *Analysing policy: what's the problem represented to be?* Frenchs Forest: Pearson.

Bäckstrand, K. and Lövbrand, E., 2016. The road to Paris: contending climate governance discourses in the post-copenhagen era. *Journal of Environmental Policy & Planning*, 1–19. doi:10.1080/1523908X.2016.1150777

Coffey, B., 2016. Unpacking the politics of natural capital and economic metaphors in environmental policy discourse. *Environmental Politics*, 25 (2), 203–222. doi:10.1080/09644016.2015.1090370

Dalby, S., 2013. The geopolitics of climate change. *Political Geography*, 37, 38–47. doi:10.1016/j.polgeo.2013.09.004

Dewulf, A., 2013. Contrasting frames in policy debates on climate change adaptation. *Wiley Interdisciplinary Reviews: Climate Change*, 4 (4), 321–330. doi:10.1002/wcc.227

Dewulf, A., Meijerink, S., and Runhaar, H., 2015. Editorial: the governance of adaptation to climate change as a multi-level, Multi-sector and multi-actor challenge: a European comparative perspective. *Journal of Water and Climate Change*, 6 (1), 1–8. doi:10.2166/wcc.2014.000

Dowling, R., 2010. Geographies of identity: climate change, governmentality and activism. *Progress in Human Geography*, 34 (4), 488–495. doi:10.1177/0309132509348427

Dryzek, J., 2013. *The politics of the earth: environmental discourses*. 3rd ed. Oxford: Oxford University Press.

Eriksen, S.H., Nightingale, A.J., and Eakin, H., 2015. Reframing adaptation: the political nature of climate change adaptation. *Global Environmental Change*, 35, 523–533. doi:10.1016/j.gloenvcha.2015.09.014

European Commission. 2007. *Green paper: adapting to climate change in Europe – options for EU action*. COM(2007) 354 final. Brussels: Commission of the European Communities. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52007DC0354.

European Commission. 2009. *White paper: adapting to climate change: towards a European framework for action*. COM(2009) 147 final. Brussels: Commission of the European Communities. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52009DC0147

European Commission. 2013. *An EU strategy on adaptation to climate change*. COM(2013) 216 final. Brussels: The European Commission. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013DC0216.

European Commission, and European Environment Agency. 2017. EU adaptation policy. *European Climate Adaptation Platform (CLIMATE-ADAPT)*. http://climate-adapt.eea.europa.eu/eu-adaptation-policy/landing.

Fairclough, N., 2003. *Analysing discourse: textual analysis for social research*. London: Routledge.

Fløttum, K. and Gjerstad, Ø., 2016. Narratives in climate change discourse. *Wiley Interdisciplinary Reviews: climate Change*. doi:10.1002/wcc.429

Fünfgeld, H. and McEvoy, D., 2014. Frame divergence in climate change adaptation policy: insights from Australian local government planning. *Environment and Planning C: Government and Policy*, 32 (4), 603–622. doi:10.1068/c1234

Glynos, J. and Howarth, D., 2007. *Logics of critical explanation in social and political theory*. London: Routledge.

Glynos, J., Klimecki, R., and Willmott, H., 2015. Logics in policy and practice: a critical nodal analysis of the UK banking reform process. *Critical Policy Studies*, 9 (4), 393–415. doi:10.1080/19460171.2015.1009841

Glynos, J. and Stavrakakis, Y., 2008. Lacan and political subjectivity: fantasy and enjoyment in psychoanalysis and political theory. *Subjectivity*, 24 (1), 256–274. doi:10.1057/sub.2008.23

Gómez-Baggethun, E. and Naredo, J.M., 2015. In search of lost time: the rise and fall of limits to growth in international sustainability policy. *Sustainability Science*, 10 (3), 385–395. doi:10.1007/s11625-015-0308-6

Granberg, M. and Glover, L., 2014. Adaptation and maladaptation in Australian national climate change policy. *Journal of Environmental Policy & Planning*, 16 (2), 147–159. doi:10.1080/1523908X.2013.823857

Griggs, S. and Howarth, D., 2013. *The politics of airport expansion in the United Kingdom: hegemony, policy and the rhetoric of "Sustainable Aviation."*. Manchester: Manchester University Press.

Hajer, M. A., ed., 1997. Discourse analysis. *In: The politics of environmental discourse*. Oxford: Oxford University Press, 42–72.

Hawkins, B., 2015. Fantasies of subjugation: a discourse theoretical account of British policy on the European Union. *Critical Policy Studies*, 9 (2), 139–157. doi:10.1080/19460171.2014.951666

Henstra, D., 2015. The tools of climate adaptation policy: analysing instruments and instrument selection. *Climate Policy*, 1–26. doi:10.1080/14693062.2015.1015946

IPCC. 2014. Summary for policymakers. *In*: C. B. Field and V. R. Barros, eds. *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 1–32. Cambridge: Cambridge University Press.

Jordan, A., *et al.*, 2010a. The evolution of climate change policy in the European Union: a synthesis. *In*: A.J. Jordan, D. Huitema, H. Van Asselt, T. Rayner, and F. Berkhout, eds. *Climate change policy in the European Union*. Cambridge: Cambridge University Press, 186–210.

Jordan, A.J., *et al.*, 2010b. Governing climate change in the European Union: understanding the past and preparing for the future. *In*: A.J. Jordan, D. Huitema, H. Van Asselt, T. Rayner, and F. Berkhout, eds. *Climate change policy in the European Union*. Cambridge: Cambridge University Press, 253–275.

Joseph, J., 2014. The EU in the horn of Africa: building resilience as a distant form of governance: the EU in the horn of Africa. *JCMS: Journal of Common Market Studies*, 52 (2), 285–301. doi:10.1111/jcms.12085

Juhola, S.E., Keskitalo, C.H., and Westerhoff, L., 2011. Understanding the framings of climate change adaptation across multiple scales of governance in Europe. *Environmental Politics*, 20 (4), 445–463. doi:10.1080/09644016.2011.589571

Laclau, E. and Mouffe, C., 2001. *Hegemony and socialist strategy: towards a radical democratic politics*. 2nd ed. London: Verso.

Lövbrand, E. and Stripple, J., 2011. Making climate change governable: accounting for carbon as sinks, credits and personal budgets. *Critical Policy Studies*, 5 (2), 187–200. doi:10.1080/19460171.2011.576531

Lövbrand, E. and Stripple, J., 2012. Disrupting the public–private distinction: excavating the government of carbon markets post-copenhagen. *Environment and Planning C: Government and Policy*, 30 (4), 658–674. doi:10.1068/c11137

Lovell, H., Bulkeley, H., and Owens, S., 2009. Converging agendas? Energy and climate change policies in the UK. *Environment and Planning C: Government and Policy*, 27 (1), 90–109. doi:10.1068/c0797j

Manuel-Navarrete, D. 2010. *Climate change and power: isn't it all about politics?* Environment, Politics and Development Working Paper Series. London: Department of Geography, King's College.

Massey, E. 2016. *Innovations in Policy: the Emergence of Climate Adaptation as a New Policy Field*. PhD Thesis. Amsterdam: Vrije Universiteit.

Massey, E., *et al*., 2014. Climate policy innovation: the adoption and diffusion of adaptation policies across Europe. *Global Environmental Change*, 29, 434–443. doi:10.1016/j.gloenvcha.2014.09.002

Methmann, C. and Oels, A., 2015. From 'Fearing' to 'Empowering' climate refugees: governing climate-induced migration in the name of resilience. *Security Dialogue*, 46 (1), 51–68. doi:10.1177/0967010614552548

Methmann, C.P., 2010. 'Climate Protection' as empty signifier: a discourse theoretical perspective on climate mainstreaming in world politics. *Millennium: Journal of International Studies*, 39 (2), 345–372. doi:10.1177/0305829810383606

Moore, F.C., 2010. 'Doing Adaptation': the construction of adaptive capacity and its function in the international climate negotiations. *St Antony's International Review*, 5 (2), 66–88.

O'Brien, K. and Selboe, E., 2015. *The adaptive challenge of climate change*. London: Cambridge University Press.

Oberthür, S. and Kelly, C.R., 2008. EU leadership in international climate policy: achievements and challenges. *The International Spectator*, 43 (3), 35–50. doi:10.1080/03932720802280594

Oels, A., 2005. Rendering climate change governable: from biopower to advanced liberal government? *Journal of Environmental Policy & Planning*, 7 (3), 185–207. doi:10.1080/15239080500339661

Oels, A., 2013. Rendering climate change governable by risk: from probability to contingency. *Geoforum*, 45, 17–29. doi:10.1016/j.geoforum.2011.09.007

Oels, A., 2015. Security. *In*: K. Bäckstrand and E. Lövbrand, eds. *Research handbook on climate governance*. Cheltenham: Edward Elgar, 458–469.

Oppermann, E., 2011. The discourse of adaptation to climate change and the UK climate impacts programme: de-scribing the problematization of adaptation. *Climate and Development*, 3 (1), 71–85. doi:10.3763/cdev.2010.0061

Paschen, J.-A. and Ison, R., 2014. Narrative research in climate change adaptation—exploring a complementary paradigm for research and governance. *Research Policy*, 43 (6), 1083–1092. doi:10.1016/j.respol.2013.12.006

Preston, B.L., Mustelin, J., and Maloney, M.C., 2015. Climate adaptation heuristics and the science/policy divide. *Mitigation and Adaptation Strategies for Global Change*, 20 (3), 467–497. doi:10.1007/s11027-013-9503-x

Randalls, S., 2011. Broadening debates on climate change ethics: beyond carbon calculation: broadening debates on climate change ethics. *The Geographical Journal*, 177 (2), 127–137. doi:10.1111/j.1475-4959.2010.00363.x

Rayner, T. and Jordan, A.J., 2010. Adapting to a changing climate: an emerging European Union policy? *In*: A.J. Jordan, D. Huitema, H. Van Asselt, T. Rayner, and F. Berkhout, eds. *Climate change policy in the European Union*. Cambridge: Cambridge University Press, 145–166.

Remling, E., 2017. Logics, assumptions and genre chains: a framework for post-structuralist policy analysis. *Critical Discourse Studies*, 1–18. doi:10.1080/17405904.2017.1382382

Rice, J.L., 2014. Public targets, private choices: urban climate governance in the Pacific Northwest. *The Professional Geographer*, 66 (2), 333–344. doi:10.1080/00330124.2013.787011

Rutland, T. and Aylett, A., 2008. The work of policy: actor networks, governmentality, and local action on climate change in Portland, Oregon. *Environment and Planning D: Society and Space*, 26 (4), 627–646. doi:10.1068/d6907

Schulz, K. and Siriwardane, R. 2015. *Depoliticised and technocratic? Normativity and the politics of transformative adaptation*. Earth System Governance Working Paper No. 33. Lund: Earth System Governance Project.

Selin, H. and VanDeveer, S.D., 2015. Broader, deeper and greener: European Union environmental politics, policies, and outcomes. *Annual Review of Environment and Resources*, 40 (1), 309–335. doi:10.1146/annurev-environ-102014-021210

Smucker, T.A., *et al*., 2015. Differentiated livelihoods, local institutions, and the adaptation imperative: assessing climate change adaptation policy in Tanzania. *Geoforum*, 59, 39–50. doi:10.1016/j.geoforum.2014.11.018

Stephan, B., Methmann, C., and Rothe, D., 2013. Third side of the coin: hegemony and governmentality in global climate politics. *In*: J. Stripple and H. Bulkeley, eds. *Governing the climate*. New York: Cambridge University Press, 59–76.

Stripple, J. and Bulkeley, H., eds, 2013. *Governing the climate: new approaches to rationality, politics and power*. New York: Cambridge University Press.

Swyngedouw, E., 2010. Apocalypse forever? Post-political populism and the spectre of climate change. *Theory, Culture & Society*, 27 (2–3), 213–232. doi:10.1177/0263276409358728

Tanner, T. and Allouche, J., 2011. Towards a new political economy of climate change and development. *IDS Bulletin*, 42 (3), 1–14. doi:10.1111/j.1759-5436.2011.00217.x

Taylor, M., 2013. Climate change, relational vulnerability and human security: rethinking sustainable adaptation in Agrarian environments. *Climate and Development*, 5 (4), 318–327. doi:10.1080/17565529.2013.830954

Termeer, C., Biesbroek, R., and Van Den Brink, M., 2012. Institutions for adaptation to climate change: comparing national adaptation strategies in Europe. *European Political Science*, 11 (1), 41–53. doi:10.1057/eps.2011.7

Uittenbroek, C.J., *et al*., 2014. Political commitment in organising municipal responses to climate adaptation: the dedicated approach versus the mainstreaming approach. *Environmental Politics*, 23 (6), 1043–1063. doi:10.1080/09644016.2014.920563

Vink, M.J., *et al*., 2015. Do state traditions matter? Comparing deliberative governance initiatives for climate change adaptation in Dutch corporatism and British pluralism. *Journal of Water and Climate Change*, 6 (1), 71–88. doi:10.2166/wcc.2014.119

Waller, S. and Barnett, J., 2015. The challenge of governing adaptation in Australia. *In*: K. O'Brien and E. Selboe, eds. *The adaptive challenge of climate change*. London: Cambridge University Press, 81–97.

Paper III

DOI: 10.1080/17405904.2017.1382382

CRITICAL DISCOURSE STUDIES, 2018
VOL. 15, NO. 1, 1–18
https://doi.org/10.1080/17405904.2017.1382382

Routledge
Taylor & Francis Group

Logics, assumptions and genre chains: a framework for poststructuralist policy analysis

Elise Remling

School of Natural Science, Technology and Environmental Studies, Södertörn University, Huddinge, Sweden

ABSTRACT

An unresolved aspect of the Logics Approach within Poststructuralist Discourse Theory (PDT) is how to operationalize its abstract theoretical concepts – of social, political and fantasmatic logics – for concrete textual analysis, especially of policy documents. Policies often institute new understandings, procedures or practices, something the logics, as originally articulated, fall somewhat short of capturing. To overcome these methodological challenges this article constructs a framework for poststructuralist policy analysis that brings together the Logics Approach with more textually oriented tools developed within Critical Discourse Analysis, namely assumptions and genre chains. For empirical illustration it draws on a case study of the European Union's adaptation policy in response to climate change. The resulting framework offers a means through which more implicit social and political logics can be examined, and contributes new insights to methodological debates around the use of the Logics Approach (and PDT more broadly), specifically in relation to critical policy analysis. The article concludes with seven observations of relevance for future studies and suggests avenues for further empirical and conceptual exploration.

KEYWORDS

Discursive policy analysis; policy discourse; poststructuralist discourse theory; logics of critical explanation; critical discourse analysis; discourse analysis methodology; climate change adaptation; European Union

Introduction

The Logics of Critical Explanation (hereafter 'Logics Approach') is a relatively recent contribution to poststructuralist social and political theory (Glynos & Howarth, 2007). Building on the work of Ernesto Laclau and Chantal Mouffe (2001 [1985]), it lays out a research approach for post-positivist social science. The approach refocuses the analysis on the articulation of certain 'logics' in a discourse, capturing underlying assumptions, ideas and norms. Its particular strengths lie in how it allows the researcher to go beyond the exploration of existing understandings around an issue by questioning *how* those understandings came about and what tacit political, ideological and affective work they do.

The Logics Approach has been used to interrogate a range of public discourses, including Eurosceptic discourse within British debates on the EU (Hawkins, 2015), health and social care (Glynos & Speed, 2012; Glynos, Speed, & West, 2014), banking reform processes (Glynos, Klimecki, & Willmott, 2015), airport expansion (Griggs & Howarth, 2013), education curricula (Andersson & Öhman, 2016; Clarke, 2012) and around institutions that mediate

CONTACT Elise Remling elise.remling@sh.se

between science and policy (Åm, 2013). As a tool for identifying and harnessing the implicit work of discourses more generally, its research methodology also lends itself to critical analysis that is aimed at uncovering underlying dynamics of a *policy* domain.

An aspect that has not gained enough attention in existing scholarship, however, is how to operationalize its abstract theoretical concepts for concrete textual analysis. Commonly authors provide some description of their data sources and the *process of data collection*, but fall short of describing procedures for analysis and interpretation, that is, the *process of data analysis* (see for instance Clarke, 2012; Glynos et al., 2014; Glynos & Speed, 2012). Articles rarely give an explanation of how the logics were brought to bear on the empirical material, be it interview data, analysis of news media, or policy documents. Such accounts provide the reader with a limited understanding of the analytical processes that lead to the eventual identification of different logics in a discourse.

This lack of attention to analytical procedures might perhaps be explained by space constraints when publishing in the form of journal articles, or a general lack of enthusiasm amongst poststructuralist scholars for the 'positivist obsession' with questions of method and methodology (Howarth, 2005). However, it is surprising given the Logics Approach precisely aims overcome earlier critiques on 'methodological deficits' of Poststructuralist Discourse Theory (PDT) by providing a more rigorous framework for conducting poststructuralist social and political research (Glynos & Howarth, 2007; Howarth, 2005; Torfing, 2005). This shortage of detailed analytical accounts has a number of additional implications. Firstly, it requires a 'leap of faith' on behalf of the reader as to how the theoretical concepts were applied in concrete empirical contexts. This in turn may give rise to questions in the credibility of research results and the grounds for critique, a central aspect of the Logics Approach. It may also prevent dialogue with researchers from other disciplinary paradigms, for instance from the field of environmental studies, who are unfamiliar with discourse-theoretical approaches. Secondly, it limits the ability of other scholars to learn from empirical analysis and build on earlier work, as well as to keep refining and developing the Logics Approach, something Glynos and Howarth (2007) have themselves expressed as desirable.

Aims and outline of the article

To better harness the Logics Approach for the analysis of policy documents a more concrete approach is needed. This article seeks to begin filling this gap by providing insight into a concrete empirical research project and presenting challenges encountered in applying the logics, as well as suggesting a possible solution to overcoming them. The aim of this article is therefore to explore how the approaches' concepts of social, political and fantasmatic logics can be empirically operationalized for the critical study of public policy.[1] This will be done by drawing on a case study of recent European Union (EU) policy development in response to climate change, the emerging policy domain of climate adaptation.[2]

The article proceeds in four stages. (1) I start by briefly introducing PDT and specifically the conceptual grammar of the Logics Approach. (2) The following section describes the initial analytical approach taken and methodological challenges encountered when putting into practice the approach for the textual analysis of policy documents. (3) Drawing on tools from Critical Discourse Analysis (CDA) the article then

moves on to articulating a novel framework for discursive policy analysis. For purposes of illustrating the framework I draw on examples from the European case study. (4) The article concludes with methodological reflections and suggests avenues for further empirical and conceptual exploration.

Poststructuralist discourse theory and the logics approach

Discourse, as understood by poststructuralist scholars is productive. This means its conception extends beyond a narrow, linguistic understanding of discourse as text, beliefs or words that describe 'reality'. Rather, from this perspective discourse '*is a constitutive dimension of social relations*' (Griggs & Howarth, 2013, p. 17) and includes all forms of social practices, such as making maps, giving a political speech, sending an email or conducting financial transactions. Underlying this understanding is the ontological premise that '*social reality is nothing more than the contingent articulation of different elements in a hegemonic discourse*' (West, 2011, p. 417). PDT scholars refer to this as the *radical contingency* of all systems of meaning and social order (Glynos & Howarth, 2007), which posits that there is no necessary essence to subjects or objects. This does not imply the complete absence of material things (as critics sometimes assert), but that material surroundings remain meaningless until interpreted and assigned meaning by humans (Laclau & Mouffe, 1987).

Meaning, and with it social order, is constructed through discursive practice or *articulation*, which refers to the linking together of elements that are not necessarily related to one another. The two mayor rhetorical strategies by which things are assigned meaning are the articulation of *equivalence* and *difference* (Laclau & Mouffe, 2001 [1985]). *Equivalence* denotes the strategy of establishing association between separate elements, making them seem alike or related, in opposition to a common 'Other'. For instance asserting connections between adaptation and other policy areas such as energy or disaster management. *Difference* describes the strategy of creating differentiation, which in policy contexts might mean 'disarticulating' certain discursive elements from a series of meanings so that they lie outside of what is proposed in response to the identified problem.

