The politics of promise in a climate emergency:

The case of West Cumbria

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Abstract

How do people's attachments to (post)fossil-fuelled lives form and morph over time? What does this mean for the imperative of a 'net zero' transition? In this thesis, I critically examine these questions, offering novel contributions to a nascent line of inquiry which examines the politics of promise in a climate emergency.

My focus is West Cumbria (WC), an English region which has been thrust into the centre of controversy because of plans to open a new coal mine in the area. By employing qualitative methodologies including interview and creative methods, I attune to how feelings and affects surface in my fieldwork site.

I argue that attachments to high-carbon lives (re)form in material cultures wherein fossil fuel industries have the upper hand over renewable industries. Fossil capital can take advantage of these conditions to reproduce high-carbon development trajectories. In addition, people's industrial attachments can render proposals for a net zero transition a 'non-promise', stymieing attempts to move away from environmentally deleterious ways of life.

I simultaneously trace the shapeshifting nature of people's attachments. This suggests that the promises which people become tethered to change, often at speed, opening opportunities to build sustainable futures. I offer the concept of 'fluid hope' to demonstrate people's capacities to imagine post-carbon futures in the face of adversity.

I open by introducing the thesis and its outline, setting out the research field my arguments are positioned within, and explaining my methodology. I then present a portfolio of papers. Paper 1 begins with a UK-wide focus. Papers 2 to 4 then zoom in to examine climate politics in West Cumbria. Throughout my papers, I shift between exploring political-affective dynamics in West Cumbria and examining their wider implications. I conclude by analysing the implications of my thesis to further explore the politics of promise in a climate crisis.

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CAfS = Cumbria Action for Sustainability

CAs = Climate assembly

CE = Climate emergency

IPCC = Intergovernmental Panel on Climate Change

LCA = Local climate assembly

UK = United Kingdom

UN = United Nations

WC = West Cumbria

WCC = Westminster City Council

XR = Extinction Rebellion

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To my parents, who are continual sources of emotional support and intellectual inspiration (yes, 'affect' has become a regular point of conversation – though my mum got there before me). To Emi and Leonardo, for their loyalty and humour (and putting up with the aforementioned conversations about affect).

Structure of this portfolio

In this thesis, I use a 'multi-part' format. I therefore present a portfolio of papers written for publication in academic journals.[1]

In total, there are four papers. Three of these are full-length papers between 9,000 and 11,500 words long (papers 2-4). One is a shorter paper which is approximately 4,000 words in length (paper 1). Further details are provided in the table below – including paper titles; whether I am the sole author or the lead author; the journal they have been submitted to; and their publication stage.

In addition, I present four supplementary pieces of writing. These show how my papers form a coherent body of work, thereby meeting the expectations of a multi-part format thesis described in the Lancaster University and Lancaster Environment Centre guidelines (provided in full in appendix 1).

This thesis is structured into five sections:

1) **Introduction:** I present the background and context of the research, a synthesis which shows how my papers are linked, and a summary of my key contributions to the field of climate politics.
2) **My research field**: I review the key concepts I use, and the empirical research I draw on and respond to.
3) **Methodology and methods**: I explain how I conducted affect research in the field, and why I chose interviews and other tools as methods.
4) **Portfolio of papers**
5) **Conclusion:** I offer some personal reflections and concluding remarks.

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[1] Lancaster University guidelines for a multi-part thesis are provided in appendix 1.

Table 1: Papers in this thesis

	Title	Authors	Journal	Publication stage, and DOI (where relevant)
Paper #1	The messy politics of local climate assemblies	Lewis, P.; Ainscough, J.; Coxcoon, R.; Willis, R.	*Climatic Change*	Published https://doi.org/10.1007/s10584-023-03555-8
Paper #2	Fluid hope in a climate emergency: Lessons from an English citizens' jury	Lewis, P.	*Environmental Politics*	Accepted with minor amendments
Paper #3	Re-attaching to coal in a climate emergency: The case of the Whitehaven mine	Lewis, P.	*Environment and Planning E: Nature and Space*	Published https://doi.org/10.1177/25148486241238663
Paper #4	Why the promise of green jobs has limited resonance: Industrial attachments in a net zero transition	Lewis, P.	To be decided	Due to be submitted (Accepted for presentation at the BSA Annual Conference 2025)

Author's declaration

This thesis has not been submitted for the award of a higher degree elsewhere. The total word count is approximately 61,000 words. It therefore does not exceed the permitted maximum word limit. As one of the papers is co-authored, I describe my role in writing them below, in line with the expectations of a multi-part thesis format.

Paper 1: The messy politics of local climate assemblies, *Climatic Change*

- Full reference: Lewis, P., Ainscough, J., Coxcoon, R. et al. The messy politics of local climate assemblies. *Climatic Change* 176, 76 (2023). https://doi.org/10.1007/s10584-023-03555-8

- CRediT authorship contribution statement: Pancho Lewis: Conceptualization. Data curation. Formal analysis. Investigation. Project administration. Writing – original draft. Jacob Ainscough: Conceptualization. Investigation. Writing – review & editing. Rebecca Willis: Conceptualization. Funding acquisition. Investigation. Writing – review & editing. Rachel Coxcoon: Conceptualization. Investigation. Visualization. Writing – review & editing.