Following this foundational idea, as there '*is no deterministic relationship between the material and the meaning; to assign meaning is an act of power*' (Stevenson, 2015, p. 50). This implies that whatever form an articulatory process takes, it is always a social construction and the discourse – in our case *policy* discourse – that emerges from it is '*intrinsically political*' (Howarth & Stavrakakis, 2000, p. 4). It follows that a poststructuralist perspective on policy analysis assumes its objects and subjects are not fixed. Instead, meanings are seen as moving, shifting and changing, created and contested by different political actors (Griggs & Howarth, 2013). Which particular courses of action are valued and prioritized over others, and which ones are suppressed and delegitimised is the outcome of political articulation. Policy *change* (or *emergence* as in the case of the rather novel domain of adaptation) always involves power struggles over meaning as new ideas, understandings and procedures are instituted. Policies are thus highly productive sites in that they render a problem and its solutions in a certain way, while excluding other options (Bacchi, 2000; Oppermann, 2011). An important empirical question then becomes *how* a policy discursively constructs its topic of concern and what political and ideological strategies it sets out to do.

Responding to charges of methodological shortcomings of PDT (Howarth, 2005; Torfing, 2005), Jason Glynos and David Howarth (2007) developed the Logics Approach as a more concrete methodological and conceptual framework for discourse analysis. Its novelty lies in the idea of *logics*, which are the basic explanatory units used to problematize, explain, criticize, and evaluate an empirical phenomena. Glynos and Howarth (2007) conceptualize three so-called logics of explanation, *social, political* and *fantasmatic*. It is important to emphasize that the separation into these three serves analytical purposes, in practice they partly overlay as they are commonly interwoven to form one overarching explanatory logic (Glynos & Howarth, 2007). The role of social and political analysis is to study the processes of articulation, explore, understand and explain what the norms of a discourse are, why and how they came about, and what made them possible and appealing. Drawing on the conceptual vocabulary of the logics this is achieved by focussing on '*the emergence and logic of discourses*' (Howarth & Stavrakakis, 2000, p. 7).

A conceptual vocabulary: social, political and fantasmatic logics

The first analytical concept of *social logics* helps characterize and describe sedimented values and dominant norms of a social practice (Griggs & Howarth, 2013). They constitute the socially accepted 'rules of the game', the unsaid background of a discourse. In relation to environmental policy these might be naturalized norms underlying a policy agenda, such as the notion of 'sustainable development'. As an analytical concept social logics help characterize a discourse and its implicit foundations at *a particular point in time*, providing a 'snapshot' (i.e. a synchronic perspective) of a discourse, as well as what expectations and rules a practice – in this case climate adaptation – will have to abide by (see Table 1).

While social logics uncover that what is largely accepted within a discourse, the second concept, *political logics*, helps explain how a certain discourse evolves, functions and how its different elements are connected with one another. By looking at the development and *evolution of a discourse over time* (i.e. the diachronic perspective), they reveal moments of *contestation* of established-, and the *institution* of new meanings and practices (Glynos & Howarth, 2007). Building on the two articulatory strategies of equivalence and difference, political logics describe who and what is included within, or excluded from a certain discourse. For instance, how and where borders between 'good' and 'bad' adaptation are drawn. In adaptation policy, political logics might contain proposals for novel forms of governance (instituting new practices), or obscure alternative meanings not seen as legitimate (preventing contestation). From an analytical perspective, political logics seek to '*expose the simplifications, reductions, exclusions, and omissions operating in the formation of any given discursive formation*' (Clarke, 2012, p. 178f) (see Table 1).

Building on recent applications of the Logics Approach to policy reform processes (Glynos et al., 2014, 2015; Glynos & Speed, 2012), I differentiate between political logics as the *signifying* practices outlined by Laclau and Mouffe (i.e. equivalence and difference), and their political *function* in a specific policy reform process. This function can take a more open, *contestatory* form in opposing the status quo thereby providing reason why a policy reform is necessary in the first instance, and/or take a subtler, *marginalizing* form. This latter function operates to contain and disarm the emergence of alternative policy solutions consequently marginalizing other possible understandings. This is particularly

Table 1. Applying the logics to the study of EU climate adaptation policy.

Logics	Key explanatory function	General questions	Empirical questions
Social logics	Reveals accepted rules and norms	What are the rules and norms?	What characterizes EU adaptation policy? What 'facts' does this discourse rest on, i.e. what appears as 'natural' or 'given'? What kinds of norms are reproduced, what values 'count'? What are the implicit expectations and rules adaptation has to abide by, i.e. what must responses look like to be acceptable?
Political logics	Reveals emergence and installation	Why and how did they come about?	How is the overarching explanatory logic constructed? What discursive strategies (i.e. equivalence/difference) create the discourse and how is coherence among different elements established? What is adaptation associated with and how? What meanings and courses of action are put forward, or excluded? Where are borders drawn, and which ideas have been closed off or marginalized in the process?
Fantasmatic logics	Reveals what recruits, grips, persuades, governs subjects	How are they sustained?	How is this discourse sustained, what makes it 'tick'? How is the understanding of adaptation justified and explained, and how does it attempt to 'win-over' its audience? What outcome(s) does it promise or warn against? What ideological work do the policies do, and to what end?

Source: Modified from (Remling, forthcoming).

relevant in policy reform processes where suggested responses compete with and need to be pre-emptively defended against other possible policy visions.

Finally, *fantasmatic logics* are stories that 'grip' subjects of a discourse, structuring their desires, providing them with forms of identification and promising the enjoyment of a 'fullness-to-come'. The effect of which essentially is to render a subject complicit and draw it to the proposed policy solution (Glynos, Howarth, Norval, & Speed, 2009). By creating an '*illusion of necessity*' (Hawkins, 2015, p. 143) fantasies typically provide a rationalization of why a certain social order is the way it is (or should be) and what might happen if this order was abolished (or disrespected). In other words, fantasmatic logics serve to conceal and cover-over the radical contingency of systems of meaning and social order, including relations of domination and subordination, and seek to naturalize and preclude alternative ways of thinking.

Glynos and Howarth (2007) distinguish two dimensions to a fantasy, a beatific and a horrific one. The *beatific fantasy of success* promises an enjoyment in terms of a desired and often utopian future, provided that the proposed course of action is followed (Glynos & Howarth, 2007). Fantasies can also entail a horrific prospect as to what might happen if the proposed path is not followed (or abandoned). This *horrific fantasy of victimization* summons an apocalyptic imaginary, a looming disaster that steals the enjoyment of a prosperous future and as a result invokes fear and danger amongst its subjects. In the context of climate change such dystopian imageries are commonly evoked around the

perceived threat of future mass-migration and associated conflicts over dwindling resources. Fantasy is an essential component of any discourse, as it provides the affective energy necessary in order for this discourse to stabilize itself and prevent the emergence of contestation by backgrounding the contingent nature of social reality. One might even say that the persuasiveness of a particular discourse – and hence its ability to gain dominance – depends upon the resonance of its fantasmatic logics. In policy contexts the deployment of fantasy provides not only ideological justification for a specific policy domain but also seeks to conceal the particular, situated and radical contingency of proposed measures, and for adaptation might for instance promise a certain climate-resilient and prosperous future. Analytically, fantasmatic logics therefore help explain how a certain discourse could emerge and is able to maintain its popularity, and hence its hegemony. They provide insight into how the understanding of adaptation is justified and explained, and importantly, how it attempts to 'win-over' its audience (see Table 1).

The conceptual grammar of the logics is a useful heuristic device for the study of emerging policy domains, such as climate adaptation, because it helps uncover hidden meanings, acknowledges the complex socio-political processes that mediate societies' responses to climate change and therefore captures how politics are embedded in these. The logics provide a conceptual vocabulary with which to grasp how (new) meanings and practices around adaptation (policy) emerge, become sedimented, what excluded courses of action are, and how and where borders are drawn to practices not seen as appropriate. By doing so, the logics enable the researcher '*to make visible the richness and complexity of these different* [*articulatory*] *processes, making possible a nuanced reading of these different policy contexts*' (Glynos & Speed, 2012, p. 407). Finally, they make social processes more transparent but also – and important for the aim of critical policy studies – '*in the process of* describing *and* explaining […] *furnish the possibility of a* critical *engagement*' (Glynos & Howarth, 2007, p. 153, emphasis in original). For research on adaptation this is particularly important at a time when many climate change responses attempt to escape politics, thereby risking to become '*post-political*' (Swyngedouw, 2010). By acknowledging that the creation of meaning is always a social and political process, and policy therefore inescapably political, PDT has the potential to contribute greatly to an enhanced understanding of current adaptation practice and other areas of environmental policy making.

The initial policy analysis and methodological challenges

Equipped with the conceptual framework of the logics I proceeded with an empirical analysis of the EU's discourse around adaptation. In order to do so I selected and analysed a set of three key documents of European adaptation policy:

- A Green Paper 'Adapting to climate change in Europe – options for EU action' (EC, 2007);
- A White Paper 'Adapting to climate change: Towards a European framework for action' (EC, 2009); and
- 'An EU Strategy on adaptation to climate change' (EC, 2013).

The European Commission (EC) issued these documents consecutively, over a period of six years. Following the EC's evolving perspective on adaptation they offer important

insights into the emerging policy domain that is likely to influence adaptation responses in the EU and possibly its Member States.

In-depth analysis of the documents and coding was aided by qualitative analysis software (MAXQDA).[3] The research approach itself took an abductive form, which allowed space for new ideas and surprises to emerge form the analysis (Blaikie, 2010).[4] The initial document analysis consisted of a complete reading of the documents in order of publication during which emerging key themes and initial observations were documented. Together with the three logics these provided the initial codes. The coding process was 'open', which is to say it was based on these *initial conceptual codes* (e.g. 'beatific dimension') and complemented by unexpected, or *emergent codes* (e.g. 'dismissal of alternatives') that were added based on a close reading of the texts. These were used to code the documents' content systematically at the second reading.

Shortly into the coding process, however, it became apparent that while the logics provide valuable theoretical concepts not all lend themselves easily to the empirical study of policy texts. *Fantasmatic logics* were relatively straightforward to spot,[5] promising both enjoyment in terms of an ideal future with improved cohesion between Member States and economic prosperity for the EU (the beatific dimension), and giving a 'doom-and-gloom' outlook of what might happen to the EU and its Member States if the suggested steps where not followed (the horrific dimension) (see Remling, forthcoming for more detailed results). However, trying to identify *social* and *political logics* in the material provided more challenging and presented a set of methodological challenges:

(1) For Glynos and Howarth (2007) *social logics* are mainly associated with social *practices*. Yet, policies are textual accounts and often aim to institute new values, understandings, or procedures to transform in some particular direction. Put differently, they propose – in written form – a *novel* line of action, rather than represent *existing* social practices, something that the logics as originally articulated fall short of capturing. In recent work Glynos and colleagues (2012; 2014, 2015) distinguish between *already existing* social logics of a *current* practice, and those that a policy reform suggests *should* guide a *new* policy regime. These latter *projected* social logics describe alternative practices that a reform process might aim to introduce but which have not materialized yet. This is an important modification, but one that gives rise to a first methodological challenge: How to trace the unsaid background, that what is taken for granted and needs not to be explained in policy documents? And how to distinguish these *existing,* from *projected* norms?
(2) The concept of *political logics* is dominantly linked to '*moments of contestation and institution*' (Glynos & Howarth, 2007, p. 147). Working with official policy texts of a very formalized nature presents a challenge in this regard, as they constitute a relatively 'static snapshot' of an authoritative discourse and leave little room for alternative voices, let alone open contestation. Some alternatives might be explicitly dismissed, but what about more tacit omissions and exclusions? This leaves unresolved a second methodological challenge, namely what more *implicit* moments of contestation and institution might look like in policy documents and how to capture this marginalizing function of political logics analytically.

The existing studies using the Logics Approach do not provide any cues on how to apply these concepts to the analysis of empirical material, and specifically how to identify

and systematically code for features of social and political logics in text documents. In order to overcome these challenges I needed to articulate a more refined framework that would allow me to effectively connect, or 'bridge', the abstract set of theoretical concepts and the text documents. I suggest that Norman Fairclough's (2003) more analytically 'hands-on' approach to CDA is helpful in this regard, as it provides more detailed concepts that are possible to integrate into the Logics Approach.

The practice of articulation as a research strategy

At their core, both PDT and CDA deal with theoretical questions and have a strong interest in the power of language and its role in social and political processes (Jørgensen & Phillips, 2002; Kolankiewicz, 2012; Montessori, 2010, 2011). With an orientation towards critical inquiry they can be considered the more 'political' strands of discourse studies (others are more empirically focussed and not as engaged in theoretical questions). The most significant differences between the two are ontological, especially in relation to the concept of *discourse* and the distinction between the discursive and the non-discursive. [6] It is important to note that while the framework presented here draws on tools for textual analysis from CDA, it remains firmly rooted in the philosophical and theoretical premises of PDT. This means the 'Logics strand' of PDT is employed both as the main model of discourse and as the main methodology for discourse analysis. CDA's strengths for this research project lie in the fact that it offers a rich methodological program and compared to PDT provides more concrete tools and techniques for empirical analysis.[7]

Combining elements of these two traditions within discourse studies is not jeopardizing the integrity of the original Logics Approach, nor is it this the first time their analytical categories and concepts are usefully combined.[8] Glynos and Howarth (2007; see also Glynos et al., 2009) emphasize the importance of the 'principle of articulation' not only as the underlying process that shapes systems of meaning and social order, but also as a key methodological device of social science practice. Staying true to a problem-driven and abductive approach to research and rejecting positivist ideas of 'applying' a method, PDT posits that there is no strict, one-size-fits-all methodological approach for conducting empirical research. When coming up against hurdles or difficulties in the application of theory to the empirical material, the authors suggest supplementing and adding new and other concepts (Fairclough, 2003 has equally emphasized that his analytical concepts can be used as a resource for research within other ontological frameworks, without necessary reference to the broader CDA project). This involves the articulation of different theoretical and empirical elements into an overarching explanation that affects both the theoretical and the empirical elements, merging them into a novel combination. Such strategy serves an explanatory function but can also result in new conceptual understandings and theory development, something I will return to in the concluding section.

Articulating a logics framework for analysing policy documents

The implicit work of assumptions and genre chains

In order to adapt the Logics Approach to the textual analysis of policy I have found it helpful, as a first step, to turn to Fairclough's (2003) discussions on 'implicitness',

specifically his elaboration on assumptions and presuppositions made in spoken or written word. These represent the 'common ground' taken as given, and consequently tend to remain more or less implicit in a text. Fairclough (2003) usefully distinguishes three types of assumptions – *existential, propositional* and *value assumptions*. *Existential assumptions* include assumptions about what exists, for instance that there are such things as climate change, or the EU. *Propositional assumptions* are statements about '*what is or can be or will be the case*' (Fairclough, 2003, p. 55) in the future. Finally, *value assumptions* reveal what is considered desirable and good, or undesirable. For instance, that cohesion is advantageous for the EU and beneficial for its Member States.

In the particular empirical context of this study these three are applied as *aiding analytical concepts* in that they help bridge the conceptual gap between the more abstract logics and concrete textual analysis in thee mayor ways (see also Table 2). First, as *existential assumptions* shed light on the unsaid background, reveal what is taken for granted and seen as legitimate, they help to empirically operationalize *social logics*. Second, *value assumptions* expose to view what values and norms structure policy discourse and what responses must be like to abide by the rules, adding another analytical layer to the *social logics*. Finally, *propositional assumptions* are useful for spotting aspects of *political logics* by making claims about what course of action should be followed to achieve the desired policy outcomes, therefore pointing to *new* logics a policy reform aims to institute.[9]

These additional concepts still beg further questions, however, about how to trace more *subtle* marginalizing aspects of political logics. In a second step to further the analytical framework I therefore turn to another aiding analytical concept, namely that of *genre chains*. For Fairclough (2003, p. 17), *genres* denote specific ways '*of acting and interacting*

Table 2. How CDA's tools complement the Logics Approach.

Aiding concepts	Definitions	Markers	The aiding concept helps …
Existential assumptions	'*Assumptions about what exists*' (Fairclough, 2003, p. 55).	'Factive verbs' that assert the truth of a following clause, e.g. '*depends*', '*rely*', '*crucial*', '*vital*', '*will*'.	… shed light on the unsaid background, therefore to grasp (*existing*) *social logics*.
Propositional assumptions	Reveal '*what is or can be or will be the case*' (Fairclough, 2003, p. 55).	Modal verbs that give a sense of necessity, appropriateness, duty and obligation, e.g. '*must*', '*should*', also '*calls for*', '*needs*'.	… make claims about what path *should* be followed to achieve desired outcomes, point to the institution of *new* logics and therefore to logics that are still *political*.
Value assumptions	Reveal something about what is assumed to be *desirable* or *undesirable*, i.e. what is valued in a discourse.	Can be triggered by words such as '*will help*', '*will promote*', '*help develop*', '*threatened*', '*risk*'.	… reveal what *norms* and *values* structure a particular policy discourse and what solutions must be like to abide by the rules, therefore help grasp (*existing*) *social logics*.
Genre chains	A chain of (interrelated) *genres* that are in interaction with each other.	–	… aid in operationalizing *political logics* further by tracing *continuity*, as well as identify *change* in the discursive productions of adaptation across documents. This is particularly important for the *logic of difference*.

Source: Inspired by Fairclough (2003).

linguistically'. This is to say texts of the same genre, for instance lectures, interviews or research articles, share certain common characteristics typical of that specific genre. Genre *chains* then, are combinations of different genres that are '*regularly linked together, involving systematic transformations from genre to genre*' (Fairclough, 2003, p. 31). Often chronologically ordered, ideas from previous genres 'travel', sometimes unchanged, sometimes altered to the next. An example of such a chain could be a new policy document, a press conference, a press release, a news article, and an interview with stakeholders commenting on the policy process. Importantly, Fairclough (2003, p. 216) points out that '[*c*]*hange in genre chains is a significant part of social change*'.

Building on this idea, I conceptualize the three consecutive versions of non-legislative policy – the Green Paper, White Paper and Strategy – as forming part of one genre chain, that is, a sequence of interconnected texts that play a key role in the emerging adaptation policy discourse. Analytically 'moving along' the chain and seeing how the text gets transformed in particular ways from one policy iteration to the next makes visible more subtle, but important, changes (in the form of exclusions or institutions) in a way that the analysis of only one document would not enable. Revisiting the challenges discussed above, genre chains therefore help address the second methodological challenge: While more implicit *moments of contestation* and exclusionary aspects are not easy to spot in individual documents (owing to their authoritative nature), they can be traced *across* the set of documents. Analytically, it is through this diachronic comparative analysis of different documents in a genre chain that I am able to tease out the more implicit marginalizing political logics behind the policies and therefore re-politicise the particular meaning of adaptation that is elevated to a prime position of importance and naturalized in the EU context (see Table 2).

Articulated together with the logics, *assumptions* and *genre chains* can help overcome the methodological challenges by providing more detailed and concrete textual-analytical tools for uncovering underlying foundations, values and principles associated with adaptation, and consequently enable a more specific analysis of policy documents. Compared to the logics, Fairclough's (2003) analytical concepts operate at a more concrete level, he even provides the user with specific suggestions of 'markers' one can look for when analysing text (see Table 2). This allows coding for social, political and fantasmatic logics with greater precision and transparency. The result is a framework that is helpful in furthering our understanding of the use of the Logics Approach, specifically when analysing the particular genre of policy texts. Table 3 illustrates how the analytical tools introduced in this section complement the original set of concepts.

Table 3. Operationalizing the logics to the study of policy discourses.

Logics	'Sublogics'	Aiding analytical concepts
Social logics	–	Existential assumptions Value assumptions
Political logics	Logics of equivalence	Propositional assumptions
	Logic of difference	Dismissal of alternatives (contestatory/explicit)
	–	Genre chains: continuity/institution/closure (marginalizing/implicit)
Fantasmatic logics	Beatific dimension	–
	Horrific dimension	–

Source: Modified from (Remling, forthcoming).

Policy analysis revisited: new perspectives on adaptation discourses

With this modified analytical framework I approached my empirical material anew. This time the analysis proceeded in two steps. In the first step, drawing on the framework outlined above, the different social, political and fantasmatic logics present in *each policy document* were identified and coded (see Table 4 for examples). All three documents

Table 4. Illustrative examples of logics in EU climate adaptation policy.

Logics	'Sublogics'	Aiding analytical concepts	Illustrative quotes and examples
Social logics	–	Existential assumptions	'Adaptation policies are emerging in nearly all Member States. It is essential to share experiences from early adaptation action and results from research. Adaptation to climate change is likely to benefit from experience gained in reaction to extreme climate events and from implementation of specific and proactive climate change risk management plans' (EC, 2007, p. 12f).
		Value assumptions	'… help the EU move towards a low-carbon and climate-resilient economy, and will promote sustainable growth, stimulate climate resilient investment and create new jobs' (EC, 2013, p. 5).
Political logics		Propositional assumptions	'Many countries are already enduring the impact of climate change and there is an urgent need to work with them, in particular with neighboring countries and the most vulnerable developing countries, to improve their resilience and capacity to adapt to adverse effects. Adaptation should be mainstreamed in all of the EU's external policies. In trade policy adaptation should be incorporated, notably through the liberalization of trade in environmental goods and services and in the elaboration of Free Trade Agreements (FTAs). There is a huge potential for green trade which can contribute to enhancing growth and creating jobs. The EU should explore this and the related mutual benefits in the relationship with key partners' (EC, 2009, p. 16).
	Logics of equivalence		'External EU policy should also make a substantial contribution to adaptation, via water management […], agriculture, biodiversity, forests, desertification energy [sic!], health, social policy (including gender issues), research, coastal erosion, and disaster risk reduction, the latter is an essential part of successful adaptation' (EC, 2009,p. 15).
	Logic of difference	Dismissal of alternatives	'If there is no early policy response, the EU and its Member States may be forced into reactive un-planned adaptation, often abruptly as a response to increasingly frequent crises and disasters, which will prove much more costly and also threaten Europe's social and economic systems and its security. For impacts where we have enough confidence in the forecasts, adaptation must therefore start now' (EC, 2007, p. 9).
		Genre chains (discursive change)	'Decreased precipitation and heat waves are also expected to influence negatively the cooling process of thermal power plants' (EC, 2009, p. 4).
Fantasmatic logics	Beatific dimension		'Early action will bring clear economic benefits […]. Furthermore competitive advantages could be gained for European companies that are leading in adaptation strategies and technologies' (EC, 2007, p. 9).
	Horrific dimension		'Failing to act or delaying action may put pressure on EU cohesion. Climate change impacts are also expected to widen social differences across the EU' (EC, 2013, p. 3).

Source: Modified from (Remling, forthcoming).

were read and (re)coded three times to ensure codes created previously were applied consistently across texts and earlier interpretations remained valid. Coded segments were then extracted and analysed to identify the logics in each document and hence characterize its predominant adaptation discourse. In a second step, and drawing on the concept of genre chains, the identified logics were *compared across documents*. This revealed alternatives that emerged or disappeared, such as ecosystem-based adaptation or the risk of so-called 'maladaptation', and therefore enabled the tracing of *continuity/sedimentation* and more marginal *change* in the identified logics. The resulting analysis enabled a deeper understanding of recent policy developments (see Remling, forthcoming for more details).

Methodological reflections

The analytical framework and its empirical application give rise to seven observations of relevance for future research within the Logics Approach, particularly with reference to policy analysis:

- **Observation 1: There is overlap between the horrific dimension of fantasy and the political logic of difference.** In the policies analysed, the *horrific dimension* of fantasy appears to overlap often with dismissals of alternative courses of action, in other words elements that are 'disarticulated' from the chain of equivalence (the *political logics*, see Table 5). Other possible perspectives – significant enough to have made it into the documents but not considered in accordance with the advocated line of action – need to be discredited, perhaps done most effectively by showing their potential for catastrophic and undesirable consequences that would prevent future enjoyment. In other words, the marginalizing function of political logics seems of operate in conjunction with a fantasmatic counterpart to conceal the radical contingency of the proposed policy reform.

Table 5. Relations between different logics in EU climate adaptation policy.

	Political logics		Fantasmatic logics	
Social logics	Logics of equivalence	Logic of difference	Beatific dimension	Horrific dimension
Market-based solutions (green growth, innovation and trade) Climate-proofing and mainstreaming Knowledge and evidence-based policy	A generous chain of equivalence to include and motivate as many actors as possible	–	The first mover advantage: New business opportunities worldwide Saving on future costs Omnipotence of management International leadership	–
–	–	Exclusion of alternatives that question or threaten the status-quo	–	The crisis narrative Failure of mitigation and/or adaptation: A threat to EU security and cohesion

Source: Modified from (Remling, forthcoming).

- **Observation 2: There is overlap between the beatific dimension of fantasy and social logics.** In this specific study there are strong interdependencies between underlying existential and value assumptions (the *social logics*), such as market-based responses, and the *beatific dimension* of fantasy that promises enjoyment in terms of a prosperous future and new market opportunities (see Table 5). This *beatific fantasy of success* might be more effective in providing reason and motivation for why one should follow the proposed path and why it might be opportune to adapt at all. The promises made therefore overlap with the advocated social logics.

Following the development of adaptation policy over time through *genre chains* prompts a number of additional observations:

- **Observation 3: Genre chains are a powerful tool for tracing the more implicit political logics in the formation of a policy**. The *diachronic* comparative analysis of documents uncovered closed-off and silenced issues, and therefore revealed the contingency and political nature of the emerging policy domain. G*enre chains* therefore provide a concept that enables a more systematic analysis of the operation of political logics, especially in the arena of policy formation. This framework presented here offers an alternative to the approach taken by Glynos and colleagues (2015; 2012; 2014) who operationalize political logics for policy analysis by comparing different *problematizations of the status quo* as they appear in documents from *different* policy-oriented actors. This constitutes a more *synchronic* approach to identifying projected social logics. In seeking to identify implicit exclusions during the consecutive development of policy through genre chains I propose a more *diachronic* approach that focuses on *shifts* in *documents from the same source*, which, as I suggest below (see Observation 7), has implications for the usefulness of this approach to the practice of immanent critique.
- **Observation 4: Political logics can be explicit or implicit.** While some alternatives (e.g. autonomous or national level adaptation) were openly and *explicitly* dismissed from the policies, other options (e.g. ecosystem-based-approaches, public participation, or the risk for nuclear power stations) were more *implicitly* concealed and disarticulated, in that their political nature only became apparent when looking at which ideas discontinued over time. Researchers using the Logics Approach may want to reflect on how to capture both these dimensions analytically in their empirical material.
- **Observation 5: The horrific dimension of fantasy appears to be an important device in the institution of adaptation policy.** From the small sample of empirical material analysed, it appears that particularly in the *institution* of the new policy domain fantasmatic logics play a central role, especially their *horrific dimension*. The early versions of adaptation policy (from 2007 to 2009) spend considerably more space and effort on pointing to the *catastrophic consequences* of failing to deal with adaptation than the final version (issued 2013). They evoke images of local and even global upheaval and insecurity likely to put pressure on the EU. This focus on disastrous futures could be due to the fact that as emerging policy, these early documents are presumably most 'political' as they institute a new domain and therefore have a lot of 'persuasion' to do. In other words, they need to convince the audience that the *problem* is significant and dramatic enough to warrant attention and necessitate immediate policy

action. In this context, the 'fear factor' and threat of the loss of enjoyment might prove a more powerful motivator for action and affective investment than beatific, positive images.

- **Observation 6: As the adaptation policy 'matures' it shifts emphasis to the beatific dimension of fantasy.** The final policy version places less emphasis on the horrific, and more on the *beatific dimension*. It may be the case that as a policy problem 'grows' on its audience, the political work shifts to providing reasoning why the proposed *solutions* are the most appropriate ones, consequently supplying ideological justification for the specific policy response proposed. Summoning images of a prosperous future that will offer better enjoyment than the present might be more effective in securing compliance to the proposed response, and thus the go-to strategy to persuade the audience at this stage in the policy development. More empirical research is needed to investigate whether similar shifts occur in other policy domains.

Observing change in the policy discourse over time exposed to view alternatives and diverse voices that, while being dismissed, were nevertheless (explicitly or implicitly) present at some point in the reform process. Such analysis enables not only a deeper understanding of recent policy developments, but also opens up possible entry points for 'immanent critique' (Glynos & Howarth, 2007), where the grounds for critique do not stem from an external set of norms but from tensions and inconsistencies internal to the text. This leads to a final important observation:

- **Observation 7: Genre chains can be a powerful tool for immanent critique.***Genre chains* appear to be a useful entry point for critique. Rather than imposing and outside, normative judgement on the policy discourse, they enable '*turn*[*ing*] *the text against itself*' (Howarth, 2005, p. 20) by uncovering struggles, inconsistencies and foreclosures *within* the development of a policy.

This is important as by doing so the analysis carves out space for critical reflection and possible re-articulation of the EU's conception of adaptation, including the wider social practices that are maintained through the policy discourse. Uncovering alternative ways of how adaptation might have been formulated could lead to a 'reactivation' of elements that have been excluded or concealed in the development of policy, possibly opening up for the creation of new, perhaps bolder, narratives of change.

Contribution and concluding remarks

This article identified two important methodological challenges in the application of the Logics Approach to policy texts and thus a need for further empirical operationalization. Drawing on a set of supporting analytical concepts, it outlined a framework for discursive policy analysis that integrates Fairclough's (2003) more practical tools of *assumptions* and *genre chains* with Glynos and Howarth's (2007) *logics*. By so doing, the article offers a suggestion of how to 'bridge' the theoretical concepts and empirical material.

The resulting framework allows for a more detailed analysis of policy documents, particularly its social and political logics. This not only provides a more practical approach, but it also makes the analytical process more rigorous and transparent. By offering a novel

account of how the logics can be operationalized or 'sharpened' for studies oriented towards policy documents, the article makes a contribution to methodological debates around the use of the Logics Approach (and more broadly PDT approaches), specifically in relation to critical policy analysis.

Offering a more detailed and rigorous account of how the Logics Approach can be applied to concrete policy analysis, as presented in this article, has in my opinion two mayor implications, one practical, the other theoretical. First, at the practical level increased transparency about analytical procedures may improve dialogue with scholars from other disciplines and help instill confidence in those interested in the research findings. That is to say, it will help justify the credibility of insights generated from empirical analysis and therefore the researchers' grounds for critique. Second, it provides an opportunity for further development and clarification of the Logics Approach, theoretically and methodologically. The empirical application presented here has given rise to a number of methodological questions and new ideas that future studies within the Logics Approach (and PDT more broadly) may want to explore: What remains open for instance is how to account for logics that are to be *instituted* through a new policy domain. The notion of '*projected social logics*' (Glynos & Speed, 2012; Glynos et al., 2014, 2015) is an important contribution is this regard, yet the empirical challenge that remains is how do differentiate between *existing/accepted* and *proposed/projected* social logics in the analysis of text documents. Another related question is where to empirically demarcate the transition from a political- to a social, sedimented logic in a policy discourse. Finally, the implications of *genre chains* as a device for generating immanent critique might also be a fruitful avenue for inquiry.

It goes without saying that the analytical framework presented here is only one possible way of operationalizing the logics. Other researchers will necessarily develop analytical procedures tailored to their specific cases and empirical material. However, the fact that theoretical frameworks and methodologies cannot 'mechanically' be applied to other empirical contexts should not make redundant attention to methodological accounts (i.e. the what, how and whys) of what we do in our empirical work. Thus, while the framework presented here might not be fully transferable to other research projects, I hope that it might inspire further creative applications of this lens to emerging and poorly understood policy debates, including related to the broader phenomenon of climate change.

Notes

1. For alternative examples of analytical frameworks see Glynos and Speed (2012), Glynos et al. (2014) and Glynos et al. (2015). These make important conceptual additions to the original approach but remain at a rather high level of abstraction and leave open the 'hows' at the level of detailed textual analysis.
2. The empirical results of the European case study are presented in detail elsewhere (see Remling, forthcoming), hence are not reproduced here. In this article examples from EU adaptation policy are merely employed as empirical illustrations.
3. Computer Assisted Quantitative Data Analysis Software (CAQDAS) has been described as a useful tool to help structure the organization, reduction and analysis of empirical material, and as more efficient than manual methods (Yin, 2011). It does not however *do* any analytical work. That task remains with the researcher who reads, interprets and analyses the material, and manually generates and organizes the codes.

4. The way I conceptualize *abduction* corresponds with what Glynos and Howarth (2007) call *retroductive* forms of explanation. Both represent a post-positivist picture of social and political analysis. Avoiding the dualism between 'the theoretical' and 'the empirical', an abductive approach sees the researcher as alternating between theoretical and empirical work. While recognizing theoretical concepts as 'points of departure' and acknowledging the influence of pre-existing ideas and preconceptions, such approach leaves space for new ideas and surprises to emerge from the analysis, which in turn may serve to clarify theoretical notions (see also Montessori, 2011).
5. Glynos and Howarth (2007, p. 148) suggest two '*methodological rule[s] of thumb*' that can serve as identifiers of fantasmatic logics, namely those incidents in a discourse that '*resist official disclosure*' and those that *oscillate between incompatible positions* and are riven with contradictions. While the authors offer convincing empirical examples, these identifiers do not speak well to the particular empirical material analyzed for this article. The policy documents in focus are 'public-official discourse' by definition, hence, looking for fantasmatic logics that '*resist public official disclosure*' (2007, p. 148) would evidently make little sense, as would the search for 'off-the record' accounts or tensions between official and unofficial discourses. The documents also did not exhibit extreme oscillations between incompatible positions (the second rule of thumb). In order to trace fantasmatic logics analytically I have instead interpreted the concepts' labels rather literally and looked for beatific and horrific imagery employed in the policies that promise an enjoyment in terms of a 'prosperous future', or paint a dystopian scenario that describes the 'stealing of enjoyment' (e.g. preventing this prosperous future to happen). Affectively charged words that commonly appeared in the *beatific dimension* included 'opportunity/ies', 'clear', or 'essential'. The *horrific dimension* often featured words that evoke an existential threat and theft of enjoyment, such as 'security', 'under pressure', 'at risk', 'severe and irreversible', 'disaster', 'threat', and economic associations such as 'economic losses', 'to pay the price' or 'costs'.
6. While CDA sharply distinguishes between semiotic (i.e. discursive) aspects and social practices that lie outside of discourse, no such difference exists for PDT (see Laclau & Bhaskar, 1998; Kolankiewicz, 2012; Flatschart, 2016). Instead, discourse is seen as encompassing both linguistic and non-linguistic practices. Debates concerning the ontological commitments of both approaches (poststructuralism vs. Critical Realism) are important (see Laclau & Bhaskar, 1998; Torfing, 2005; Kolankiewicz, 2012; Fairclough, 2013, 2016), but beyond the scope of this article.
7. My choice of PDT as the main pillar of the discourse analytical framework is motivated by the central place given to articulatory struggles and the primacy of politics in these. CDA on the other hand, while constantly developing its rich ensemble of analytical approaches has in recent years been '*mainly driven by analytical needs that often preceded theoretical or conceptual concerns*' (Krzyzanowski & Forchtner, 2016, p. 256). In the context of this research project PDT, with its well-articulated theoretical framework and broad vocabulary of social-theoretical concepts, was considered to offer stronger explanatory power. An additional strength of PDT is the notion of fantasy, something that to the best of my knowledge is not captured within the analytical toolbox of CDA.
8. Both groups of scholars have acknowledged and sometimes borrowed from each other, also in the field of policy analysis (see Howarth, 2005; Glynos & Howarth, 2007; Fairclough, 2013; and also Jørgensen & Phillips, 2002; Phelan, 2007; Montessori, 2010, 2011). The approach taken in this article differs from these earlier attempts, however, in that to the best of my knowledge it is the first attempt to integrate elements of CDA into the specific Logics Approach within PDT.
9. These *new logics* are not sedimented or accepted yet and hence are (still) *political logics*, thereby revealing '*the political origin of social logics*' (Griggs & Howarth, 2013, p. 298). This conception is similar to Glynos and Speed's (2012, 2014, 2015) concept of 'projected social logics' in the context of policy reform processes, which describe the *imagined* practices a policy reform seeks to institute.

Acknowledgements

I would like to thank Jenny Gunnarsson Payne, Jason Glynos, Pernilla Andersson, Ellinor Hamrén and Sophie Adams for their stimulating and helpful comments on earlier drafts of this article. Thank you also to Florence Fröhlig and Ann Runfors for their curiosity, enthusiasm and encouragement at a time when these ideas were still very much in their infancy.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

Elise Remling is a PhD candidate in Environmental Studies at Södertörn University, Sweden. She is interested in how societies can anticipate and respond to climate change and other environmental stressors in equitable and sustainable ways. Elise has conducted policy relevant research in the field of climate change and sustainable development. Drawing on Poststructuralist Discourse Theory and the so-called 'Logics of Critical Explanation' in particular, her current research focuses on the politics of climate adaptation.

References

Andersson, P., & Öhman, J. (2016). Logics of business education for sustainability. *Environmental Education Research*, *22*(4), 463–479. doi:10.1080/13504622.2015.1015493

Åm, H. (2013). "Don't make nanotechnology sexy, ensure its benefits, and be neutral": studying the logics of new intermediary institutions in ambiguous governance contexts. *Science and Public Policy*, *40*(4), 466–478. doi:10.1093/scipol/sct054

Bacchi, C. (2000). Policy as discourse: What does it mean? Where does it get us? *Discourse: Studies in the Cultural Politics of Education*, 21(1), 45–57. doi:10.1080/01596300050005493

Blaikie, N. W. H. (2010). *Designing social research* (2nd edition). Cambridge: Polity Press.

Clarke, M. (2012). Talkin' 'bout a revolution: The social, political, and fantasmatic logics of education policy. *Journal of Education Policy*, *27*(2), 173–191. doi:10.1080/02680939.2011.623244

European Commission. (2007). *Green paper: Adapting to climate change in Europe – options for EU action* (No. COM(2007) 354 final). Brussels: Commission of the European Communities.

European Commission. (2009). *White paper: Adapting to climate change: Towards a european framework for action* (No. COM(2009) 147 final). Brussels: Commission of the European Communities. Retrieved from http://ec.europa.eu/clima/policies/adaptation/what/documentation_en.htm

European Commission. (2013). *An EU strategy on adaptation to climate change* (No. COM(2013) 216 final). Brussels: The European Commission. Retrieved from http://ec.europa.eu/clima/policies/adaptation/what/documentation_en.htm

Fairclough, N. (2003). *Analysing discourse: Textual analysis for social research*. London: Routledge.

Fairclough, N. (2013). Critical discourse analysis and critical policy studies. *Critical Policy Studies*, *7*(2), 177–197. doi:10.1080/19460171.2013.798239

Flatschart, E. (2016). Critical realist critical discourse analysis: A necessary alternative to post-marxist discourse theory. *Journal of Critical Realism*, *15*(1), 21–52. doi:10.1080/14767430.2015.1118588

Glynos, J., & Howarth, D. (2007). *Logics of critical explanation in social and political theory*. London: Routledge.

Glynos, J., Howarth, D., Norval, A., & Speed, E. (2009). *Discourse analysis: Varieties and methods* (ESRC National Centre for Research Methods Review paper No. NCRM/014). National Centre for Research Methods. Retrieved from http://eprints.ncrm.ac.uk/796/1/discourse_analysis_NCRM_014.pdf

Glynos, J., Klimecki, R., & Willmott, H. (2015). Logics in policy and practice: A critical nodal analysis of the UK banking reform process. *Critical Policy Studies*, *9*(4), 393–415. doi:10.1080/19460171.2015.1009841

Glynos, J., & Speed, E. (2012). Varieties of co-production in public services: Time banks in a UK health policy context. *Critical Policy Studies*, *6*(4), 402–433. doi:/10.1080/19460171.2012.730760

Glynos, J., Speed, E., & West, K. (2014). Logics of marginalisation in health and social care reform: Integration, choice, and provider-blind provision. *Critical Social Policy*, *35*(1), 45–68. doi:10.1177/0261018314545599

Griggs, S., & Howarth, D. (2013). *The politics of airport expansion in the United Kingdom: Hegemony, policy and the rhetoric of "sustainable aviation."* Manchester: Manchester University Press.