- Brief statement: First, to produce content for the paper, all four authors had a structured discussion which lasted an hour and a half. I chaired the discussion. Second, I used notes from the discussion to organise our discussion into themes. This was iterated and developed in a workshop with the other co-authors. Third, I wrote an initial draft of the paper which I shared with my co-authors. Rebecca Willis made changes to the paper's structure, and the other two authors suggested amendments or additions to its contents. Fourth, we wrote the final version of the paper. I led on the write up of sections 1, 2 and 3. Jacob Ainscough led on writing section 4. Rebecca Willis led on writing section 5. Rachel Coxcoon made minor amendments to the paper and produced the diagrams.

Yours sincerely

Francisco (Pancho) Lewis

Co- authors:

Jacob Ainscough

Rachel Coxcoon

Rebecca Willis

Section 1: Introduction

In this section, I introduce the key themes and issues I examine in this thesis. I begin by locating the origins of this project seven years ago, when I became involved in advocating for climate policy as an elected local government representative. I then introduce my fieldwork site and describe the four papers in this thesis. I bring this section to a close by outlining my thesis' overarching research question and summarising the contributions that I make to the field of climate politics.

1.i. Project origins: Politics in a climate emergency

I remember it well. I was lying on my sofa in the autumn of 2018. Scrolling through my phone, I saw the headline: "We have 12 years to limit climate catastrophe, warns UN" (Watts, 2018). Seeing the number 12 made me sit up.

In the following months it became clear that the report the article was based on, a landmark intervention by the International Panel on Climate Change (IPCC) (IPCC, 2018), resonated with other people too. Throughout 2019, there was a wave of climate action across the United Kingdom (UK), in part inspired by the IPCC paper. Extinction Rebellion (XR) took to the streets and blocked roads (Stuart, 2020). Youth activists inspired by campaigner Greta Thunberg erupted on the political stage (Taylor, 2019). Dozens of UK local authorities passed Climate Emergency (CE) declarations – committing to achieve 'net zero' emissions ahead of national government targets (Howarth et al., 2021).

At the time, I was an elected representative on Westminster City Council (WCC), a central London local authority. Whilst attending Council meetings I noticed that there were no plans for WCC to pass its own CE motion. This was an obvious campaign that needed someone to lead on. I reached out to activists, think-tank researchers, other politicians, and residents to ask them to join me in lobbying WCC. After a six-months long campaign which involved a series of activities (a community meeting with dozens of residents; a petition; multiple demonstrations; private meetings with senior officials, opposition politicians, and party colleagues), WCC agreed to pass a CE motion (Dimoldenberg, 2019).

The campaign left a lasting impression on me. I was struck by the powerful emotions it mobilised – in the demonstrations held outside of the Council, where people chanted slogans about the need to avert climate breakdown; in the images in campaign materials, where pictures of a world on fire were printed on leaflets. I also bore witness to emotions

which seemed to move some people in the opposite direction. Some councillors and residents suggested that these protestors were fearmongering, implying that they were overstating the problem of climate change. People's conflicting views seemed to be a consequence of the imagined futures they gravitated towards – some groups attached to the possibility of radical change; others seemed more motivated by maintaining the current state of affairs.

Climate emergency politics thus surfaced feelings which circulated in scenes of exchange. These scenes seemed to be organised by recognisable emotions, like hope, fear, anger, anxiety, and optimism. At the same time, they seemed to be shaped by moods which were opaquer and harder to make sense of. I would later come to understand these as 'affects' – the intensities that circulate in and between people, and which orient dispositions towards the world (Anderson & Holden, 2008).

This left me with a series of questions which stayed with me about what it means for people to navigate a moment of climate emergency. In this thesis, I explore these questions primarily, although not exclusively, from a place-based perspective – by examining climate politics in West Cumbria, a remote part of north-west England. Attending to these issues from a place-based perspective allows me to zoom in on a specific arena, narrowing down an otherwise unwieldy set of questions to a more manageable set of problems. More pertinently, there are specific reasons why West Cumbria (WC) provides a vantage point from which to examine these questions, as I now explain.

1.ii. The politics of climate emergency in West Cumbria

A geographically isolated part of England, coastal Cumbria has become a hotbed for climate politics in recent years. Eight years ago, the area was thrust into the centre of global controversy because of plans to open a new coal mine in Whitehaven – a town of 23,000 people with a historic connection with coal industries (Willis, 2021). Although plans for the mine were blocked by the courts in the summer of 2024, until recently it seemed feasible that it would go ahead (Seabrook, 2024). Had it opened, it would have been the first deep coal mine to open in the UK in thirty years, threatening to derail the UK's reputation among international climate negotiators (Willis, 2021).

Controversy over the mine led to scenes of heated disagreement in West Cumbria and in London. In Whitehaven, environmentalists mounted a campaign to oppose the mine. They argued that the area would benefit from the creation of 'green jobs' over the return of 'brown jobs', saying that the former held more economic potential for West Cumbrians than the return of coal jobs (Fearn, 2024). They held demonstrations at the site of the proposed mine, where they were sometimes confronted by residents who wanted to see new coal extraction go ahead. At the same time, politicians clashed over the mine in the Houses of Parliament. There were fiery exchanges between centre-left parties who opposed it, and the then Conservative Government, who granted it permission to open (Guru-Murthy, 2022).

Whilst debate over the mine has ensued, some have sought to advance climate action in the area. Cumbrian local authorities committed to ambitious net zero goals ahead of UK targets (Cumbria Action for Sustainability, 2021). In 2020, Copeland Council – one of the two districts in West Cumbria – set up a climate assembly (CA), which they called the Copeland People's Panel. This gave residents the opportunity to develop recommendations for local climate policy (Shared Future, 2021), following a similar process to CAs held elsewhere in the country (Howarth et al., 2021). Panellists drew up policy suggestions that envisaged dramatic improvements to West Cumbria's public services and labour market as part of a net zero transition (The Mail, 2021).