Hawkins, B. (2015). Fantasies of subjugation: A discourse theoretical account of British policy on the European Union. *Critical Policy Studies*, *9*(2), 139–157. doi:10.1080/19460171.2014.951666

Howarth, D. (2005). Applying discourse theory: The method of articulation. In D. Howarth & J. Torfing (Eds.), *Discourse theory in european politics: Identity, policy and governance* (pp. 316–349). London: Palgrave Macmillan.

Howarth, D., & Stavrakakis, Y. (2000). Introducing discourse theory and political analysis. In D. Howarth, A. Norval, & Y. Stavrakakis (Eds.), *Discourse theory and political analysis: Identities, hegemonies, and social change* (pp. 1–23). Manchester: Manchester University Press.

Jørgensen, M., & Phillips, L. (2002). *Discourse analysis as theory and method*. London: Sage Publications.

Kolankiewicz, M. (2012). Where discourse ends: The discursive and the non-discursive in Laclau and Mouffe's discourse theory and in Fairclough's critical discourse analysis. In K. Jacobsson, & K. Sjöberg (Eds.), *Pondering on methods A variety of methodological concerns* (pp. 123–136). Lund: Faculty of Social Sciences, Lund Univeristy.

Krzyzanowski, M., & Forchtner, B. (2016). Theories and concepts in critical discourse studies: Facing challenges, moving beyond foundations. *Discourse & Society*, *27*(3), 253–261. doi:10.1177/0957926516630900

Laclau, E., & Bhaskar, R. (1998). Discourse theory vs critical realism. *Alethia*, *1*(2), 9–14. doi:10.1558/aleth.v1i2.9

Laclau, E., & Mouffe, C. (1987). Post-Marxism without apologies. *New Left Review*, (166), 79–106.

Laclau, E., & Mouffe, C. (2001 [1985]). *Hegemony and socialist strategy: Towards a radical democratic politics* (2nd ed, Vol. 1). London: Verso.

Montessori, N. M. (2010). *A discursive analysis of a struggle for hegemony in Mexico: The zapatista movement versus president Salinas de Gortari*. Saarbrücken: VDM Verlag.

Montessori, N. M. (2011). The design of a theoretical, methodological, analytical framework to analyse hegemony in discourse. *Critical Discourse Studies*, *8*(3), 169–181.

Oppermann, E. (2011). The discourse of adaptation to climate change and the UK climate impacts programme: De-scribing the problematization of adaptation. *Climate and Development*, *3*(1), 71–85. doi:10.3763/cdev.2010.0061

Phelan, S. (2007). The discourses of neoliberal hegemony: The case of the Irish republic. *Critical Discourse Studies*, *4*(1), 29–48. doi:10.1080/17405900601149459

Remling, E. (forthcoming). Depoliticizing adaptation: A critical analysis of EU Climate Adaptation Policy. Article under review.

Stevenson, H. (2015). Alternative theories: Constructivism, marxism and critical approaches. In *Routledge handbook of global environmental politics* (pp. 42–55). London: Routledge.

Swyngedouw, E. (2010). Apocalypse forever?: Post-political populism and the spectre of climate change. *Theory, Culture & Society*, *27*(2–3), 213–232. doi:10.1177/0263276409358728

Torfing, J. (2005). Discourse theory: Achievements, arguments, and challenges. In D. Howarth, & J. Torfing (Eds.), *Discourse theory in european politics: Identity, policy and governance* (pp. 1–32). London: Palgrave Macmillan.

West, K. (2011). Articulating discursive and materialist conceptions of practice in the logics approach to critical policy analysis. *Critical Policy Studies*, *5*(4), 414–433. doi:10.1080/19460171.2011.628033

Yin, R. K. (2011). *Qualitative research from start to finish*. New York: Guilford Press.

Paper IV

The affective dimensions of climate adaptation: Fantasy and future-making in German Climate Adaptation Discourse

Elise Remling

Abstract: Most policy and advice on adaptation to climate change to date remains surprisingly unambitious, maintaining rather than changing the status quo. Exploring the persistence of such business-as-usual approaches to adaptation, this paper draws on the theoretical toolkit of Poststructuralist Discourse Theory, specifically its notions of fantasy. This can help to clarify how techno-managerial adaptation discourses operate and what it is that makes them seem appealing. Empirically, the paper examines how affect and fantasy are at play in German government discourse on adaptation. To that end, it reviews central policy documents on adaptation, specifically the communication brochures taken to the wider public.

Based on an interpretative analysis the paper discerns four specific forms that fantasy takes in key official documents: (1) fantasies of control and preparedness, (2) fantasies of objectivity and reason, (3) fantasies of a shared sense of place, and (4) fantasies about the good life. Taken together, they support a common narrative for how to understand and act in society to address climate change – primarily in a way that does not challenge the social order. The analysis shows how the politics of adaptation is intrinsically intertwined with identity projects, in the sense that the German government policy is supported by fantasmatic elements that speak to non-rational desires and provide important affective anchor points for national and collective identification.

Thinking 'fantasmatically' about the German climate adaptation discourse suggests that despite its apparent scientificity and technical rationality, it is deeply tied up with the operation of fantasy and modes of identification. In other words, the German adaptation policy discourse is not constructed only at the level of rational argumentation, but very much also on the level of affect. In conclusion, the paper makes the case for placing fantasy into the analytical and theoretical vocabulary within critical perspectives on the politics of adaptation.

Keywords: Climate adaptation; Public policy; German Adaptation Strategy; Policy discourse; Poststructuralist Discourse Theory; Fantasy; Policy fantasies; Discursive policy analysis

Introduction and background

Despite increasingly clear indications about the serious and far-reaching social impacts of climate change and the need for adjusting to them, most policy and advice on adaptation to climate change to date remains surprisingly conventional and unambitious, maintaining rather than changing the status quo (Pelling 2011, Bassett and Fogelman 2013, Eriksen *et al.* 2015, O'Brien and Selboe 2015a, Schulz and Siriwardane 2015, Nightingale *et al.* 2019). There is a tendency for policy responses to portray adaptation as a 'tame' technical problem that can be narrowed down with the help of scientific studies and responded to with technological solutions (paraphrased and referred to hereafter as a techno-managerial approach) (Taylor 2015, Waller and Barnett 2015, Klepp and Chavez-Rodriguez 2018, Remling 2018). Such incremental approaches, which see adaptation as solvable through familiar patterns of action (Pelling 2011, Dewulf 2013), appear to be the norm rather than the exception, even though they have been shown to be less effective, just and sustainable than expected (Brown 2011, Kates *et al.* 2012) and, therefore, contradictory of their declared goal to prepare for the impacts of climate change.

To understand the absence of more substantial or radical approaches to adaptation, scholars have turned their attention to the political and material contexts in which adaptation policy is made (e.g. by drawing on political ecology) (Leichenko and O'Brien 2008, Ribot 2010, Taylor 2013, 2015, Eriksen *et al.* 2015), they have scrutinised the discursive processes which underlie them (e.g. by drawing on biopolitics/governmentality studies) (Cannon and Müller-Mahn 2010, Oppermann 2011, Andersson and Keskitalo 2018), they have considered social, cultural and institutional barriers to effective adaptation (O'Brien and Hochachka 2010, Eisenack *et al.* 2014), and they have argued for more ontological pluralism in order to open up for new climate change imaginations (Nyamwanza and Bhatasara 2015, Keskitalo and Preston 2019, Nightingale *et al.* 2019).

This article puts forward a different, but I believe fruitful, avenue for exploring the persistence of business as usual approaches to adaptation by drawing on the theoretical toolkit of Poststructuralist Discourse Theory (PDT) (Laclau and Mouffe 2001 [1985], and beyond). This can help to clarify how certain discourses operate and what it is that makes them seem appealing. To this end, the paper focuses on the affective, non-rational aspects of adaptation policy discourse, the realm of fantasy.

Based on an interpretative analysis of how affect and fantasy are at play in the public policy discourse on adaptation, as articulated by the German government, I discern four specific forms that fantasy takes in key official documents. These I term (1) *fantasies of control and preparedness*, (2) *fantasies of objectivity and reason*, (3) *fantasies of a shared sense of place*, and (4) *fantasies about the good life*. I am not suggesting that these are the only fantasies surrounding the German adaptation discourse – others not discussed here relate to increased migration from Africa and

to Germany's leading role in adaptation at the European and international level – but within the empirical sample examined, they stand out in aiming to provide affective support for the proposed adaptation response. Taken together, they support a common narrative for how to understand and act in society to address climate change – primarily in a way that does not challenge the social order. The analysis shows how the politics of adaptation is intrinsically intertwined with identity projects, in the sense that the German government policy is supported by fantasmatic elements that speak to non-rational desires and provide important affective anchor points for national and collective identification.

This paper contributes to two fields of research. On the one hand, drawing on the notion of fantasy it introduces a novel theoretical perspective to the study of adaptation discourses and thereby makes a contribution to *critical adaptation research* (see Klepp and Chavez-Rodriguez 2018, Bauriedl and Müller-Mahn 2018) at a conceptual level, and in the empirical context of Germany in particular. On the other hand, the paper contributes to a new field of investigation that Glynos (2014, p. 187) calls *critical fantasy studies*, and here specifically to a small but growing number of empirical studies on fantasy in policy discourse.

This remainder of this article is structured as follows. In the next section, I highlight why climate adaptation is a particularly potent playing field of desire and fantasy and point to a lack of attention to this in previous work. I then provide the notion of fantasy with more theoretical grounding, building on Lacanian psychoanalysis, and give an overview of my empirical material. This is followed by the analysis and discussion sections where I present the four fantasies and their joint affective potency. Finally, I draw some conclusions and outline implications of this work for future studies.

The relevance of fantasy: Adaptation policy as future-making

The idea behind the notion of fantasy is that '*political discourse [only] succeeds when we recognize ourselves as its addressee*' (Salecl 1994, p. 33). This is to say, that in order to be successful as a discourse, adaptation policy and advice has to connect to its audience by providing an '*attractive affective discourse*' (Bloom 2016, p. 168). Evidently, not all discourses are equally influential and effective at arousing subjects' desire, otherwise no discourse would be more prevalent than another. This means that there must be 'something more' to successful discourses than language. In order to become '*powerful symbolic sites of emotional investment on the part of audiences*' (Koschut *et al.* 2017, p. 497), a discourse that seeks to attain dominance must be

affectively engaging beyond the mere utterance of language.[45] This is equally the case for *policy* discourses, which need to 'affectively pull' their audiences in order to be(come) accepted. For research this implies that when critically examining a discourse, such as techno-managerial adaptation policy, it is not enough to stop at the description of its content and contingent construction, but that its critical analysis must offer an account of what it is that makes *this* discourse seem *appealing*, what it 'moves' in people (Glynos 2001). That is why the analysis of fantasy is a necessary complement to existing approaches, because it may help clarify why it is that certain discourses are more successful in appealing to the wider public than others.

I shall argue that without the explicit acknowledgement of fantasy and the identity projects that come with it, the workings and politics of prevalent adaptation discourses cannot be fully understood. My proposition is that fantasies are vital to the emergence of adaptation policy making and can play an important role in our understanding of how responses are organised, sustained and potentially transformed. This is not only a theoretical endeavour. If critical analytical (and by extension political) interventions into adaptation practice are to overturn the technical focus of adaptation (see e.g. O'Brien and Selboe 2015b, O'Brien 2016, Fazey *et al.* 2018), they need to provide alternative '*points of subjective identification to which social actors remain attached*' (Griggs and Howarth 2013, p. 10).

Two aspects make the exploration of fantasy particularly apt to the study of climate change-related discourses, including those around adaptation policy. First, anthropogenic climate change, perhaps more than other policy challenges, confronts the social order with unpredictable and unforeseeable consequences and futures that are hard to domesticate. Second, the growing awareness that climate change is caused by 'our way of life' shakes the foundations of Western consumerist and growth-oriented societies and, therefore, threatens to reveal the contingency and seeming stability of social reality. In sum, climate change poses a threat to the *identity of the subject* and can be seen as a symbolic crisis, where *we no longer know who we are*. Attempting to achieve or maintain closure over this crisis, or dislocation (in Laclau's terminology), policies in response to it seek to create a fixity and predictability when there is none, and which in the case of climate change can clearly never be reached. So, in order to '*protect us from ambiguity [and] shuffle vulnerability and uncertainty to the margins*' (Glynos 2011, p. 79), the operation of fantasy as masking radical contingency becomes particularly paramount in the context of climate change, and a critical challenge for discourse-oriented scholars to unpack.

—

[45] Stavrakakis (2005, p. 79) points out that political projects may contain '*minimal affective content*' but that in doing so they are unlikely to mobilise support on a larger scale. In reverse this implies that successful political projects, such as techno-managerial approaches to adaptation, contain affective elements that render these particular discourses attractive to the wider public.

That climate change more generally is a field where important struggles over the direction of broader social and economic order occur, has been sketched out by Swyngedouw (2010) and Hulme (2011). As for adaptation policy and advice, these are – similar to other planning processes – proposals about *how we ought to proceed from here* (Gunder and Hillier 2009). But as a *future* endeavour, such proposals rely much on promises, visions and ideas about the future that have little to do with analytical or factual reasoning. A recent anthology on critical adaptation research (Bauriedl and Müller-Mahn 2018, p. 285, my emphasis) concludes that:

> Understanding adaptation as a transformative process that links the present to the future clearly has a timeframe that points into the future, and it is perhaps from this side that adaptation research may gain some innovative ideas. […] *adaptation may be understood as a way of future-making. This implies a future […]* that *is actively shaped by imaginations, visions, desires* […].

It is in this context of 'future-making' that I propose that fantasy can be a helpful conceptual approach to begin unravelling the visions and desires, in short, the affective dimension of adaptation politics.

While psychoanalytical notions of the subject and their implications for fantasy have in recent years gained growing interest in a number of academic fields across the social sciences, including ethnography, sociology (Glynos and Stavrakakis 2008), human geography (Sjöstedt Landén *et al.* 2017), political ecology (Robbins and Moore 2013), spatial planning (Gunder and Hillier 2009), and development studies (Warner *et al.* 2019), in the context of adaptation policy analysis, they have been largely underexplored, theoretically and empirically. Analyses tend to take a rationalist approach to policy norms, discourse and meaning, assuming that adaptation happens in some sort of '*emotionally free vacuum*' (Clouser 2016, p. 322). A telling example is Vogel and Hengstra (2015), who lay out a research agenda for comparative analysis of local adaptation policy which in no instance mentions the influence of emotions on policy development (the same goes for Dolšak and Prakash 2018). Also, at a broader level in the context of climate change governance, previous research on fantasies is limited (see Methmann and Rothe 2012, Methmann 2014, Mert 2015, and Bedall 2015 for notable exceptions). Anderson (2010, p. 785) mentions '*affectively imbued popular imaginations*' in the context of future imaginings, but does not go into any theoretical depth. Fazey at al. (2018, p. 207) discuss the role of utopias and futures and their '*particularly important capacity that […] provides scope for transformation*'. However, how to '*harness this utopian impulse*' (Fazey *et al.* 2018, p. 207) remains less clear.

With a few notable exceptions (see Symons 2014, Wright and Nyberg 2014), there is a gap in adaptation research when it comes to understanding what it is that makes certain discourses more appealing than others, how subjects, communities, municipalities recognise themselves as addressees of certain discourses and come to identify themselves with them, and how they are adopted as authoritative.

With the above in mind, this paper aims to empirically explore the *ways in which fantasy is established and operates* in adaptation policy discourses, and *with what (ideological) function*, using the German adaptation discourse as a case.[46] To this end, I review aspects of central policy documents on adaptation, specifically the policy versions taken to the wider public in the form of brochures, from key institutions that shape the adaptation discourse at the national level in Germany. Importantly, the analysis is oriented towards how the policy discourse around adaptation is *communicated* to the wider German public, which is why I focus on public brochures and not the policies themselves. As a 'soft' form of policy, such brochures can be considered an important medium for communicating with and translating ideas around adaptation to the wider public; they are more likely to reach a broader audience than the actual policy documents.

The choice of Germany as a case study is based upon the country's relatively high level of adaptation activities, its early involvement in establishing adaptation policies, and the fact that it is seen as an 'adaptation leader' (Biesbroek *et al.* 2010, Massey *et al.* 2015). Despite being the largest national economy in Europe, Germany will be significantly affected by climate change. Some of the most significant expected impacts are; an increase in average surface temperatures, in the duration of summer heat waves and the number of warm days, a decrease in snow cover and high increase in precipitation during the winter months and, relatedly, an increased average runoff on major rivers during the winter and decrease during in the summer months. Economic sectors expected to be impacted particularly severe are the agriculture and forestry sectors, and soil productivity and biodiversity (see Brasseur *et al.* 2017 for details).

A number of papers examine adaptation policy development in Germany. These have focused on policy choices when constructing policy frameworks (Massey *et al.* 2015), the process and context of its emergence (Vetter *et al.* 2017), and the inter-ministerial coordination within the German government around the development of the national adaptation action plan (Hustedt 2014), they have proposed a set of criteria for prioritising federal adaptation measures (Vetter and Schauser 2013), and examined the consideration of sustainable development trajectories in national adaptation planning (Lucas and von Winterfeld 2015).

—

[46] *Ideology* here is understood , '*as the attempt to pass off as necessary what in fact is contingent*' (Glynos 2014, referencing Laclau 1991). So it is not about *political ideologies*, nor about *ideology as superstructure*, where a sedimented or dominant discourse produces specific hegemonic meanings, but about *how a discourse manages to structure desire* and generate attachment (Glynos 2001, Kølvraa and Ifversen 2017).

Theoretical points of departure: The function of fantasy in discourse

As insinuated earlier, this research is situated within PDT (Laclau and Mouffe 2001, and beyond), which understands discourse as a productive and '*constitutive dimension of social relations*' (Griggs and Howarth 2013, 17). In this broader theoretical apparatus, and extending beyond conceptions of the subject found in other approaches (e.g. the rational Habermasian or Rawlsian subject), PDT's notion of *fantasy* crucially accounts for the affective, non-rational investment of subjects into a particular discourse. Building on Lacan's psychoanalytic theory, this idea recognises that what enables discourses to become objects of long-term identification, and hence discursive fixity, is what 'sticks' to and 'fuels' identification processes in subjects (Žižek 1997, Glynos and Stavrakakis 2008). From a Lacanian perspective, fantasy is not a synonym for illusion or myth (Žižek 1997). Rather, the idea is that fantasies play a *necessary* and *productive* role in discourses in order to provide anchor points for identification or, as Glynos (2011, p. 73) proposes, fantasies are '*ineliminable and essential to action*'.

To grasp the notion of fantasy, it is useful to discuss the Lacanian understanding of the process of *identity formation*. For Lacan, subjects (i.e. people/social actors) do not have underlying or fixed identities (Laclau 1994). Instead, in the absence, or lack, thereof subjects – and by extension the communities to which they belong – are driven to seek representation of themselves through a process of identification that is continuously ongoing throughout a person's life (Glynos and Stavrakakis 2008). That is to say, identities are not recognised or discovered, but socially constructed (Laclau 1994, Stavrakakis 2005). However, as the absence of a complete identity is of ontological nature, the subject never manages to fulfil its desire and is forever caught in a dual tension between the lack and the attempt to cover over that lack (Žižek 1997, Stavrakakis 2005, Eberle 2017). What forms identity in the first place, then, is this '*ever impossible but also never-ending drive, longing, for bringing back a lost wholeness*' (Bloom 2016, p. 162). This is where fantasy comes in, offering *'points of identification*' (Glynos and Stavrakakis 2008, p. 261) that 'grip' subjects of a discourse, promising the enjoyment of a 'fullness-to-come' (Glynos and Howarth 2007, Glynos and Stavrakakis 2008), providing subjects with forms of identification and, thereby, (the promise of) seeming ontological security. Fantasies, then, promise (but ultimately never deliver) '*the achievement of a whole identity*' (Eberle 2017, p. 247).