Proposals have also been put forward for new large-scale renewable infrastructures (Cumbria Action for Sustainability, 2021), hydrogen plants (Robbins, 2021) and steel recycling facilities (Bedendo, 2019). Although none of these proposals have come to fruition, some stakeholder groups and campaigners are rallying behind them.

Complicating things further, the question of the future of nuclear energy looms over West Cumbria. UK climate policy envisages an increase in nuclear energy in the net zero transition (Department for Energy Security & Net Zero, 2024). Given coastal Cumbria's history of nuclear energy, many – including local voices – want to see new nuclear facilities built in the area (Kalshoven, 2022). But this generates its own political contestations, given concerns about the long-term storage of nuclear waste and other issues (Bickerstaff, 2022; Kalshoven, 2022).

Contained within the area of West Cumbria we thus find a series of knotty issues. These hinge on what it means to live in a moment of climate emergency and the accompanying imperative of a rapid net zero transition, mobilising emotions, affects, and conflicting visions of the future which circulate at various scales.

In this thesis, I explore how climate emotions, affects, and 'attachments' (Anderson, 2023b) surface in people's lives. I do so by drawing on interviews as well as creative and embodied forms of research, helping me attune to affective lives. I simultaneously focus on how local experiences relate to macro political and economic issues. Moving between the two allows me to examine the relation between the grassroots with larger-scale problems which exceed West Cumbria as a place and hold implications for wider climate emergency politics.

As set out earlier ('Structure of this portfolio and author's declaration'), this thesis is a portfolio of work. It consists of four papers produced for publication in journals. In the sub-section that follows (1.iii), I outline these papers' key arguments and how they link together in narrative form.

1.iii. Thesis outline

This thesis is organised into five sections. Upon completing **section 1** (this section), I proceed as follows: **section 2** outlines my research field, where I examine the key concepts and areas of empirical research that inform this thesis; **section 3** discusses my methodological orientation and the methods I used; **section 4** contains a portfolio of papers; and **section 5** offers a conclusion to this thesis, where I offer some personal reflections and concluding remarks, as well as identifying opportunities for further research.

Section 4 contains four papers. **Paper 1 ('The messy politics of local climate assemblies')** analyses local authority climate emergency declarations and the pronouncement which often accompanied these – the decision to set up a local climate assembly (LCA). My co-authors and I signal that LCAs communicated a *promise*. Namely, that citizens would have the opportunity to directly shape local authority climate action plans, which local government would then use to implement bold climate policy. The paper notes, however, that local authorities lack the resources and capacities to be effective climate leaders. This raises a question: Is there a risk that LCAs may inadvertently generate citizen disillusionment and backlash when LCAs fail to deliver on their promises?

Paper 2 ('Fluid hope in a climate emergency') analyses this question in the context of West Cumbria (WC). I use interview methods to empirically examine people's experiences of the Copeland People's Panel, a LCA which ran in coastal Cumbria. My findings show that people felt a palpable sense of hope during the Panel's deliberations, believing that their efforts to devise climate policy might help build a sustainable future. When the Council did not act on their recommendations, Panellists felt disillusioned. The paper thus provides evidence which confirms the aforementioned point of speculation in the context of WC.

As well as noting participants' disappointment, the paper traces how people's experiences of hope morphed in the Panel's aftermath. Instead of abandoning hope after being disillusioned, my research participants embraced alternative promissory futures. These centred less on the possibility of enacting rapid transformation for a green transition, and more on the promise of gradual change (c.f., Mauch, 2019).

By focusing on hope's capacity to morph, the paper extends beyond the question of LCAs and their politics. It enters into conversation with wider literature about the affective politics of hope in a climate crisis (Cassegård, 2024; Head, 2016; Mauch, 2019; Stuart, 2020; Thaler, 2024). I contend that people's experiences in and after the Copeland People's Panel demonstrates that hope has a capacity to reinvent itself. The paper argues that attending to hope's fluidity has implications for empirical and normative research about hope in a climate crisis.

Paper 3 ('Re-attaching to coal in a climate emergency') and paper 4 ('Why the promise of green jobs fails to resonate') stay with the question of promissory futures in West Cumbria but address different issues. Rather than analysing people's feelings in the Copeland Panel, they explore everyday experiences of industry and how these shape people's desires for the future. The data I draw on is the product of interviews and ethnographic encounters with a wider group of residents, the vast majority of whom did not take part in the Copeland Panel.

These papers demonstrate how material cultures and political economies shape affective ties to industry, limiting the potential for a swift transition to net zero. Paper 3 analyses coal attachments. It makes the case that paying attention to the affectivities of prior fossil fuel industries helps explain why some local residents supported proposals for the new Whitehaven coal mine. They did so even whilst the majority recognised that the climate

crisis is intensifying. The papers enter into conversation with wider research about coal affects (Bright, 2012; Della Bosca & Gillespie, 2018; Rohse et al., 2020) and the political economy of fossil fuels (Lamb et al., 2020).

Paper 4 builds on paper 3 to examine attachments to the nuclear industry. I analyse attachments to both nuclear and coal to explain why anti-mine campaigners' promise of 'green jobs' has relatively limited resonance with many local people. I conclude by drawing on research which explores the relations between place and the imperative of an industrial transition (Devine-Wright, 2022; Thomas et al., 2022). I do so to explore what it would mean to articulate 'green jobs' in such a way that they would affectively resonate with people who are attached to traditional industries.