The primary role of fantasy in a discourse is to support the reproduction of its inner logics and conceal their inherent contradictions, and to harness adherence to its political project. To this larger end, fantasies conceal inequalities within societies and '*blur, obscure and often stop us from questioning too closely what is actually occurring within social reality, especially when they provide the subject with a 'clear' sense of purpose, identity and course of action*' (Gunder 2015, p. 145). In the context of climate change, for instance, discourses have been found to cover up the socio-

economic and political contexts that cause anthropogenic climate change and make people vulnerable to its impacts in the first place (Taylor 2013).

Glynos and Howarth (2007) operationalise these theoretical foundations into a beatific and a horrific dimension of fantasy, which often operate alongside one another. The *beatific dimension* promises an enjoyment of an idealised scenario, intended to act as a motivational 'spur to action'. 'Solving' climate change through technological innovations, or 'sustainable consumption' are examples of such beatific fantasies (Wright and Nyberg 2014). The *horrific dimension* entails an alarming prospect about the future if a proposed path is not followed. This often describes an apocalyptic scenario, which may invoke fear and danger amongst its subjects. In the context of climate change such dystopian imaginaries are commonly evoked around future migrations and associated conflicts (Bettini 2013, 2015).

Critical studies inspired by Foucauldian discourse theory have examined the role of apocalyptic imagery in climate change debates, especially in relation to migration (Swyngedouw 2010, Methmann and Rothe 2012, Bettini 2013, 2015, Symons 2014, see also Anderson 2010, on anticipatory action in liberal democracies in the face of climate change). These studies have shown how scenarios that threaten to disrupt the social order are employed as '*the whip to keep the present in line*' (Hulme 2011, p. 266 citing Beck 1997). The approach proposed here adds to these literatures that desirable, positive images are just as essential and part of discourses as daunting ones (Glynos and Howarth 2007). It is here in particular where this paper hopes to make a critical contribution to the literature on adaptation to date that goes beyond and complements what has been done previously.

Another important aspect of fantasies, and one relevant for the empirical material of this paper, is that they are often transgressive of 'official' norms and ideals (Glynos 2001). Eberle suggests (2017, p. 253), that such transgressive elements in discourses articulate

> something that is typically unacknowledged or peripheral in official language […], which may be at odds with the official narration, yet still supports the proposed course of action indirectly by providing a parallel justification that offers particularly attractive 'objects' for our desire.

Translating this idea to my empirical focus, I pay attention to content that is not only contained in the text of the government brochures but also in visual material accompanying them.

A number of studies have explored the fantasmatic support structures of public and policy discourses. These have focused on the health and age care sector (Fotaki 2010, West 2011), on education policy (Clarke 2015, 2018), foreign policy (Eberle 2016), transport planning (Griggs and Howarth 2013, 2017), and urban, regional and spatial planning (Gunder and Hillier 2009, Gunder 2014, 2016, Sjöstedt Landén *et al.* 2017). These empirical studies of fantasy have often tended to use material that

is 'disproportionally charged' or invested with affect, such as news media discussions (Chang and Glynos 2011, Eberle 2016, Sjöstedt Landén *et al.* 2017), sheer 'unrealistic' planning visions (Gunder 2014) or 'polemic' speeches of politicians (Bloom 2016). However, the language in public policy discourses, that are the focus here, is generally more measured in degree, and fantasmatic clues therefore oftentimes more subtle than in media or public discourse.

Accounting for this and acknowledging that the analysis of fantasies is interpretative, in identifying fantasies, I looked for the following four tropes: (1) promises of 'the good life' and 'mythical utopian horizons' (Glynos and Howarth 2007, Sjöstedt Landén 2012, Gunder 2015); (2) apocalyptic and emergency imaginaries (Glynos and Howarth 2007); (3) transgressive hints, uttered 'between the lines' (Žižek 1997, Eberle 2017); and finally (4) animations of 'popular desires' and 'Germanness' that seek to establish anchor points for affective investment.

Methodological strategy and empirical material

To analyse the discursive constructions of fantasy in German adaptation policy discourse I select and analyse three key documents by the Federal Ministry for Environment[47] that communicate the government's take on adaptation: (1) the brochure *'Encountering climate change. The German strategy for adaptation*' (BMU 2009); (2) the brochure '*Action plan of the German strategy for adaptation to climate change'* (BMU 2012); and (3) the *'First progress report of the German government on the German strategy for adaptation to climate change*' (BMUB 2016).[48] These public communication brochures are directly derived from the most official documents on adaptation policy in Germany (Die Bundesregierung 2008, 2011, 2015). I deliberately focus on these documents because they are not only representative of the government's thinking on the issue of adaptation but also essential 'objects' to consider in unpicking how the government articulates adaptation for the wider public and on what fantasies this articulation builds. For context, I reviewed some additional material from parliamentary debates and websites targeting the German public. The empirical material selected for analysis is listed in Table 1.

—

[47] Note that the German Federal Ministry in charge of adaptation, the Ministry for the Environment, Nature Conservation and Nuclear Safety, has changed names a number of times, from '*Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit*' (1986-2013), and '*Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit*' (2013-2018), to its current name '*Bundesministererium für Umwelt, Naturschutz und nukleare Sicherheit*' (since 2018).

[48] All English quotations from the German documents are translated by the author.

Table 1: Documents included in the analysis.

Type	Source	Document name
Policy and advice/ Policy papers and guidance documents	The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (In German: *Bundesministerium fuïr Umwelt, Naturschutz, Bau und Reaktorsicherheit* (BMUB))	The brochure 'Encountering climate change. The German strategy for adaptation' (In German: *Dem Klimawandel begegnen. Die Deutsche Anpassungsstrategie (2009)*)
		The brochure 'Action plan of the German strategy for adaptation to climate change' (In German: *Aktionsplan Anpassung der Deutschen Anpassungsstrategie an den Klimawandel (2012))*
		The brochure 'First progress report of the German government on the German strategy for adaptation to climate change' (In German: *Erster Fortschrittsbericht der Bundesregierung zur Deutschen Anpassungsstrategie (2016)*
Additional contextualising material	The German Environment Agency (In German: *Umweltbundesamt*)	Website 'Kompetenzzentrum Klimafolgen und Anpassung (KomPass)' – a governmental website that bundles, communicates and evaluates adaptation options and climate impacts for the German public (https://www.umweltbundesamt.de/themen/klima-energie/klimafolgen-anpassung)
	The German Government (In German: *Die Bundesregierung*)	Website 'Deutsches Klimavorsorgeportal (KliVo)' – a governmental meta-information-platform on climate change and adaptation (https://www.klivoportal.de/DE/Home/home_node.html)
	The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (In German: *Bundesministerium fuïr Umwelt, Naturschutz und nukleare Sicherheit* (BMU))	Website 'Anpassung an den Klimawandel,' (https://www.bmu.de/themen/klima-energie/klimaschutz/anpassung-an-den-klimawandel/)
	The German Parliament (In German: *Deutscher Bundestag*)	Parliamentary debate, 17.12.2008 (around the approval of the German strategy for adaptation)

I qualitatively analyse this material with the aforementioned four tropes as heuristic devices for coding. Inspired by work on multimodality (Kress and Van Leeuwen 2001), in my analysis I also consider different communicative modes through which

the documents in my corpus seek to make meaning, including imagery.[49] I assume that such visual elements are not added arbitrarily but with the specific purpose of 'gripping' their audience. I suggest that the accompanying images in particular, provide potent emotive communicative tools that speak to the intended audience (i.e. the German public) and contribute an important part to the making of meaning (and fantasy) in the policy texts (see also Eberle 2016).

Analysis: Fantasies in German adaptation policy discourse

Before going on to discuss how fantasy and affect are at play in the German adaptation policy discourse, first, I need to say a bit more about the policies' development, content and overall narrative. The main pillars of Germany's climate adaptation policy are the 2008 Strategy for Adaptation to Climate Change (the so-called DAS) (Die Bundesregierung 2008) and the corresponding 2011 Adaptation Action Plan (the so-called APA) (Die Bundesregierung 2011). Progress on both of these was assessed in a 'progress report' in 2016, which also laid out some further steps (Die Bundesregierung 2015). A federal level policy, the Strategy came into being after the *Länder* (Germany's federal states) and large re-insurance companies had requested national guidance and leadership on adaptation (Massey *et al.* 2015).

In the policies, greenhouse gas emissions, caused by '*mankind*' (BMU 2009, pp. 12, 16) are seen as causing significant changes in the climate worldwide, including that in Germany. Vulnerability to such changes is largely understood in regional terms and the policies lay out where the greatest vulnerabilities lie: in the Alpine region, south-western Germany, the northeast German plain, the southeast German basin and the coastal regions of the North Sea and Baltic Sea.

Corresponding to the idea of climate change affecting different regions, adaptation is seen as primarily a local or regional problem (BMU 2009) to which people on the ground should adapt. Accordingly, the responsibility for adaptation is delegated to the local and regional level (BMU 2009), specifically to local municipalities (BMU 2012). Moreover, the responsibility for implementing adaptation is directed away from states and institutions and on to individual citizens and businesses (BMU 2009). Central signifiers here are '*Eigenvorsorge*' and '*Eigenverantwortung*', which roughly translate to taking responsibility for oneself, being self-sufficient or reliant (BMU 2012). This individualisation of responsibility is an essential element in what Chandler and Reid (2016) identify as a typical feature of contemporary neoliberal approaches to policy, where individuals are prescribed responsibility to change their behaviour to adjust to different societal challenges (for a critique of the

—

[49] Although these two strands of thinking are not commonly used together, multimodality's notion of communicative modes is compatible with the theoretical assumptions of PDT, which understand the making of meaning as created by the articulation of different elements, including material and discursive elements.

German adaptation policy, especially this delegation of responsibility to the local and individual level, see Lucas and von Winterfeld 2015).

Adaptation is never clearly defined in the DAS or the APA (see also Hustedt 2014), but the general guidelines for concrete adaptation measures are that they should be '*pragmatic*', '*cost-effective*', focus on '*no-regret measures*', be '*based on scientific knowledge, led by the precautionary and sustainability principles*' (BMU 2012, p. 12), and that adaptation be '*mainstreamed*' into existing and future plans and strategies (BMU 2012, pp. 14f BMUB 2016, p. 27). The DAS (BMU 2009) identifies adaptation needs and measures in 15 different economic sectors.[50]

The main contribution to adaptation by the German national government is to support research in order to '*close knowledge gaps*' (BMU 2012, p. 21), to reduce uncertainties in relation to climate change and adaptation, and to support the building of capacity and understanding of responsibility of municipalities, and also individuals and businesses, to equip them so that they can adapt on their own (BMU 2009, 2012). By focusing almost exclusively on such 'soft', incremental measures that focus on knowledge generation and information provision (Vetter *et al.* 2017) the policy discourse implicitly suggests that previous strategies, approaches and ways of operating are compatible with a climate-changed world, rather than aspiring to a new state of affairs and rethinking social order, lifestyles or politics. Whether such an approach to adaptation will be sufficient to adjust Germany to future changes has been questioned (Vetter *et al.* 2017), yet it ties neatly into policy discourses at the European level (see Remling 2018) and is typical for most EU member countries' national adaptation policies (Vetter *et al.* 2017) and other nation (Bierbaum *et al.* 2013).

In what follows, I map the four most important fantasies in the German adaptation discourse as identified in the documents and accompanying material. I outline what each fantasy involves in terms of its basic content and narrative, and (in the discussion section) outline what the collective ideological effects of the fantasies are.

Providing future certainty: Fantasies of control and preparedness

The German adaptation policy is firstly underpinned by fantasmatic assertions of control. The documents follow a common argumentative structure; climate change poses challenges for health, water, soils, biodiversity, fisheries and the energy sector and so forth, but this is followed by examples of what is already being done by the German government to ameliorate these impacts. For example, in its central chapter '*The impacts of climate change – what can be done?*' the policy highlights numerous

—

[50] The 15 sectors or 'fields of action' in focus for adaptation measures in the DAS are; human health, the building sector, water management, coastal and marine protection, soils, biological diversity, agriculture, forestry, fisheries, the energy industry, the financial services industry, transport, trade and industry, tourism industry, spatial and regional planning, and disaster and civil protection.

existing initiatives by federal states and the national government that serve the greater cause of adaptation, including a joint '*climate-biomonitoring programme*' (2009, p. 23), a German Federal Ministry of Food and Agriculture '*action plan against allergies*' (2009, p. 24), a Government '*programme on environment and health*' (2009, p. 25), a '*Joint Task for the Improvement of Agricultural Structures and Coastal Protection*' (2009, p. 28), the '*National Strategy for the Sustainable Use and Protection of the Seas*' (2009, p. 29), a national program to promote research on '*sustainable land management*' (2009, p. 30), and working groups on '*Crisis prevention in the energy sector*' (2009, p. 38) and '*Climate change and civil protection*' (2009, p. 44). It also emphasises the competencies of government agencies and research institutes such as the Robert Koch Institute, responsible for disease control and prevention, and the German Meteorological Service (2009, p. 25). In the spirit of 'mainstreaming' the documents emphasise congruence with existing policies, such as the High-tech Strategy 2020, the National Biodiversity Strategy, and the National Forest Strategy (BMU 2012, p. 5). To suggest an expansion and intensification of existing policies and strategies is effectively policy redressing, where ongoing actions are reinterpreted in a (new) adaptation policy context. This shows how the emphasis in the policies is on *continuity* rather than change, where climate change is not seen as a reason to rethink existing policy agendas.[51]

In relation to climate change, this fantasy of control and preparedness suggests that even though we now live in a climate-changed world without precedent, climate change-related troubles are manageable with current approaches. The fantasy stresses how the German government and its federal states are already undertaking a wide range of activities that support (or can be considered to be) adaptation. Demonstrating what is already happening in relation to adaptation in terms of scientific research, the competence of involved actors, policies in place and actions taken serves to assure the public that most of the identified climate risks are 'under control'. In presenting adaptation as a continuation and reinforcement of business as usual, alternative positions that call for more substantial socio-economic changes or even propose the decarbonisation of energy systems, land usage, housing stock and the transport sector, for instance, are subdued.

Exemplified by headings such as '*The Government – leading the way*' (BMU 2009, p. 8), the significance of this fantasy is also that it provides the German government with a moral role in leading the public debate on adaptation, and thereby a way to retain authority and legitimacy. German people are given responsibility for choosing 'efficient' and 'rational' solutions at the household level, without

—

[51] Rather than developing a wish list of new activities specific to adaptation, an explicit aim in the development of the APA was to inventorise already existing and planned activities with secured funding from the different Federal Ministries. See Hustedt (2014) for a critique and genesis of the APA.

having a role in the larger debate about climate change or in consulting on the content and direction and goals of adaptation (see also Vetter *et al.* 2017).

Scientificity as the saviour: Fantasies of objectivity and reason

The second fantasy, closely related to the first, I term objectivity and reason. Here, scientific research serves as an answer to the questions of *how to do* adaptation. This is evidenced by headings such as '*Knowing how – research helps adaptation*' (BMU 2009, p. 48). Throughout the policy discourse, considerable emphasis is placed on the importance of scientific knowledge, practices of measurement, calculation, and prediction. For instance, '*documenting*', '*collecting data*', '*modelling*' and '*monitoring*' (BMU 2009), developing and testing '*technologies, procedures and concepts for adaptation*' (BMU 2009, p. 53) is seen as key for adaptation. The national government aspires to help businesses, organisations and local administrations by providing '*toolboxes*' and '*checklists*' for adaptation, as well as a catalogue of '*best practice*' examples (BMU 2009, p. 54). The APA refers to '*computational models*', '*observation methods and systems*', '*multi-model ensembles*' (BMU 2012, p. 13), '*vulnerability assessments*' and '*cost benefit analysis*' (BMU 2012, p. 15).

Many sections in the documents express an inflated sense of confidence in scientific assessments and calculations. For example, the DAS in speaking about climate models and projections states; '*The further one looks into the future and the more downscaled the grid, the more uncertain the [climate] forecasts become. […] At least in Germany, there are four regional models, with each of which three emission scenarios were calculated. Further calculations will follow.*' (BMU 2009, p. 18). Sigmar Gabriel, the Minister for the Environment, Nature Conservation, and Nuclear Safety at the time, echoed this hope; *'By the way, we have one great advantage: unlike other countries, we have four climate models in Germany*' (Deutscher Bundestag 2008, p. 21071). This seems to suggest that having four climate models somehow means Germany is already be 'better off' and one step ahead compared to other countries. The implicit suggestion in both these examples is that one can outmanoeuvre uncertainty (for problems concerning the use of climate projections for concrete national and local-level adaptation planning, see Nissan *et al.* 2019).

A lot of trust is put not only on the importance of such evidence but also into the accuracy of calculations for decision making: '*The Federal Government will take into account the entire spectrum [of climate scenarios] and uncertainties in its planning and decisions, and will not rely on the results of a single model. […] The Federal Government will plan adaptation in such a way that it will achieve its goal with high accuracy, even under different climate scenarios.*' (BMU 2009, p. 18). These diverse techniques of 'objective calculation' are presented as having unquestionable objectivity, which is to say they give precise and clear indications of what needs to be done. For example, '*From this [documentation of climate impacts and the impacts*

of adaptation initiatives on species and biotopes] it is then possible to deduce what can and must be done' (BMU 2009, p. 33).

To support the impression of scientificity, several images accompanying the text depict libraries, stacks of books, and weather stations on the North Sea and in the Alps (see Figure 1).

Figure 1: BMU (2012, p. 14).

Importantly, the fantasy of objectivity and reason also articulates something about desirable personality traits of (Germans as a) people; they are – or ought to be – led by reason, be considered, prudent, factual, and deliberative. Decisions should be made in a '*structured*' (BMU 2009, p. 7), '*systematic*' (BMU 2009, p. 52), and '*pragmatic'* (BMU 2012, p. 14) way, based on '*indicators'* (BMU 2009, p. 52).

Premised upon the idea that *more* knowledge (more data and new modelling techniques) will lead to *better* responses, this second fantasy with science and objectivity as its, what Žižek (1997) has referred to as, *sublime objects* suggests that climate change and the problem of adaptation can be tamed, managed and remedied through '*sound and continuously updated scientific research*' (BMU 2009, p. 8). Its function, then, is to present adaptation as a problem soluble through objective measurement and analysis were science, not politics becomes the inventor of legitimate solutions.

Relatedly, the policy discourse gives the impression that choosing adaptation responses is a relatively straightforward process, in which '*the impacts of global climate change are identified, risks assessed, action requirements identified, and measures for adaptation are developed and implemented*' (BMU 2012, p. 8). It frames the issue of adaptation as if there were no difficult choices to be made, only objective scientific assessments and evaluations to be carried out, which give unquestionable indications for *what needs to be done* in relation to adaptation and *how*. This suggests that beyond the 'rational' application of calculation and analysis there is nothing 'political' in the adaptation choices to be made and, by suggesting that the proposed responses are without alterative 'rational', closes the window for debate on different or broader choices that could be made in relation to adaptation. Discursive

closure is imposed and uncomfortable questions (e.g. *Why is climate change happening?, What shall we do about it?*) are suspended.

The land of plenty and wilderness: Fantasising a shared 'sense of place'

The third fantasy, and the one arguably most significant and 'affectively potent', the affective keystone of the policies so to speak, centres around Germany as a place. This is strikingly operative in almost all of the images contained in the documents (but not so much in the written text) and features distinctively 'German' landscapes, places, and iconic sites. The images depict rivers and forests, snow-peaked alpine mountains, the North and Baltic Sea coasts, bogs and marshes, fields of bright-yellow flowering rapeseed, and other 'typical' agricultural landscapes. The way these iconic landscapes are portrayed gives the impression that Germany is a picturesque, wild and pristine place (there are for instance much fewer images of towns or cities). Images also depict specific places and recognisable sites such as the Donau river (see Figure 2), the city of Dresden, the Reichstag building, the Brandenburger Tor, the historic 'Fountain of Justice' in Frankfurt am Main, and *Strandkörbe*.[52]

By drawing upon this existing reservoir of cultural signifiers, the policies appeal to places and landscapes that hold special meaning to German people, with which people consciously or unconsciously identify, where they live or which they utilise on a regular basis. Invoking feelings of *Heimat*, they appeal to Germans' identity of place, or '*sense of place*' (Tuan 1977). Essentially, speaking to a sense of belonging and wellbeing, they are about the question of 'who we are' as a German people. By relating climate change to such recognisable objects and landscapes surrounding people, the government very effectively brings the abstract issue of global climate change down to the local level.