Paper 1 thus begins with a UK-wide focus. Papers 2, 3, and 4 then zoom in to examine climate politics in West Cumbria. At the same time, papers 2, 3, and 4 analyse implications which extend beyond WC. Thus, the thesis moves between analysing dynamics in a unique local place and their wider significance. I continue to explore what implications the affective politics of climate emergency in West Cumbria holds for wider climate politics in the conclusion of this thesis (section 5).

1.iv. Research question and summary of contributions

This thesis thus responds to an overarching research question: **What do people's experiences in West Cumbria tell us about the nature of affective attachments in a climate emergency?** By answering this question, I provide four novel contributions to my research field which I summarise below.

Contribution #1: I contribute to an emerging but nascent research agenda about the politics of 'attachment' in a climate crisis (Anderson, 2023a; Hentschel & Krasmann, 2024).[2] My papers foreground the fluid and sometimes ambivalent nature of people's attachments. In the conclusion of this thesis (section 5), I further reflect on the implications this holds for researching affects in a climate crisis, identifying opportunities for further research.

Contribution #2: I offer new empirical evidence about the promise of climate assemblies (CAs) and the political repercussions when attachments to CAs begin to unravel. I use my analysis of the Copeland People's Panel to provide a new concept to researchers who examine hope in a climate crisis – 'fluid hope'.

Contribution #3: I show how attachments to high-carbon industries can resurface even after people have largely detached from its promise. Climate politics researchers and practitioners should remain attentive to this danger and explore ways to (de/re)compose attachments to fossil fuel industries.

Contribution #4: I carry out a novel examination of the politics of 'non-promise' in the net zero transition. This concerns a specific issue: the need to reformulate 'green jobs' language so that it engages its intended audiences. I suggest ways in which 'non-promises' might be converted into objects which affectively resonate with communities to drive forward a rapid net zero transition.

Having briefly summarised the key contributions that my thesis makes to climate politics research, I now turn to the next section of this thesis where I position my papers within a broader research field. I explain how my papers respond and build on this literature.

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[2] Note that my use of the concept of 'attachment' is different to the way the term is used in 'place attachment' literature (Della Bosca & Gillespie, 2018). I outline key differences between these two conceptualisations in section 2.

Section 2: Research field

In this section, I discuss the research field that my thesis is positioned within. I use the descriptor 'research field' rather than 'literature review' because I do not draw on research contained within a discrete area of inquiry, as the latter term might imply. Instead, I examine and respond to conceptual and empirical literature which spans various issues and themes which, at first sight, might seem disconnected. Despite the scope of issues and themes that I draw on, my field of inquiry coheres around the core problematic which runs through my papers – what it means to affectively navigate the politics of climate emergency and its accompanying imperative of a net zero transition.

This section is divided into four sub-sections. I begin (2.i) by discussing research about the recent surge of climate assemblies (CAs) in the UK. I explain how my papers approach CAs as a politics of *affective promise*, leading me to a more theoretical discussion (2.ii) about the concepts that run through this thesis. I then discuss two other issues which are important for my research field: empirical research about climate emotions and affects (2.iii); and a related research area which examines experiences of industry and deindustrialisation (2.iv). I provide a table which summarises the research I draw on below, detailing the disciplines that these research areas have emerged from, and my rationale for drawing on them.

Table 2: Research issues/themes and their objects of inquiry

Issue / theme	Object of inquiry	My rationale for using this literature	Disciplinary origins
The (affective) politics of climate assemblies	CAs as situated politics (Labrador & Zografos, 2023; Wells et al., 2021a; Willis et al., 2022).	To understand how CAs have emerged within a specific historical context, and to explore their political consequences. This differs with more idealist approaches to CAs which dominate much of the literature (Curato et al., 2020).	Interdisciplinary environmental social sciences; applied policy research; political science and theory
	The emotional and affective politics of CAs (Andrews, 2022).	To understand how CAs are bound up in emotional and affective lives.	Interdisciplinary environmental social sciences

Issue / theme	Object of inquiry	My rationale for using this literature	Disciplinary origins
Emotion, affect, and attachment	The concept of 'affective attachments' (Anderson, 2023b), and related concepts, namely 'emotion' and 'affect' (Rohse et al., 2020).	Emotion, affect, and attachment are key concepts in this thesis.	Cultural-political geographies; sociology; interdisciplinary environmental social sciences
Climate emotions and affects	How emotions/affects bind people to fossil-fuelled lives (Daggett, 2018) or lead people to desire low-carbon futures (Andrews, 2022; Stuart, 2020).	To understand the relations between climate politics and people's emotions and affects, and their implications for a net zero transition.	Sociology; political science; cultural geographies; interdisciplinary environmental social sciences
Experiences of deindustrialisation and of industry	The affective consequences of coal deindustrialisation (Bright, 2012; Rohse et al., 2020) and people's relations with nuclear industries (Kalshoven, 2022).	West Cumbria, my fieldwork site, is an area that has experienced deindustrialisation of coal industries and maintains the presence of a large nuclear sector. These literatures signal how people become affectively bound to these industries.	Energy geographies; interdisciplinary environmental social sciences; social anthropology; sociology

2.i. The politics of climate assemblies

In recent years, climate assemblies (CAs) have garnered increasing attention from researchers, following a surge of CAs that emerged in the late 2010s and early 2020s (Elstub et al., 2021; Howarth et al., 2021b; Smith, 2021; Wells et al., 2021a; Willis et al., 2022).[3] This growing area of research has drawn on an array of different perspectives to critically assess CAs and their politics. This includes the viewpoints of deliberative democrats (Doughty, 2023; Elstub et al., 2021; Smith, 2021), inter-disciplinary social scientists (Ainscough & Willis, 2024; Andrews, 2022; Willis, 2020), and policy practitioners (Howarth et al., 2021b; Wells et al., 2021a).

Some deliberative democrats have examined the extent to which CAs align with the ideals of deliberative political theory (Curato et al., 2020; Doughty, 2023). This type of analysis begins with the ideal forms of political behaviour envisioned by political theorists and then assess real-world political practices against them (Curato et al., 2020).

An alternative approach has been to examine CAs as a form of situated politics. This seeks to understand how CAs have emerged within a specific historical and political milieu, and the extent to which they advance net zero policy objectives (Andrews, 2022; Howarth et al., 2021b; Labrador & Zografos, 2023; Wells et al., 2021a; Willis et al., 2022).

Policy researcher Candice Howarth and her co-authors (2021) adopt this approach. They focus on CAs which have been carried out at a local level and draw attention to "the political, cultural and institutional landscapes from which local emergency declarations [and accompanying climate assemblies] have been spawned" (Howarth et al., 2021: 27). Their paper assesses the challenges that these landscapes imply for the possibilities of rapid climate action.

Similarly, climate governance researcher Rebecca Willis and her co-authors contextualise CAs within a wider set of difficulties (Willis et al., 2022). They include the problems that "democracies face in tackling climate change, including short-termism; the ways in which

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[3] Climate assemblies are sometimes referred to as 'climate juries'. The difference between them is that assemblies involve large numbers of citizens, usually more than 80 people. Juries tend to be smaller, often recruiting 25 to 30 people (Willis et al., 2022).

scientific and expert evidence are used; [and] the influence of powerful political interests" (Willis et al., 2022: 8).

In this thesis, papers 1 ('The messy politics of local climate assemblies') and 2 ('Fluid hope in a climate emergency') build on this literature. Paper 1 explores opportunities by which the challenges that the aforementioned research identified might be worked through. It analyses a 'convenient fiction' that political actors use to narrate the rationale for running CAs. This depoliticises CAs and their origins, implying that they are the product of dispassionate decision-making. The paper concludes by suggesting that policy actors could be more explicit about the messy politics of CAs when they communicate their purpose to wider audiences, to help other actors push against the structural constraints of CAs.

Paper 2 ('Fluid hope in a climate emergency') also provides a granular analysis of the politics of CAs. But it does so from a different perspective. It traces people's experiences in and after the assembly, contributing to comparable literature which examines the intensity of affects and emotions that people sometimes experience as CA participants (Andrews, 2022; Labrador & Zografos, 2023). This foregrounds the 'human side' of being involved a climate assembly.

In addition, paper 2 alerts CA researchers to a slightly different dynamic. It focuses on people's experiences of disappointment in the aftermath of a climate assembly, highlighting what it means to be moved by the *promise* of climate assemblies and the repercussions which unfold when that promise begins to fray. In doing so, it gestures towards wider socio-emotional dynamics about why people have attached to climate assemblies in a conjuncture marked by fear of impending catastrophes.

As researchers have noted, the wave of recent CAs did not occur in a historical vacuum (Andrews, 2022; Howarth et al., 2021b; Labrador & Zografos, 2023; Wells et al., 2021b; Willis et al., 2022). Rather, CAs are a political response to a societal predicament, namely that political institutions appear to be unable to implement meaningful climate policy despite an ever-intensifying climate crisis. As Rebecca Willis and her co-authors argue:

> "The promise of climate assemblies is that the recommendations of citizens will break through the current political impasse on climate change...Citizen [assemblies] are not constrained by party-electoral motivations or the influence of vested

interests and are in a position to consider their own and others' futures." (Willis et al., 2022: 5)

This theme repeats itself throughout the literature on climate assemblies. Time and time again, researchers point to the need to be politically innovative to accelerate climate policy, placing hope in the capacity of CAs to accelerate climate action (Doughty, 2023; Howarth et al., 2021b; Smith, 2021; Wells et al., 2021b).

Yet, in recent years, it has arguably become increasingly apparent that the promise of CAs is not being fully realised. In most cases, CAs have not led to transformative change (Labrador & Zografos, 2023). A key question that emerges is: If people attached to the political possibilities of CAs, what happens when its promise begins to unravel?

There has been relatively little research exploring this question (Andrews, 2022; Elstub et al., 2021; Labrador & Zografos, 2023). Paper 2 helps to fill this research gap. Paper 1 also contributes more indirectly by asking what happens when CAs do not achieve their objective. It remains open, however, to the possibility that CAs may yet have a substantial impact. This may be in part because it was written two years ago, when the promise of CAs maintained a stronger grip on researchers, including myself.

Paying attention to CAs and their politics thus surfaces questions about the nature of experience and emotions amid the intensities of a climate emergency. Far from being a product of dispassionate decision-making – as suggested by the convenient fiction in paper 1 – CAs are always bound up with questions about what it means to 'feel' one's way through a crisis.

This leads to issues which reach beyond the scope of CAs and concern wider questions about affective politics in our conjuncture. Indeed, there is an area of literature which has made the relations between people's emotional and affective experiences and climate politics a central object of inquiry (e.g., Anderson, 2023a; Cassegård, 2024; Thaler, 2024). This research presents valuable material to understand what it means to experientially confront a climate emergency. I examine this literature later in this section.

Before, though, I offer a more conceptually oriented discussion about how 'emotion' and related concepts like 'affect' and 'attachment' have been understood by social scientists.