—

[52] There is no English translation for the German term *Strandkorb*. The *Strandkorb* is an explicitly German phenomenon, a roofed wicker beach chair common on Germany's North and Baltic coast beaches that holidaymakers rent for the day or the length of the vacation. Enabling to mark out your private space on the windy seaside, they embody a 'home away from home'. The signifier *Strandkorb* holds a strong affective baggage in the German context that is also reflected in the fine arts and literature.

Figure 2: BMU (2009, p. 19).

Another example of how the policies rely on highly symbolic and culturally recognisable images is from the Adaptation Plan (BMU 2012, p. 19f), where written text and imagery interact to draw a connection between the APA's 'four pillars' of action' and the marble columns of the German Reichstag (in German the word for both, the conceptual and the material object, is the same: *Säule*).[53] This association seems to suggest that the proposed four pillars of action are equally 'foundational' and 'stabilising' as is the case for the columns of the historic building, and that questioning – let alone politicizing – the proposed actions might undermine the very foundations of the German democratic state (i.e. society as we know it). This em-phasis on the Reichstag building adds to the moral force of the proposed adaptation response.

Noteworthy is that the fantasy of a shared sense of place engages in a dual play, in the sense that it involves both a beatific and a horrific scenario. Appealing to the place identity noted above, these serve to demonstrate the threat that climate change poses to places and landscapes 'we' hold dear through the horrific scenario, and evoke that same place identity to motivate adaptation action (in order to protect those very places and lifestyles).

—

[53] The Reichstag Building is an historic building in central Berlin which houses the German federal parliament. A highly symbolic site, it was built in the late 19th century, housed the parliaments under the German Kaiser and the Weimarer Republic, was burned in 1933, bombed in 1945 and re-installed as the seat of the parliament in 1999.

The beatific scenario of the leisurely life

The beatific scenario intertwined with the fantasy of sense of place is that of the 'leisurely life'. This shows people (presumably Germans) as enjoying themselves in their leisure time, or while on holidays. For example, against the backdrop of wild beaches, snow-peaked mountain tops, forests, and parks people are depicted socialising, walking, hiking and cycling, or simply 'lazing around'. This effectively tells people how to *enjoy* in the literal sense (e.g. by socialising and being active), but it also appeals to Germans as *knowing how to enjoy* (life) in general (this is a romanticised image of 'German' life: we do not see people working, shopping, paying bills, cleaning, or looking after their house, garden, kids etc.). However, this is not only some abstract fantasmatic promise, but one that hinges on concrete and lived bodily experiences that people have had (see also Stavrakakis 2005). It appeals to certain modes of feeling people may have experienced, for instance while enjoying a summer's evening in a park with friend (see Figure 3), while walking through a rainy forest protected by an umbrella, or while reading the newspaper in a *Strandkorb*.

Figure 3: BMU (2009, p. 25).

This beatific scenario appeals to properties that constitute a particular 'way of life' – landscapes and places that are frequented, experiences that are shared – through which a community (in this case Germans) organises its enjoyment (Howarth 2013, p. 174). By relating to such shared ways of enjoying it constructs a collective 'us as Germans' and provides a sense of 'who we are'. In other words, 'we' know how to enjoy (life), and 'we' all do it in a similar way, through similar ways of passing time and practices of consumption. Differences within German society are only mentioned in a few instances throughout the documents, in relation to people who might not be able to afford insurance schemes against climate risks (BMU 2009, p. 39) and in relation to the elderly, children and people with health issues (BMU

2009, p. 24, 2012, p. 31). Beyond that, differences in socio-economic status do not feature. This demonstrates the policy discourse's desire to mask divisions and establish, consolidate and reproduce a seemingly homogenous and collective whole. Interestingly, the beatific aspect of the leisurely life serves both as a window to 'how we are' situated in the past, and as a future vision. As such, it serves both as a *prelude* to the horrific dimension (see the following subsection), in that it shows what is at stake, and it shows the good life German's would have *after* adapting to climate change in accordance to the government plans.

It is noteworthy that the predominant mode of this fantasy (i.e. spending time leisurely) contradicts many of the avowed moral virtues about being 'rational', 'efficient', and 'effective' in choosing appropriate adaptation measures. So there is a certain break between the general (textual) discourse and this '*obscene supplement*' (Stavrakakis 2005) on the margins, the images framing the policy text. However, fantasmatic contradictions are not a problem for discourses, as fantasy is '*not [about] rational argumentation, but the organization and administration of enjoyment*' (Stavrakakis 1999: 109), a point that I will return to further below.

The horrific scenario of society in disarray

A second scenario intertwined with the fantasy of sense of place I termed 'society in disarray'. Here, images that speak to a sense of place overlap with those that show undesirable consequences of climate change resulting from flooding, storm events, or changing precipitation patterns for culturally recognisable '*affectively charged elements*' (Glynos *et al.* 2014, p. 194). Examples of such disarray include flood waters rising around traditional Northern German *Fachwerk* houses (see Figure 4)or causing chaos on a suburban avenue (*Allee* in German)[54], storm clouds gathering on a Baltic Sea beach, and empty ski lifts over sparsely snow-covered grass.

These horrific scenarios suggest that places where people live or which they utilise on a regular basis – and by extension German identities – are under threat. They appeal to a collective 'our' by rallying affective support with identifications of climate change as affecting 'our' homes, forests, historic places, cars and roads. This suggests that the core of 'who we are' as a people, our 'way of life', is in danger from climate change. Here, climate change acts as the abstract Other 'stealing' enjoyment.

—

[54] Again, the English term avenue does not quite capture the meaning (and affective baggage) contained in the German term *Allee*. The term specifically relates to a path or road that is aligned on both sides by uniform trees, usually of the same species. *Alleen* are a common cultural landscape feature across the country and there is even an annual '*Tag der Allee*' and sponsorships programs to protect *Alleen*.

Figure 4: BMU (2012, p. 12).

Noteworthy is that this horrific scenario seems to contradict the assurances made by the policy discourse overall that adaptation is 'manageable'. But as stated above, showing fantasies of society in disarray does not undermine, but instead reinforces the respective fantasies of control, objectivity and sense of place, by increasing the likelihood that affect will be invested in the policy proposal.

The function of the fantasy of sense of place with its beatific and horrific scenarios acts as the affective keystone, in the sense that subjects are rallied behind the proposed adaptation approach by their affective identifications with places, sites and shared experiences.

An ideal of harmony: Fantasies of the good life in the future

A fourth fantasy throughout the policy discourse depicts playful, optimistic images, repeatedly featuring children (often girls): children in rubber boots jumping into puddles, playing in water fountains (supposedly during a heatwave), planting seedlings, a girl dangling her legs from a wall in front of the German Reichstag (featuring the slogan '*Dem Deutschen Volke*' – to the German people – in the background), a girl out on a walk amongst green fields on the shoulders of an older man (her grandfather?) (see Figure 5) and, perhaps most iconic, a little girl on a grassy field 'playing doctor' with a miniature version of earth (specifically, she is listening to Africa's heartbeat with a stethoscope). Others show colourful balloons rising to the sky against the Brandenburger Tor (on the front cover of the 2012 Action Plan), and a person lounging in a *Strandkorb* in a public place (presumably a park or café) in front of the Reichstag. With a focus on the younger generation, these images offer beatific visions of a stable, enjoyable and prosperous future Germany and, therefore, promise a more abstract '*future of contentment*' (Gunder 2015, p. 147). Offering optimistic visions, they instil hope for a fullness-to-come, an *even better* future – in spite of climate change. Is this the good life Germans will have in the future, *after* adapting to climate change in accordance with the government's plans.

Figure 5: BMU (2012, p. 64).

Intertwined with this fourth fantasy depicted in the images are promises of 'sustainable growth' in the written text. Contrasting with critiques that profit and environmental wellbeing cannot go hand-in-hand, the idea of sustainable growth first emerged in connection to the 'Brundtland Report' (WCED 1987). It promotes the idea that continued economic growth and social and ecological well-being are mutually supportive, and that economic growth can be a driver for more sustainable living. This idea is evidenced in the policies by suggestions that German companies (and by implication society as a whole) can use climate change as an opportunity for further profit. The DAS, for instance, expects a '*significant increase in the demand for climate-friendly technology*' (BMU 2009, p. 55) and stresses the competitive advantages for German companies from the innovation and export of 'green' and more efficient products, promises new jobs in the construction and technology sectors (BMU 2009, p. 41) and suggests a possible 25-30% increase in the number of tourists, as the North- and Baltic Sea Coasts become more attractive holiday destinations (BMU 2009, p. 42).

Although the policies acknowledge the negative consequences of climate change, the discourse, through this fantasy of a better future, in a way transforms climate adaptation into an (economic business) opportunity. In that way, adaptation becomes equivalent with sustainable economic growth, and, importantly, therefore *not opposed* to economic development and growth.

Re-capturing identities and building a brighter future – without changing

The purpose of this analysis has been to identify key fantasies animating the German adaptation discourse – drawing on a selection of public policy documents from the German government – and to examine what their purpose and ideological

significance is. While the key features of each fantasy operating in the policy discourse are described above, the four fantasies are interdependent and overlapping in supporting a broader imaginary for how to understand and act in society to address climate change. Taken together, they act as a generator of political legitimacy for the techno-managerial adaptation policy, by portraying its version of adaptation as not only compatible with German identities and highly conducive to people's sense of place, but as having 'our best interests in mind'. Through a web of affective anchor points for national enjoyment, the policies provide individuals uncertain over their climate-changed future with a clear sense of *who they are* (Germans) and *course of action* (to carry on as before). The policies in this sample are, therefore, an example of evoking sense of place for *maintaining* the status quo, which contrasts with somewhat more hopeful views on the role of place identity in transformative adaptation planning (Fresque-Baxter and Armitage 2012).

By providing attractive and recognisable *objects of desire*, the images underpinning the 'rational' argumentation about evidence, objectivity and reason play a crucial role in the overall discursive efficacy of the adaptation policy. Giving a strong affective impulse, they seek to resolve doubt in the proposed approach to adaptation (*Will the proposed measures be effective? Are they the right ones? What else might we do instead?*) and conceal the ultimate uncertainty that comes with climate change (*Will we be safe? How can we know the exact consequences of climate change?*). These fantasies seek to guide and unify German subjects in a direction that is harmless to the social order and provide them with justification and clear identities in this process. This indirectly and simultaneously prevents more profound reflections on what might be done instead and diverts affective energy *away from* more substantive or socially progressive adaptation responses.

It is worth noting that not all aspects of the fantasies are harmonious with one another. As highlighted above, there are a number of contradictory aspects, such as the tension between the values and virtues promised in the written text (e.g. a society that aspires to be 'rational' and 'efficient') and the accompanying images that paint a picture of Germans knowing how to enjoy themselves (e.g. children playing, leisure time, 'dreamy' landscapes). Yet, that some aspects of the fantasies contradict each other does not provide a problem for the overall efficacy of the discourse, as their purpose is not to provide logical consistency but to provide effective modes of enjoyment and stimulate desire (Stavrakakis 2005, Eberle 2017). This makes it quite possible for fantasies contained in the policy discourse to (re)produce ontological security in the identity of the 'rational German' *as well as* offering other desirable modes of enjoyment.

At a practical level, the implication is that things can 'go on' as before, despite climate change, and that continuing on the paths that have been laid out by the government (for instance in existing strategies) is not only sufficient to buffer against impacts but can even lead to a better and brighter future. At a more fundamental level, concerning identity formation, these fantasies shield their audience

discursively from the symbolic dislocation, that is the reality of a physically changing and increasingly unpredictable climate caused by 'our way of life', and shuffle the very real social, environmental, and economic drawbacks of continuing as before to the margins.

While this may seem contradictory, Laclau (1994, p. 3) suggests that '*the order [i.e. dominant discourse] with which we identify is accepted, not because it is considered as valuable in terms of the criteria of* goodness *or* rationality *which operate at its bases, but because it brings about the possibility of an order, of a certain regularity*.' That means, it is not necessarily what makes 'most sense' in a given situation that gains popular acceptance, but what is most convincing for the dislocated subject. Based on empirical work on the global financial crisis of 2008, Bloom (2016, p. 167) found that in an attempt to '*return to a state of normalcy*' responses to the crisis have reinforced rather than dismantled the very institutions and ideologies that caused the crisis in the first place. This suggests that the confrontation with a symbolic crisis, such as climate change, does not automatically lead to transformation; quite the opposite: To acknowledge the uncertain future we are slipping into, the loss of control over it, and the need to think more fundamentally about our trajectories as a species is a dangerous endeavour, as it confronts us with our internal and primordial lack. Re-claiming our identities is easier (and more *affectively attractive*) than facing the core of what climate change points to – the destruction of ourselves as a species.

Conclusions: Fantasy as a resource for discursive change on adaptation?

Despite the growing evidence of emerging climate change and related negative impacts across the globe, there is little indication that adaptation policies and advice respond in meaningful ways to avert negative impacts (Nightingale *et al.* 2019).

Borrowing a novel approach from Lacanian psychoanalysis, I have argued here that in an effort to understand and analyse why adaptation responses across the board have been rather incremental and techno-managerial, the concept of fantasy might be usefully employed. Thinking 'fantasmatically' about the German climate adaptation discourse suggests that despite its apparent scientificity and technical rationality, it is deeply tied up with the operation of fantasy and modes of identification. In other words, the German adaptation policy discourse is not constructed only at the level of rational argumentation, but very much also on the level of affect.

While the German case study is thought to be valuable in and of itself as a contribution to the empirical literature, the paper's principal value lies in its attempt at demonstrating fantasy's analytical value for the wider field of critical adaptation studies. First, by recognising the affective, irrational, sometimes contradictory production of adaptation discourses, we may see how it is not only about 'rational' arguments, but about affective hold and offering attractive forms of identification.

Without taking this '*unconscious energy*' (Howarth 2013) into account, critical scholars are unable to account for this 'force field' behind prevalent adaptation discourses. Second, thinking about processes of identification deepens our understanding of what it might be that makes these perspectives 'work' and remain largely uncontested, and thereby sheds new light on the question of what it might be about incremental approaches to adaptation that makes them so successful: *because* they help recapture a sense of identity in an increasingly unpredictable world. Third, attention to fantasy also helps illuminate the noted lack of attention in adaptation policies to social and economic disadvantages within societies (Ojha *et al.* 2015, Schulz and Siriwardane 2015, Nightingale *et al.* 2019), as policies seek to re-establish credibility in the current social order and paying attention to equity issues would admit that something is wrong with that order. It is my hope that through the theoretical discussion and empirical illustration based on the German policy discourse, this paper has made the case for placing fantasy into our analytical and theoretical vocabulary within critical perspectives on the politics of adaptation.

This study provides a useful initial account of German adaptation fantasies but has far from exhausted the topic. Given the myriad of influences, actors and institutions that constitute Germany's adaptation discourse as a whole and the fact that the corpus examined for this paper is very selective, I recognise that a broader investigation than is described here is required. Future research may also want to investigate the fantasies contained in alternative adaptation discourses, such as those interlinking vulnerability and security (Thomas and Warner 2019), promoting a 'deep adaptation agenda' (Bendell 2018), degrowth, or, at a more general level, those presented by new global environmental movements such as Extinction Rebellion and Friday's for Future.

Laying open the operation of fantasy in public or planning discourses is one thing, but what practical implications for the 'real world' does its analysis bring? Work on fantasy suggests that looking for and 'removing' barriers to more transformative adaptation (Kates *et al.* 2012) or considering alternative knowledges (Nightingale *et al.* 2019) might not be the way forward – as discourses do not become dominant because they are most rational (Laclau 1994). In the same vein, it suggests that simple critiques of conventional adaptation do not, in and of themselves, provide sufficient affective purchase to change current trends in adaptation policy development (they may even serve to fortify existing fantasies, see Warner *et al.* 2019). Instead, in order to construe *real alternatives* to techno-managerial adaptation, we need *alternative fantasies* that capture people's imagination and provide them with modes of political identification.

German adaptation policies and their fantasmatic work play a conservative role, more concentrated on re-capturing the status quo and 'taming' the problems of climate change and adaptation to become rather mundane issues of technology and science than moving into a direction of betterment that may actually accomplish something in preparing for climate change, or at the very least '*effectively engage*

with the uncertainty that actually constitutes the world that we live in' (Gunder 2014, p. 12f). I suggest an alternative mode of approaching adaptation is needed, one that is explicitly political and more openly uncomfortable. The selection of any adaptation intervention must pass through sites of political struggle over priorities, imaginations and visions for the future. A more open engagement, for instance in parliamentary debates, in parties' manifestos or in citizens fora, with the normative foundations and contingencies that are implicit in adaptation policy discourse is necessary. Currently, in the case of German adaptation policy, which only mentions potential conflicts of interest and areas of tension on the margins (Lucas and von Winterfeld 2015) and has not consulted with the wider public (Vetter *et al.* 2017), this is clearly not the case. Furthermore, I call for more reflexive planning of adaptation, one which requires an active (and potentially scary) encounter with imaginations, visions and desires for the future, rather than pretending responses to climate change happen in a space void of affect.

Acknowledgements

I thank Jenny Gunnarsson Payne for our many discussions on fantasy and for reading and commenting on my ideas. I am grateful to Åsa Persson for helpful comments on an earlier version of this paper. Any error of fact or interpretation of course remains entirely my own responsibility.

References

Anderson, B., 2010. Preemption, precaution, preparedness: Anticipatory action and future geographies. *Progress in Human Geography*, 34 (6), 777–798.

Andersson, E. and Keskitalo, E.C.H., 2018. Adaptation to climate change? Why business-as-usual remains the logical choice in Swedish forestry. *Global Environmental Change*, 48, 76–85.

Bassett, T.J. and Fogelman, C., 2013. Déjà vu or something new? The adaptation concept in the climate change literature. *Geoforum*, 48, 42–53.

Bauriedl, S. and Müller-Mahn, D., 2018. Conclusion. The politics in critical adaptation reserch. *In*: S. Klepp and L. Chavez-Rodriguez, eds. *A critical approach to climate change adaptation: discourses, policies, and practices*. London and New York: Routledge/Taylor & Francis Group, 275–287.

Bedall, P.T., 2015. 'Climate justice', 'green economy' or 'a one planet liefestyle'. Hegemonic narratives in transnational NGOs and social movements. *In*: C. Methmann, D. Rothe, and B. Stephan, eds. *Interpretive approaches to global climate governance.* Abingdon and New York: Routledge, 198–216.

Bendell, J., 2018. *Deep Adaptation: A Map for Navigating Climate Tragedy*. Cambridge: Institute of Leadership and Sustainability (IFLAS), IFLAS Occasional Paper 2.

Bettini, G., 2013. Climate Barbarians at the Gate? A critique of apocalyptic narratives on 'climate refugees'. *Geoforum*, 45, 63–72.

Bettini, G., 2015. (In)convenient convergences. 'Climate refugees', apocalyptic discourses and the depoliticization of climate-induced migration. *In*: *Interpretive approaches to global climate governance. (De)constructing the greenhouse*. London: Routledge, 122–136.

Bierbaum, R., Smith, J.B., Lee, A., Blair, M., Carter, L., Chapin, F.S., Fleming, P., Ruffo, S., Stults, M., McNeeley, S., Wasley, E., and Verduzco, L., 2013. A comprehensive review of climate adaptation in the United States: more than before, but less than needed. *Mitigation and Adaptation Strategies for Global Change*, 18 (3), 361–406.

Biesbroek, R., Swart, R.J., Carter, T.R., Cowan, C., Henrichs, T., Mela, H., Morecroft, M.D., and Rey, D., 2010. Europe adapts to climate change: Comparing National Adaptation Strategies. *Global Environmental Change*, 20 (3), 440–450.

Bloom, P., 2016. Back to the capitalist future: Fantasy and the paradox of crisis. *Culture and Organization*, 22 (2), 158–177.

BMU - Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, 2009. *Dem Klimawandel begegnen. Die Deutsche Anpassungsstrategie*. Berlin: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU).