This helps me to explain the conceptual repertoire which climate emotions and affect researchers drawn on. It also allows me to make explicit how these concepts are used in my papers. I begin by situating my analysis within the turn towards affect within the critical social sciences and humanities in the mid-1990s (Knudsen & Stage, 2015).

2.ii. Emotion, affect, and attachment

Researchers have explored the relations between politics and emotions for many decades (Hochschild, 1983; Williams, 1958). But 'emotion' and 'affect' became central objects of inquiry thirty years ago, following the 'affective turn' in the mid-1990s (Knudsen & Stage, 2015). This signalled a shift away from a preoccupation with the "content and structures of signification" (Knudsen & Stage, 2015: 2). Instead, researchers increasingly attended to elements of social and political life seen as existing in excess of (though always entangled with) discourse and language, including "embodied experiences…[and] pre-cognitive" (Rohse et al., 2020: 138) phenomena.

Since then, there has been a proliferation of writing about emotion and affect in diverse fields – including in geography (Anderson et al., 2023; Anderson & Holden, 2008; DeSilvey, 2012; Rohse et al., 2020; Stephens, 2022), sociology (Bright, 2012; Bright & Ivinson, 2019; Walkerdine, 2010; Walkerdine et al., 2012), anthropology (Stewart, 2007), and political science (Capelos & Demertzis, 2022).

As some have noted, the multiplication of research in this area means that an "excess of theories of affect and emotion…haunt the social sciences" (Anderson & Holden, 2008: 156). Further, 'affect' is a capacious category which is prone to being used in related but different ways. It is important to explicitly articulate, then, how emotion and affect are conceptualised when researching them.

In this thesis I use 'emotion' and 'affect' in broad alignment with how they are used by some critical geographers and interdisciplinary environmental social scientists (e.g., Anderson & Holden, 2008; Rohse et al., 2020). I refer to 'emotions' as phenomena with a relatively clear and distinct form, such that a person can say with a degree of certainty that they feel a specific way (Hochschild, 2016). Understood as such, emotions are feelings which have been codified (Massumi, 2022) and might be ordered in binary relation to one another, as with emotions like being happy/sad, or feeling proud/ashamed.

This definition correlates with understanding emotions as phenomena which are primarily lodged with individual bodies, rather than circulating between (Rohse et al., 2020). Note that I differ with how cultural theorist Sara Ahmed (Ahmed, 2014) thinks of 'emotion', for whom emotions are more relational.

I use 'affect' to refer to moods, intensities and energies that circulate "within and between bodies" (Pile, 2010: 10). Unlike emotions, affects are more subtle and elusive, and as such are more akin to 'feelings' given their relatively amorphous form (Coleman, 2024). As Melanie Rohse and her colleagues put it, they are sometimes conceptualised as 'pre-cognitive' and as such arguably less "readily explained through language" (Rohse et al., 2020: 138). Instead, they demand a certain degree of attuning for research purposes and can only be approximated (Stewart, 2007) – a point I return to in my 'methodologies and methods' section.

As energies which move in and between bodies, affects have a constitutive effect on how people behave, shaping dispositions and orientations towards the world. In this sense, I understand affects as forces which inform "what a body can [and can't] do" (e.g., Anderson & Holden, 2008: 145).

Whilst the concept of affect is important in this thesis, my focus is more specifically affective *experience*. Like others before me (Anderson, 2023b; Bright, 2012; DeSilvey, 2012; Rohse et al., 2020), I am interested in the relations between forms of signification and the affective forces which are simultaneously constitutive of and in excess of signifying systems. In analysing this dynamic, I foreground how culture constructs meaning as much as the moods and intensities which both shape and disrupt people's capacities to make sense of the world (Knudsen & Stage, 2015).

In this sense, I thus examine a slightly different set of dynamics to researchers who focus more closely on more-than-human affective forces. This includes political philosopher Jane Bennett, who examines how forces and the vitality of matter move *through* bodies. In doing so, she arguably does more to decentre the human subject (Bennett, 2009). It also includes anthropologist Kathleen Stewart, whose work uses experimental writing to explore how affects destabilise sense-making (Stewart, 2007).

A third concept is 'attachment'. Recently introduced into the sub-discipline of cultural geography by Ben Anderson, attachment refers to the magnetising force that subjects experience when they encounter promissory objects (Anderson, 2023). The 'objects' that people can attach to are potentially infinite. They can extend to "home, Gods, Brexit, lost hopes, how another person laughs, non-human worlds, land, whiteness, nation, a phrase" (Anderson, 2023b: 393). What matters is that the object comes to feel necessary to a way of life such that it is experienced as containing a 'promise' – a desirable or valued future.

'Attachment' has comparisons with the concept of 'place attachment', a term which has been used extensively by geographers and sociologists, including in the energy social sciences (Cass & Walker, 2009; Della Bosca & Gillespie, 2018; Devine-Wright, 2013; Gormally et al., 2014). Both refer to a process by which people become bound to something which is cherished and fundamental to people's sense of orientation in the world. But there are important differences between the two. Most obviously, place attachment focuses on attachment to place. Attachment theory as used in this thesis emphasises the multiplicity of objects that people can become affectively bound to (Anderson, 2023). This might be a place, it might be something in a place, or it might have little to do with place.

Building on this differentiated starting point, the meaning of attachment is conceptualised differently in the 'place attachment' and cultural geography 'attachment' literature. A commonly used definition of place attachment is the "ecological, built, social, and symbolic" (Hummon, 1992) bond between people and where they live. 'Attachment' as used in this thesis foregrounds movements and trajectories through processes of attaching and detaching to myriad objects (Anderson, 2023; Berlant, 2011).[4] As will become clear, using attachment in this way helps me think through what it means to live in a moment of climate emergency given my focus on the fluidity of affective experience.

My use of emotion, affect, and attachments is thus inspired by prior conceptual work in the critical social sciences and cultural theory. In the following sub-section, I turn to exploring how researchers have employed these to make sense of politics in a moment of intensifying climate crisis, situating how my thesis responds to and builds on this field of inquiry.

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[4] This is not to say that that 'place attachments' are thought of as static. In fact, the very opposite is the case (Devine-Wright, 2013).

2.iii. Climate emotions and affects

Critical social scientists have examined the relations between climate politics and people's emotions and affective experiences (Anderson, 2023a; Cassegård, 2024; Daggett, 2018; Larrington-Spencer, 2024; Norgaard, 2011; Thaler, 2024). One overarching motivation for researching this question is that climate change and energy transitions have historically been dominated by disciplines with a techno-economic lens (Lawhon & Murphy, 2012). These tend to discount the importance of people's experiences and feelings, both of which are crucial to understanding the possibilities for enacting a rapid transition towards sustainable futures.

There are two main strands in the existing literature. First, scholars have explored how emotions bind societies to high-carbon futures. A seminal book is sociologist Kari Marie Noorgard's (2011) *Living in Denial*. She shows how people in Norway's oil-dependent economy are subject to, and reproduce, the social organisation of climate denial. They do so even whilst they experience the dangerous consequences of climate change in their lives. Comparably, political scientist Cara Daggett (2018) develops the concept of 'petromasculinities'. Attending to affective-gendered ties, argues Daggett, helps explain why political actors mobilise denial discourses and how these shore up support for extractive industries.

More recently, denial rhetoric has given way to discourses of delay (Lamb et al., 2020). Researchers have thus turned to examining how delay discourses are politically effective when they marshal attachments to high carbon objects (Paterson et al., 2024). This includes attachments to high-carbon diets (Sievert et al., 2022) and fossil-fuelled forms of mobility (Larrington-Spencer, 2024).

A second strand of this literature concerns emotions and affects which move people in the opposite direction – to desire low-carbon futures. Researchers have examined the experiences of environmental activists (Robson, 2025; Stuart, 2020), public sector workers (Lysack, 2012), and scientists (Head & Harada, 2017), among others. As this work has shown, these groups experience a variety of 'eco-emotions', like anxiety (Head & Harada, 2017), sadness (Lysack, 2012), grief (Head, 2016b), guilt (Lysack, 2012), and excitement (Klein, 2019).

One emotion or affect that is receiving increasing attention is the role of hope (Cassegård, 2024; Mauch, 2019; Robson, 2025; Stuart, 2020; Thaler, 2024). At the crux of this emerging line of inquiry is what it means to hold hope in circumstances that often feel hopeless. Scholars have attempted to answer this question by pointing to the different forms of hope that emerge in a climate crisis, including 'slow hope' (Mauch, 2019) and 'radical hope' (Thaler, 2024). Despite these differences, a unifying theme is that hope seems to re-appear in surprising and new guises, despite some people's best efforts to succumb to hopelessness (Cassegård, 2024).

In this thesis, I draw on both of these research strands. Paper 3 ('Re-attaching to coal in a climate emergency') echoes and builds on earlier work on the relations between economic power and people's emotional-affective lives (Daggett, 2018; Norgaard, 2011). It shows how the promise of new coal extraction can lead to the resurrection of old fossil fuel attachments among communities, emphasising the durability of coal affects. This is advantageous to fossil fuel interests, who benefit from new coal extraction.

Concurrently, paper 2 ('Fluid hope in a climate emergency') examines climate affects of 'hope'. It does so by entering into conversation with burgeoning literature on hope in a climate emergency (Cassegård, 2024; Mauch, 2019; Robson, 2025; Stuart, 2020; Thaler, 2024). Drawing on my fieldwork data, I show how hope has the capacity to shape-shift, carrying implications for research about hope in a climate emergency.

Read as such, it might appear that my papers work *within* the strands of research articulated above – that it shows how people's emotions and affects can *either* reproduce *or* challenge high-carbon futures. However, I simultaneously work *against* the frame outlined above. I do so by sharing empirical material which blurs the line between pro and anti-climate action affects.

In paper 3, I show how people can simultaneously imagine the terrors of climate-ravaged futures, even whilst they become bound to fossil fuels (Berlant, 2011). Concurrently, in paper 4 ('Why the promise of green jobs fails to resonate'), I demonstrate how some people articulate the need for a net zero transition. They do so even whilst the objects made available to them about what a net zero future would look like fail to move them.

I use these findings to warn researchers of a potential risk – namely, of inadvertently reproducing binaries that present people's emotional and affective states of experience as more internally coherent than they really are. Instead, I suggest that we need to be sensitive to states of feeling which defy easy categorisation (Anderson, 2021). I expand on this point in this thesis' conclusion (section 5), where I also identify opportunities for how the ambivalences of climate affects might be further explored.

There is a final theme that my research field draws on and responds to. This concerns the nature of affective experience in industrial and deindustrialising contexts. I now turn to outlining how I situate my thesis within this literature.