BMU - Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, 2012. *Aktionsplan Anpassung der Deutschen Anpassungsstrategie an den Klimawandel.* Berlin: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU).

BMUB - Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit, 2016. *Anpassung an den Klimawandel. Erster Fortschrittsbericht der Bundesregierung zur Deutschen Anpassungsstrategie.* Berlin: Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB).

Brasseur, G., Jacob, D., and Schuck-Zöller, S., eds., 2017. *Klimawandel in Deutschland: Entwicklung, Folgen, Risiken und Perspektiven*. Berlin: Springer Spektrum.

Brown, K., 2011. Sustainable adaptation: An oxymoron? *Climate and Development*, 3 (1), 21–31.

Cannon, T. and Müller-Mahn, D., 2010. Vulnerability, resilience and development discourses in context of climate change. *Natural Hazards*, 55 (3), 621–635.

Chandler, D. and Reid, J., 2016. *The neoliberal subject: resilience, adaptation and vulnerability*. London: Rowman & Littlefield International.

Chang, W. and Glynos, J., 2011. Ideology and Politics in the Popular Press: The Case of the 2009 UK MPs' Expenses Scandal. *In*: L. Dahlberg and S. Phelan, eds. *Discourse Theory and Critical Media Politics*. London: Palgrave Macmillan, 106–127.

Clarke, M., 2015. 'Knowledge is power'? A Lacanian entanglement with political ideology in education. *Critical Studies in Education*, 56 (1), 71–85.
Clarke, M., 2018. Eyes wide shut: the fantasies and disavowals of education policy. *Journal of Education Policy*, 1–17.
Clouser, R., 2016. Nexus of Emotional and Development Geographies. *Geography Compass*, 10 (8), 321–332.
Deutscher Bundestag, 2008. *Plenarprotokoll 16/195*. Berlin, Stenografischer Bericht No. 16/195.
Dewulf, A., 2013. Contrasting frames in policy debates on climate change adaptation. *Wiley Interdisciplinary Reviews: Climate Change*, 4 (4), 321–330.
Die Bundesregierung, 2008. *Deutsche Anpassungsstrategie an den Klimawandel vom Bundeskabinett am 17. Dezember 2008 beschlossen*. Berlin: Deutsche Bundesregierung.
Die Bundesregierung, 2011. *Aktionsplan Anpassung der Deutschen Anpassungsstrategie an den Klimawandel vom Bundeskabinett am 31. August 2011 beschlossen*. Berlin: Deutsche Bundesregierung.
Die Bundesregierung, 2015. *Fortschrittsbericht zur Deutschen Anpassungsstrategie an den Klimawandel Stand: 16.11.2015*. Berlin: Deutsche Bundesregierung.
Dolšak, N. and Prakash, A., 2018. The Politics of Climate Change Adaptation. *Annual Review of Environment and Resources*, 43 (1), 317–341.
Eberle, J., 2016. Logics of Foreign Policy. Discourse, Fantasy and Germany's Policies in the Iraq Crisis. Thesis submitted for the degree of Doctor of Philosophy. Department of Politics and International Studies, University of Warwick, Coventry.
Eberle, J., 2017. Narrative, desire, ontological security, transgression: fantasy as a factor in international politics. *Journal of International Relations and Development*, 22 (1), 243–268.
Eisenack, K., Moser, S.C., Hoffmann, E., Klein, R.J.T., Oberlack, C., Pechan, A., Rotter, M., and Termeer, C.J.A.M., 2014. Explaining and overcoming barriers to climate change adaptation. *Nature Climate Change*, 4 (10), 867–872.
Eriksen, S.H., Nightingale, A.J., and Eakin, H., 2015. Reframing adaptation: The political nature of climate change adaptation. *Global Environmental Change*, 35, 523–533.
Fazey, I., Moug, P., Allen, S., Beckmann, K., Blackwood, D., Bonaventura, M., Burnett, K., Danson, M., Falconer, R., Gagnon, A.S., Harkness, R., Hodgson, A., Holm, L., Irvine, K.N., Low, R., Lyon, C., Moss, A., Moran, C., Naylor, L., O'Brien, K., Russell, S., Skerratt, S., Rao-Williams, J., and Wolstenholme, R., 2018. Transformation in a changing climate: a research agenda. *Climate and Development*, 10 (3), 197–217.
Fotaki, M., 2010. Why do public policies fail so often? Exploring health policy-making as an imaginary and symbolic construction. *Organization*, 17 (6), 703–720.
Fresque-Baxter, J.A. and Armitage, D., 2012. Place identity and climate change adaptation: a synthesis and framework for understanding: Place identity and climate change adaptation. *Wiley Interdisciplinary Reviews: Climate Change*, 3 (3), 251–266.
Glynos, J., 2001. The grip of ideology: A Lacanian approach to the theory of ideology. *Journal of Political Ideologies*, 6 (2), 191–214.
Glynos, J., 2011. Fantasy and Identity in Critical Political Theory. *Filozofski vestnik*, XXXII (2), 65–88.
Glynos, J., 2014. Hating government and voting against one's interests: Self-Transgression, enjoyment, critique. *Psychoanalysis, Culture & Society*, 19 (2), 179–189.
Glynos, J. and Howarth, D., 2007. *Logics of critical explanation in social and political theory*. London: Routledge.
Glynos, J., Speed, E., and West, K., 2014. Logics of marginalisation in health and social care reform: Integration, choice, and provider-blind provision. *Critical Social Policy*, 35 (1), 45–68.
Glynos, J. and Stavrakakis, Y., 2008. Lacan and Political Subjectivity: Fantasy and Enjoyment in Psychoanalysis and Political Theory. *Subjectivity*, 24 (1), 256–274.
Griggs, S. and Howarth, D., 2013. *The politics of airport expansion in the United Kingdom: hegemony, policy and the rhetoric of 'sustainable aviation'*. Manchester: Manchester University Press.

Griggs, S. and Howarth, D., 2017. Discourse, policy and the environment: hegemony, statements and the analysis of U.K. airport expansion. *Journal of Environmental Policy & Planning*, 1–15.

Gunder, M., 2014. Fantasy in Planning Organisations and their Agency: The Promise of Being at Home in the World. *Urban Policy and Research*, 32 (1), 1–15.

Gunder, M., 2015. The Role of Fantasy in Public Policy Formation. *In*: R. Beunen, K. Van Assche, and M. Duineveld, eds. *Evolutionary Governance Theory*. Cham: Springer International Publishing, 143–154.

Gunder, M., 2016. Planning's "Failure" to Ensure Efficient Market Delivery: A Lacanian Deconstruction of this Neoliberal Scapegoating Fantasy. *European Planning Studies*, 24 (1), 21–38.

Gunder, M. and Hillier, J., 2009. *Planning in ten words or less: a Lacanian entanglement with spatial planning*. Farnham and Burlington, Ashgate.

Howarth, D.R., 2013. *Poststructuralism and after: structure, subjectivity, and power*. New York: Palgrave Macmillan.

Hulme, M., 2011. Reducing the Future to Climate: A Story of Climate Determinism and Reductionism. *Osiris*, 26 (1), 245–266.

Hustedt, T., 2014. Negative Koordination in der Klimapolitik: Die Interministerielle Arbeitsgruppe Anpassungsstrategie. *dms – der moderne staat – Zeitschrift für Public Policy, Recht und Management*, 7 (2) , 311–330.

Kates, R.W., Travis, W.R., and Wilbanks, T.J., 2012. Transformational adaptation when incremental adaptations to climate change are insufficient. *Proceedings of the National Academy of Sciences*, 109 (19), 7156–7161.

Keskitalo, E.C.H. and Preston, B.L., 2019. Conclusions: climate change adaptation policy research and its role in understanding climate change. *In*: E.C.H. Keskitalo and B.L. Preston, eds. *Research handbook on climate change adaptation policy*. Cheltenham: Edward Elgar Publishing, 475–491.

Klepp, S. and Chavez-Rodriguez, L., eds., 2018. *A critical approach to climate change adaptation: discourses, policies, and practices*. London and New York: Routledge/Taylor & Francis Group.

Kølvraa, C. and Ifversen, J., 2017. The attraction of ideology: discourse, desire and the body. *Journal of Political Ideologies*, 22 (2), 182–196.

Koschut, S., Hall, T.H., Wolf, R., Solomon, T., Hutchison, E., and Bleiker, R., 2017. Discourse and Emotions in International Relations. *International Studies Review*, 19, 481–508.

Kress, G.R. and Van Leeuwen, T., 2001. *Multimodal discourse: the modes and media of contemporary communication*. London and New York: Arnold/Oxford University Press.

Laclau, E., 1994. Introduction. *In*: E. Laclau, ed. *The Making of Political Identities*. London and New York: Verso, 1–8.

Laclau, E. and Mouffe, C., 2001. *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. 2nd ed. London: Verso.

Leichenko, R. and O'Brien, K., 2008. *Environmental Change and Globalization*. Oxford University Press.

Lucas, R. and von Winterfeld, U., 2015. Zwischen Anpassungs- und Veränderungsdruck: Klimafolgenanpassung und nachhaltige Transformation. *GAIA - Ecological Perspectives for Science and Society*, 24 (3), 164–168.

Massey, E., Huitema, D., Garrelts, H., Grecksch, K., Mees, H., Rayner, T., Storbjörk, S., Termeer, C., and Winges, M., 2015. Handling adaptation policy choices in Sweden, Germany, the UK and the Netherlands. *Journal of Water and Climate Change*, 6 (1), 9–24.

Mert, A., 2015. *Environmental governance through partnerships: a discourse theoretical study*. Cheltenham: Edward Elgar Publishing.

Methmann, C., 2014. We are all green now. Hegemony, governmentality and fantasy in the global climate polity. Unpublished Ph.D. thesis. Univeristy of Hamburg, Hamburg.

Methmann, C. and Rothe, D., 2012. Politics for the day after tomorrow: The logic of apocalypse in global climate politics. *Security Dialogue*, 43 (4), 323–344.

Nightingale, A.J., Eriksen, S., Taylor, M., Forsyth, T., Pelling, M., Newsham, A., Boyd, E., Brown, K., Harvey, B., Jones, L., Bezner Kerr, R., Mehta, L., Naess, L.O., Ockwell, D., Scoones, I., Tanner, T., and Whitfield, S., 2019. Beyond Technical Fixes: climate solutions and the great derangement. *Climate and Development*, 1–10.

Nissan, H., Goddard, L., de Perez, E.C., Furlow, J., Baethgen, W., Thomson, M.C., and Mason, S.J., 2019. On the use and misuse of climate change projections in international development. *Wiley Interdisciplinary Reviews: Climate Change*, 10 (3), e579.

Nyamwanza, A.M. and Bhatasara, S., 2015. The utility of postmodern thinking in climate adaptation research. *Environment, Development and Sustainability*, 17 (5), 1183–1196.

O'Brien, K., 2016. Climate change and social transformations: is it time for a quantum leap? *Wiley Interdisciplinary Reviews: Climate Change*, 7 (5), 618–626.

O'Brien, K. and Hochachka, G., 2010. Integral Adaptation to Climate Change. *Journal of Integral Theory and Practice*, 5 (1), 89–102.

O'Brien, K. and Selboe, E., 2015a. *The Adaptive Challenge of Climate Change*. London: Cambridge University Press.

O'Brien, K. and Selboe, E., 2015b. Social Transformation: The Real Adaptive Challenge. *In*: K. OBrien and E. Selboe, eds. *The Adaptive Challenge of Climate Change*. Cambridge: Cambridge University Press, 311–324.

Ojha, H.R., Ghimire, S., Pain, A., Nightingale, A., Khatri, D.B., and Dhungana, H., 2015. Policy without politics: technocratic control of climate change adaptation policy making in Nepal. *Climate Policy*, 1–19.

Oppermann, E., 2011. The discourse of adaptation to climate change and the UK Climate Impacts Programme: De-scribing the problematization of adaptation. *Climate and Development*, 3 (1), 71–85.

Pelling, M., 2011. *Adaptation to Climate Change: From Resilience to Transformation*. London: Routledge.

Remling, E., 2018. Depoliticizing adaptation: a critical analysis of EU climate adaptation policy. *Environmental Politics*, 1–21.

Ribot, J., 2010. Vulnerability Does Not Fall from the Sky: Toward Multiscale, Pro-Poor Climate Policy. *In*: R. Mearns and A. Norton, eds. *Social Dimensions of Climate Change. Equity and Vulnerability in a Warming World*. Washington, DC: The International Bank for Reconstruction and Development /The World Bank, 47–74.

Robbins, P. and Moore, S.A., 2013. Ecological anxiety disorder: diagnosing the politics of the Anthropocene. *cultural geographies*, 20 (1), 3–19.

Salecl, R., 1994. *The spoils of freedom: psychoanalysis and feminism after the fall of socialism*. London and New York: Routledge.

Schulz, K. and Siriwardane, R., 2015. *Depoliticised and technocratic? Normativity and the politics of transformative adaptation*. Lund: Earth System Governance Project, Earth System Governance Working Paper No. 33.

Sjöstedt Landén, A., 2012. A Fantasy of the "Ambitious Young Girl" as Flexible Knowledge-worker Subject. *NORA - Nordic Journal of Feminist and Gender Research*, 20 (4), 249–265.

Sjöstedt Landén, A., Ljuslinder, K., and Lundgren, A.S., 2017. The moral geographies of public sector job relocation: discourses of compensation and competence in the Swedish news press. *Social & Cultural Geography*, 18 (5), 623–644.

Stavrakakis, Y., 2005. Passions of Identification: Discourse, Enjoyment, and European Identity. *In*: D.R. Howarth and J. Torfing, eds. *Discourse theory in European politics: identity, policy, and governance*. New York: Palgrave Macmillan, 68–92.

Swyngedouw, E., 2010. Apocalypse Forever?: Post-political Populism and the Spectre of Climate Change. *Theory, Culture & Society*, 27 (2–3), 213–232.

Symons, K., 2014. Anti-politics, Apocalypse and Adaptation in Kenya's National Climate Change Response Strategy. *Scottish Geographical Journal*, 130 (4), 266–278.

Taylor, M., 2013. Climate change, relational vulnerability and human security: rethinking sustainable adaptation in agrarian environments. *Climate and Development*, 5 (4), 318–327.
Taylor, M., 2015. *The political ecology of climate change adaptation: livelihoods, agrarian change and the conflicts of development*. London and New York: Routledge.
Thomas, K.A. and Warner, B.P., 2019. Weaponizing vulnerability to climate change. *Global Environmental Change*, 57, 101928.
Tuan, Y.-F., 1977. *Space and place: the perspective of experience*. 1. publ. in Great Britain. London: Arnold.
Vetter, A., Chrischilles, E., Eisenack, K., Kind, C., Mahrenholz, P., and Pechan, A., 2017. Anpassung an den Klimawandel als neues Politikfeld. *In*: G.P. Brasseur, D. Jacob, and S. Schuck-Zöller, eds. *Klimawandel in Deutschland*. Berlin and Heidelberg: Springer Berlin Heidelberg, 325–334.
Vetter, A. and Schauser, I., 2013. Anpassung an den Klimawandel. Priorisierung von Maßnahmen innerhalb der Deutschen Anpassungsstrategie. *GAIA - Ecological Perspectives for Science and Society*, 22 (4), 248–254.
Vogel, B. and Henstra, D., 2015. Studying local climate adaptation: A heuristic research framework for comparative policy analysis. *Global Environmental Change*, 31, 110–120.
Waller, S. and Barnett, J., 2015. The Challenge of Governing Adaptation in Australia. *In*: *The Adaptive Challenge of Climate Change*. London: Cambridge University Press, 81–97.
Warner, J., Jomantas, S., Jones, E., Ansari, Md., and de Vries, L., 2019. The Fantasy of the Grand Inga Hydroelectric Project on the River Congo. *Water*, 11 (3), 407.
WCED - World Commission on Environment and Development, 1987. *Our common future*. Oxford: Oxford University Press.
West, K., 2011. Articulating discursive and materialist conceptions of practice in the logics approach to critical policy analysis. *Critical Policy Studies*, 5 (4), 414–433.
Wright, C. and Nyberg, D., 2014. Creative self-destruction: corporate responses to climate change as political myths. *Environmental Politics*, 23 (2), 205–223.
Žižek, S., 1997. The Seven Veils of Fantasy. In: Žižek, S., ed. *The Plague of Fantasy*. London: Verso, 3–44.

Södertörn Doctoral Dissertations

1. Jolanta Aidukaite, *The Emergence of the Post-Socialist Welfare State: The case of the Baltic States: Estonia, Latvia and Lithuania*, 2004
2. Xavier Fraudet, *Politique étrangère française en mer Baltique (1871–1914): de l'exclusion à l'affirmation*, 2005
3. Piotr Wawrzeniuk, *Confessional Civilising in Ukraine: The Bishop Iosyf Shumliansky and the Introduction of Reforms in the Diocese of Lviv 1668–1708*, 2005
4. Andrej Kotljarchuk, *In the Shadows of Poland and Russia: The Grand Duchy of Lithuania and Sweden in the European Crisis of the mid-17th Century*, 2006
5. Håkan Blomqvist, *Nation, ras och civilisation i svensk arbetarrörelse före nazismen*, 2006
6. Karin S Lindelöf, *Om vi nu ska bli som Europa: Könsskapande och normalitet bland unga kvinnor i transitionens Polen*, 2006
7. Andrew Stickley. *On Interpersonal Violence in Russia in the Present and the Past: A Sociological Study*, 2006
8. Arne Ek, *Att konstruera en uppslutning kring den enda vägen: Om folkrörelsers modernisering i skuggan av det Östeuropeiska systemskiftet*, 2006
9. Agnes Ers, *I mänskligheten namn: En etnologisk studie av ett svenskt biståndsprojekt i Rumänien*, 2006
10. Johnny Rodin, *Rethinking Russian Federalism: The Politics of Intergovernmental Relations and Federal Reforms at the Turn of the Millennium*, 2006
11. Kristian Petrov, *Tillbaka till framtiden: Modernitet, postmodernitet och generationsidentitet i Gorbačevs glasnost' och perestrojka*, 2006
12. Sophie Söderholm Werkö, *Patient patients?: Achieving Patient Empowerment through Active Participation, Increased Knowledge and Organisation*, 2008
13. Peter Bötker, *Leviatan i arkipelagen: Staten, förvaltningen och samhället. Fallet Estland*, 2007
14. Matilda Dahl, *States under scrutiny: International organizations, transformation and the construction of progress*, 2007
15. Margrethe B. Søvik, *Support, resistance and pragmatism: An examination of motivation in language policy in Kharkiv*, Ukraine, 2007
16. Yulia Gradskova, *Soviet People with female Bodies: Performing beauty and maternity in Soviet Russia in the mid 1930–1960s*, 2007
17. Renata Ingbrant, *From Her Point of View: Woman's Anti-World in the Poetry of Anna Świrszczyńska*, 2007
18. Johan Eellend, *Cultivating the Rural Citizen: Modernity, Agrarianism and Citizenship in Late Tsarist Estonia*, 2007

19. Petra Garberding, *Musik och politik i skuggan av nazismen: Kurt Atterberg och de svensk-tyska musikrelationerna*, 2007
20. Aleksei Semenenko, *Hamlet the Sign: Russian Translations of Hamlet and Literary Canon Formation*, 2007
21. Vytautas Petronis, *Constructing Lithuania: Ethnic Mapping in the Tsarist Russia, ca. 1800–1914*, 2007
22. Akvile Motiejunaite, *Female employment, gender roles, and attitudes: the Baltic countries in a broader context*, 2008
23. Tove Lindén, *Explaining Civil Society Core Activism in Post-Soviet Latvia*, 2008
24. Pelle Åberg, *Translating Popular Education: Civil Society Cooperation between Sweden and Estonia*, 2008
25. Anders Nordström, *The Interactive Dynamics of Regulation: Exploring the Council of Europe's monitoring of Ukraine*, 2008
26. Fredrik Doeser, *In Search of Security After the Collapse of the Soviet Union: Foreign Policy Change in Denmark, Finland and Sweden, 1988–1993*, 2008
27. Zhanna Kravchenko. *Family (versus) Policy: Combining Work and Care in Russia and Sweden*, 2008
28. Rein Jüriado, *Learning within and between public-private partnerships*, 2008
29. Elin Boalt, *Ecology and evolution of tolerance in two cruciferous species*, 2008
30. Lars Forsberg, *Genetic Aspects of Sexual Selection and Mate Choice in Salmonids*, 2008
31. Eglė Rindzevičiūtė, *Constructing Soviet Cultural Policy: Cybernetics and Governance in Lithuania after World War II*, 2008
32. Joakim Philipson, *The Purpose of Evolution: 'struggle for existence' in the Russian-Jewish press 1860–1900*, 2008
33. Sofie Bedford, *Islamic activism in Azerbaijan: Repression and mobilization in a post-Soviet context*, 2009
34. Tommy Larsson Segerlind, *Team Entrepreneurship: A process analysis of the venture team and the venture team roles in relation to the innovation process*, 2009
35. Jenny Svensson, *The Regulation of Rule-Following: Imitation and Soft Regulation in the European Union*, 2009
36. Stefan Hallgren, *Brain Aromatase in the guppy, Poecilia reticulate: Distribution, control and role in behavior*, 2009
37. Karin Ellencrona, *Functional characterization of interactions between the flavivirus NS5 protein and PDZ proteins of the mammalian host,* 2009
38. Makiko Kanematsu, *Saga och verklighet: Barnboksproduktion i det postsovjetiska Lettland,* 2009
39. Daniel Lindvall, *The Limits of the European Vision in Bosnia and Herzegovina: An Analysis of the Police Reform Negotiations,* 2009
40. Charlotta Hillerdal, *People in Between – Ethnicity and Material Identity: A New Approach to Deconstructed Concepts*, 2009
41. Jonna Bornemark, *Kunskapens gräns – gränsens vetande,* 2009

42. Adolphine G. Kateka, *Co-Management Challenges in the Lake Victoria Fisheries: A Context Approach*, 2010
43. René León Rosales, *Vid framtidens hitersta gräns: Om pojkar och elevpositioner i en multietnisk skola*, 2010
44. Simon Larsson, *Intelligensaristokrater och arkivmartyrer: Normerna för vetenskaplig skicklighet i svensk historieforskning 1900–1945*, 2010
45. Håkan Lättman, *Studies on spatial and temporal distributions of epiphytic lichens*, 2010
46. Alia Jaensson, *Pheromonal mediated behaviour and endocrine response in salmonids: The impact of cypermethrin, copper, and glyphosate*, 2010
47. Michael Wigerius, *Roles of mammalian Scribble in polarity signaling, virus offense and cell-fate determination,* 2010
48. Anna Hedtjärn Wester, *Män i kostym: Prinsar, konstnärer och tegelbärare vid sekelskiftet 1900*, 2010
49. Magnus Linnarsson, *Postgång på växlande villkor: Det svenska postväsendets organisation under stormaktstiden*, 2010
50. Barbara Kunz, *Kind words, cruise missiles and everything in between: A neoclassical realist study of the use of power resources in U.S. policies towards Poland, Ukraine and Belarus 1989–2008*, 2010
51. Anders Bartonek, *Philosophie im Konjunktiv: Nichtidentität als Ort der Möglichkeit des Utopischen in der negativen Dialektik Theodor W. Adornos,* 2010
52. Carl Cederberg, *Resaying the Human: Levinas Beyond Humanism and Antihumanism*, 2010
53. Johanna Ringarp, *Professionens problematik: Lärarkårens kommunalisering och välfärdsstatens förvandling*, 2011
54. Sofi Gerber, *Öst är Väst men Väst är bäst: Österreich identitetsformering i det förenade Tyskland*, 2011
55. Susanna Sjödin Lindenskoug, *Manlighetens bortre gräns: Tidelagsrättegångar i Livland åren 1685–1709*, 2011
56. Dominika Polanska, *The emergence of enclaves of wealth and poverty: A sociological study of residential differentiation in post-communist Poland*, 2011
57. Christina Douglas, *Kärlek per korrespondens: Två förlovade par under andra hälften av 1800-talet*, 2011
58. Fred Saunders, *The Politics of People – Not just Mangroves and Monkeys: A study of the theory and practice of community-based management of natural resources in Zanzibar*, 2011
59. Anna Rosengren, *Åldrandet och språket: En språkhistorisk analys av hög ålder och åldrande i Sverige cirka 1875–1975*, 2011
60. Emelie Lilliefeldt, *European Party Politics and Gender: Configuring Gender-Balanced Parliamentary Presence*, 2011
61. Ola Svenonius, *Sensitising Urban Transport Security: Surveillance and Policing in Berlin, Stockholm, and Warsaw*, 2011
62. Andreas Johansson, *Dissenting Democrats: Nation and Democracy in the Republic of Moldova*, 2011
63. Wessam Melik, *Molecular characterization of the Tick-borne encephalitis virus: Environments and replication*, 2012
64. Steffen Werther, *SS-Vision und Grenzland-Realität: Vom Umgang dänischer und „volksdeutscher" Nationalsozialisten in Sønderjylland mit der „großgermanischen" Ideologie der SS*, 2012

65. Peter Jakobsson, *Öppenhetsindustrin*, 2012
66. Kristin Ilves, *Seaward Landward: Investigations on the archaeological source value of the landing site category in the Baltic Sea region*, 2012
67. Anne Kaun, *Civic Experiences and Public Connection: Media and Young People in Estonia*, 2012
68. Anna Tessmann, *On the Good Faith: A Fourfold Discursive Construction of Zoroastripanism in Contemporary Russia*, 2012
69. Jonas Lindström, *Drömmen om den nya staden: stadsförnyelse i det postsovjetisk Riga,* 2012
70. Maria Wolrath Söderberg, *Topos som meningsskapare: retorikens topiska perspektiv på tänkande och lärande genom argumentation*, 2012
71. Linus Andersson, *Alternativ television: former av kritik i konstnärlig TV-produktion,* 2012
72. Håkan Lättman, *Studies on spatial and temporal distributions of epiphytic lichens*, 2012
73. Fredrik Stiernstedt, Mediearbete i mediehuset: produktion i förändring på MTG-radio, 2013
74. Jessica Moberg, *Piety, Intimacy and Mobility: A Case Study of Charismatic Christianity in Present-day Stockholm*, 2013
75. Elisabeth Hemby, *Historiemåleri och bilder av vardag: Tatjana Nazarenkos konstnärskap i 1970-talets Sovjet*, 2013
76. Tanya Jukkala, *Suicide in Russia: A macro-sociological study*, 2013
77. Maria Nyman, *Resandets gränser: svenska resenärers skildringar av Ryssland under 1700-talet*, 2013
78. Beate Feldmann Eellend, *Visionära planer och vardagliga praktiker: postmilitära landskap i Östersjöområdet,* 2013
79. Emma Lind, *Genetic response to pollution in sticklebacks: natural selection in the wild*, 2013
80. Anne Ross Solberg, *The Mahdi wears Armani: An analysis of the Harun Yahya enterprise,* 2013
81. Nikolay Zakharov, *Attaining Whiteness: A Sociological Study of Race and Racialization in Russia,* 2013
82. Anna Kharkina, *From Kinship to Global Brand: the Discourse on Culture in Nordic Cooperation after World War II*, 2013
83. Florence Fröhlig, *A painful legacy of World War II: Nazi forced enlistment: Alsatian/Mosellan Prisoners of war and the Soviet Prison Camp of Tambov*, 2013
84. Oskar Henriksson, *Genetic connectivity of fish in the Western Indian Ocean*, 2013
85. Hans Geir Aasmundsen, *Pentecostalism, Globalisation and Society in Contemporary Argentina*, 2013
86. Anna McWilliams, *An Archaeology of the Iron Curtain: Material and Metaphor*, 2013
87. Anna Danielsson, *On the power of informal economies and the informal economies of power: rethinking informality, resilience and violence in Kosovo*, 2014
88. Carina Guyard, *Kommunikationsarbete på distans*, 2014
89. Sofia Norling, *Mot "väst": om vetenskap, politik och transformation i Polen 1989–2011*, 2014
90. Markus Huss, *Motståndets akustik: språk och (o)ljud hos Peter Weiss 1946–1960,* 2014
91. Ann-Christin Randahl, *Strategiska skribenter: skrivprocesser i fysik och svenska*, 2014
92. Péter Balogh, *Perpetual borders: German-Polish cross-border contacts in the Szczecin area*, 2014

93. Erika Lundell, *Förkroppsligad fiktion och fiktionaliserade kroppar: levande rollspel i Östersjöregionen*, 2014
94. Henriette Cederlöf, *Alien Places in Late Soviet Science Fiction: The "Unexpected Encounters" of Arkady and Boris Strugatsky as Novels and Films*, 2014
95. Niklas Eriksson, *Urbanism Under Sail: An archaeology of fluit ships in early modern everyday life*, 2014
96. Signe Opermann, *Generational Use of News Media in Estonia: Media Access, Spatial Orientations and Discursive Characteristics of the News Media*, 2014
97. Liudmila Voronova, *Gendering in political journalism: A comparative study of Russia and Sweden,* 2014
98. Ekaterina Kalinina, *Mediated Post-Soviet Nostalgia*, 2014
99. Anders E. B. Blomqvist, *Economic Natonalizing in the Ethnic Borderlands of Hungary and Romania: Inclusion, Exclusion and Annihilation in Szatmár/Satu-Mare, 1867–1944,* 2014
100. Ann-Judith Rabenschlag, *Völkerfreundschaft nach Bedarf: Ausländische Arbeitskräfte in der Wahrnehmung von Staat und Bevölkerung der DDR*, 2014
101. Yuliya Yurchuck, *Ukrainian Nationalists and the Ukrainian Insurgent Army in Post-Soviet Ukraine*, 2014
102. Hanna Sofia Rehnberg, *Organisationer berättar: narrativitet som resurs i strategisk kommunikation*, 2014
103. Jaakko Turunen, *Semiotics of Politics: Dialogicality of Parliamentary Talk*, 2015
104. Iveta Jurkane-Hobein, *I Imagine You Here Now: Relationship Maintenance Strategies in Long-Distance Intimate Relationships*, 2015
105. Katharina Wesolowski*, Maybe baby? Reproductive behaviour, fertility intentions, and family policies in post-communist countries, with a special focus on Ukraine*, 2015
106. Ann af Burén, *Living Simultaneity: On religion among semi-secular Swedes*, 2015
107. Larissa Mickwitz, *En reformerad lärare: konstruktionen av en professionell och betygssättande lärare i skolpolitik och skolpraktik,* 2015
108. Daniel Wojahn, *Språkaktivism: diskussioner om feministiska språkförändringar i Sverige från 1960-talet till 2015*, 2015
109. Hélène Edberg, *Kreativt skrivande för kritiskt tänkande: en fallstudie av studenters arbete med kritisk metareflektion*, 2015
110. Kristina Volkova, *Fishy Behavior: Persistent effects of early-life exposure to 17α-ethinylestradiol*, 2015
111. Björn Sjöstrand, *Att tänka det tekniska: en studie i Derridas teknikfilosofi,* 2015
112. Håkan Forsberg, *Kampen om eleverna: gymnasiefältet och skolmarknadens framväxt i Stockholm, 1987–2011*, 2015
113. Johan Stake, *Essays on quality evaluation and bidding behavior in public procurement auctions*, 2015
114. Martin Gunnarson, *Please Be Patient: A Cultural Phenomenological Study of Haemodialysis and Kidney Transplantation Care*, 2016
115. Nasim Reyhanian Caspillo, *Studies of alterations in behavior and fertility in ethinyl estradiol-exposed zebrafish and search for related biomarkers,* 2016

116. Pernilla Andersson, *The Responsible Business Person: Studies of Business Education for Sustainability,* 2016
117. Kim Silow Kallenberg, *Gränsland: svensk ungdomsvård mellan vård och straff,* 2016
118. Sari Vuorenpää, *Literacitet genom interaction*, 2016
119. Francesco Zavatti, *Writing History in a Propaganda Institute: Political Power and Network Dynamics in Communist Romania*, 2016
120. Cecilia Annell, *Begärets politiska potential: Feministiska motståndsstrategier i Elin Wägners 'Pennskaftet', Gabriele Reuters 'Aus guter Familie', Hilma Angered-Strandbergs 'Lydia Vik' och Grete Meisel-Hess 'Die Intellektuellen',* 2016
121. Marco Nase, *Academics and Politics: Northern European Area Studies at Greifswald University, 1917–1992,* 2016
122. Jenni Rinne, *Searching for Authentic Living Through Native Faith – The Maausk movement in Estonia*, 2016
123. Petra Werner, *Ett medialt museum: lärandets estetik i svensk television 1956–1969*, 2016
124. Ramona Rat, *Un-common Sociality: Thinking sociality with Levinas*, 2016
125. Petter Thureborn, *Microbial ecosystem functions along the steep oxygen gradient of the Landsort Deep, Baltic Sea*, 2016
126. Kajsa-Stina Benulic, *A Beef with Meat Media and audience framings of environmentally unsustainable production and consumption*, 2016
127. Naveed Asghar, *Ticks and Tick-borne Encephalitis Virus – From nature to infection*, 2016
128. Linn Rabe, *Participation and legitimacy: Actor involvement for nature conservation*, 2017
129. Maryam Adjam, *Minnesspår: hågkomstens rum och rörelse i skuggan av en flykt*, 2017
130. Kim West, *The Exhibitionary Complex: Exhibition, Apparatus and Media from Kulturhuset to the Centre Pompidou, 1963–1977*, 2017
131. Ekaterina Tarasova, *Anti-nuclear Movements in Discursive and Political Contexts: Between expert voices and local protests, 2017*
132. Sanja Obrenović Johansson, *Från kombifeminism till rörelse: Kvinnlig serbisk organisering i förändring, 2017*
133. Michał Salamonik, *In Their Majesties' Service: The Career of Francesco De Gratta (1613–1676) as a Royal Servant and Trader in Gdańsk,* 2017
134. Jenny Ingridsdotter, *The Promises of the Free World: Postsocialist Experience in Argentina and the Making of Migrants, Race, and Coloniality*, 2017
135. Julia Malitska, *Negotiating Imperial Rule: Colonists and Marriage in the Nineteenth century Black Sea Steppe,* 2017
136. Natalya Yakusheva, *Parks, Policies and People: Nature Conservation Governance in Post-Socialist EU Countries,* 2017
137. Martin Kellner, *Selective Serotonin Re-uptake Inhibitors in the Environment: Effects of Citalopram on Fish Behaviour,* 2017
138. Krystof Kasprzak, *Vara – Framträdande – Värld: Fenomenets negativitet hos Martin Heidegger, Jan Patočka och Eugen Fink*, 2017
139. Alberto Frigo, *Life-stowing from a Digital Media Perspective: Past, Present and Future*, 2017

140. Maarja Saar, *The Answers You Seek Will Never Be Found At Home: Reflexivity, biographical narratives and lifestyle migration among highly-skilled Estonians*, 2017
141. Anh Mai, *Organizing for Efficiency: Essay on merger policies, independence of authorities, and technology diffusion*, 2017
142. Gustav Strandberg, *Politikens omskakning: Negativitet, samexistens och frihet i Jan Patočkas tänkande*, 2017
143. Lovisa Andén, *Litteratur och erfarenhet i Merleau-Pontys läsning av Proust, Valéry och Stendhal*, 2017
144. Fredrik Bertilsson, *Frihetstida policyskapande: uppfostringskommissionen och de akademiska konstitutionerna 1738–1766*, 2017
145. Börjeson, Natasja, *Toxic Textiles – towards responsibility in complex supply chains*, 2017
146. Julia Velkova, *Media Technologies in the Making – User-Driven Software and Infrastructures for computer Graphics Production*, 2017
147. Karin Jonsson, *Fångna i begreppen? Revolution, tid och politik i svensk socialistisk press 1917–1924*, 2017
148. Josefine Larsson, *Genetic Aspects of Environmental Disturbances in Marine Ecosystems – Studies of the Blue Mussel in the Baltic Sea*, 2017
149. Roman Horbyk, *Mediated Europes – Discourse and Power in Ukraine, Russia and Poland during Euromaidan*, 2017
150. Nadezda Petrusenko, *Creating the Revolutionary Heroines: The Case of Female Terrorists of the PSR (Russia, Beginning of the 20th Century)*, 2017
151. Rahel Kuflu, *Bröder emellan: Identitetsformering i det koloniserade Eritrea*, 2018
152. Karin Edberg, *Energilandskap i förändring: Inramningar av kontroversiella lokaliseringar på norra Gotland*, 2018
153. Rebecka Thor, *Beyond the Witness: Holocaust Representation and the Testimony of Images - Three films by Yael Hersonski, Harun Farocki, and Eyal Sivan*, 2018
154. Maria Lönn, *Bruten vithet: Om den ryska femininitetens sinnliga och temporala villkor*, 2018
155. Tove Porseryd, *Endocrine Disruption in Fish: Effects of 17α-ethinylestradiol exposure on non-reproductive behavior, fertility and brain and testis transcriptome*, 2018
156. Marcel Mangold, *Securing the working democracy: Inventive arrangements to guarantee circulation and the emergence of democracy policy*, 2018
157. Matilda Tudor, *Desire Lines: Towards a Queer Digital Media Phenomenology*, 2018
158. Martin Andersson, *Migration i 1600-talets Sverige: Älvsborgs lösen 1613–1618*, 2018
159. Johanna Pettersson, *What's in a Line? Making Sovereignty through Border Policy*, 2018
160. Irina Seits, *Architectures of Life-Building in the Twentieth Century: Russia, Germany, Sweden*, 2018
161. Alexander Stagnell, *The Ambassador's Letter: On the Less Than Nothing of Diplomacy*, 2019
162. Mari Zetterqvist Blokhuis, *Interaction Between Rider, Horse and Equestrian Trainer – A Challenging Puzzle*, 2019
163. Robin Samuelsson, *Play, Culture and Learning: Studies of Second-Language and Conceptual Development in Swedish Preschools*, 2019
164. Ralph Tafon, *Analyzing the "Dark Side" of Marine Spatial Planning – A study of domination, empowerment and freedom (or power* in, of *and* on *planning) through theories of discourse and power*, 2019
165. Ingela Visuri, *Varieties of Supernatural Experience: The case of high-functioning autism*, 2019

166. Mathilde Rehnlund, *Getting the transport right – for what? What transport policy can tell us about the construction of sustainability*, 2019

167. Oscar Törnqvist, *Röster från ingenmansland: En identitetsarkeologi i ett maritimt mellanrum*, 2019

168. Elise Remling, *Adaptation, now? Exploring the Politics of Climate Adaptation through Post-structuralist Discourse Theory*, 2019

How should societies prepare for a climate-changed future? What are the dominant views of adaptation? And, what does it mean to adapt well?

This thesis addresses societal responses to the impacts of climate change and the politics involved. It examines the practical implications of current official debates on climate adaptation at the international, European and German national levels. Such critical scrutiny is important at a time when adaptation planning and implementation is likely to be scaled up in the near future.

Drawing on Poststructuralist Discourse Theory, the politics around these debates are explored to provide critical insights into contemporary understandings of adaptation. The thesis proposes two important changes to the way research and policy practice have conceptualised adaptation.

First, it is important to consider whether adaptation efforts planned for one region lead to negative effects elsewhere. Second, overly simplistic accounts of humans as individualistic and rationalistic need to be expanded on to better account for affective and non-rational reactions to climate change. Proposed attention to this presents new insights into how certain discourses 'take hold' and justify themselves, and how critical scholarship might challenge conventional techno-managerial approaches to adaptation.

Elise Remling is an environmental social science researcher with extensive experience working on the social impacts of climate change and climate adaptation. Located at the interface of political science, development studies and human geography, her work is driven by a keen interest in how societies can confront and respond to climate change and other environmental challenges in equitable and sustainable ways. Elise holds a M.Sc. in Geography with a major in climate change from the University of Hamburg, and a dual majors B.A. in Social- and Cultural Anthropology and Geography from the University of Münster.

Environmental Science, School of Natural Sciences, Technology and Environmental Studies, Södetörn University.

ISBN 978-91-88663-78-8 (print) / 978-91-88663-79-5 (digital) | Södertörn University | publications@sh.se

SÖDERTÖRN UNIVERSITY | STOCKHOLM
sh.se