2.iv. Experience in (post-)industrial places

In the past decade, a large amount of research in energy geographies and related disciplines has focused on people's experiences of deindustrialisation (Bright, 2012; Bright & Ivinson, 2019; DeSilvey, 2012; Rohse et al., 2020; Walker, 2020; Walkerdine, 2010; Walkerdine et al., 2012b). These questions have been examined in relation to wider structural trends, whereby many industries have been outsourced from Euro-American contexts to countries in the Global South (Gibbs, 2020).

Deindustrialisation in the UK and elsewhere has had severe consequences for communities who previously relied on industries to make ends meet. Areas which depended on mining, manufacturing, and other forms of work have faced harsh economic realities, especially when new sources of good employment have not been made available (Bright, 2012; Walkerdine, 2010).

The consequences of deindustrialisation have also been cultural. As geographers Mark Alan Rhodes II and Amy Walker put it, "[m]any communities were devastated by the loss of industry, losing not only their primary employers and sources of income but also the unifying factor at the core of places' identities" (Rhodes II et al., 2020: 7). Similar studies have been carried out by other critical researchers, unmasking the disorienting effects on people's sense of place in the world when a local factory or mine has closed down (Bright, 2012; Gibbs, 2020; Rohse et al., 2020; Walkerdine, 2010).

What is less known is how people experience deindustrialisation in contexts where the closure of one set of industries dovetails with the arrival of new ones. One might expect that the traumas experienced elsewhere might not transpire in such contexts, given the opportunities afforded by new forms of work. Yet, I show in paper 3 ('Re-attaching to coal in a climate emergency') past industrial lives can still haunt contemporary generations, even when attachments have reassembled around new infrastructures.

One factor why the afterlives of industry can linger is because newer infrastructures fall short of reproducing the promises of prior industries. This leads me to issue a warning about the durability of attachments and how they can be (re)constituted in contemporary worlds, even when they appear to have dissipated.

Another area of literature examines the relation between people's experiences of (de)industrial places and the imperative of a net zero transition (Brock et al., 2021; Cherry et al., 2022; Devine-Wright, 2022; Thomas et al., 2022). These studies focus on the importance of place, and how people's embeddedness within localities open opportunities or lead to challenges for industrial decarbonisation (Cherry et al., 2022; Devine-Wright, 2022; Svobodova et al., 2021).

As Gareth Thomas and his co-authors argue, places are "assemblages of embodied and emotional relationships between infrastructure and local people, within which everyday life is produced" (Thomas et al., 2022a: 83). Net zero strategies must account not just for the importance of material interest and the role of discourses but, rather, for the way relationships and everyday rhythms form within places, constituting people's lives as meaningful and, in turn, shaping people's imagined futures (Cherry et al., 2022).

What some of these studies have paid less attention to is how net zero policies are often encountered with a combination of incredulity and a lack of desirability from their intended beneficiaries. This is a pertinent issue to explore because delivering a rapid transition requires that people *believe* that industrial decarbonisation and the roll out of green industries is possible. Otherwise, it is likely that the political base of support for net zero will not materialise, risking the reproduction of high-carbon futures (Ainscough et al., 2024).

Paper 4 examines this issue by analysing what happens when proposals for a green industrial renewal are encountered by people who see them less as a promise and more as a 'non-

promise'. By examining expectations of work and affects in my fieldwork site, I show how proposals for the delivery of 'green jobs' over 'brown jobs' lacks resonance with my interviewees, not least because my research participants do not trust democratic institutions to deliver well-paid, secure green jobs.

I thus argue that delivering a net zero transition requires that the state can show it is capable of delivering on promises of change. Otherwise, proposals for fossil fuel and other unsustainable industries will continue to be appealing to some publics (Fearn, 2024).

Having outlined how I situate my papers within my research field, I now turn to section 3. This provides an overview of how I approached the opportunities and challenges of researching people's affective experiences in my fieldwork site.

Section 3: Methodology and methods

This section proceeds in three stages. First, I describe my methodological orientation (3.i). I provide an outline of the research tools I employed, discuss my positionality, and examine ethical issues. Second, I offer an overview of my fieldwork site, including its history and contemporary socio-economic landscape (3.ii). Third, I explain how I collected and interpreted my fieldwork data (3.iii).

3.i. Methodological orientation

Research tools

What methods might researchers use to examine people's affective experiences? Should scholars employ quantitative or qualitative approaches, or a combination of the two?

Some scholars use quantitative tools, including numerical methods to analyse people's affective engagement with online media content (Knudsen & Stage, 2015) and surveys to create intricate patterns about everyday experiences and emotions (Chen & Cheng, 2022). Others suggest that qualitative methods are more appropriate (Alasuutari et al., 2008). They arguably possess an epistemological advantage insofar as they are more adept at capturing nuance and, thus, can better account for the intricacies of people's feelings (Alasuutari et al., 2008).

Further, some opt to use a mixed-methods approach, foregrounding that qualitative and quantitative techniques can be used in combination (Andrews, 2022; Knudsen & Stage, 2015). Researchers can cast a wide net by using numbers to glean initial headline data to later delve deeper by using methods like interviews (Andrews, 2022). Arguably, the more one uses mixed methods approaches, the blurrier the line between the "well-rehearsed qualitative/quantitative divide" becomes (Knudsen & Stage, 2015: 26).

Yet, in my research I employed qualitative tools, in line with most approaches taken in affect research (Anderson et al., 2023; Anderson & Holden, 2008; DeSilvey, 2012; Rohse et al., 2020; Stephens, 2022). I determined that qualitative methods' reliance on the presence of the researcher's body possessed its own distinctive advantage, given that affective experiences arise in the encounter between bodies in scenes, events, and the flow of everyday lives. I also found that qualitative methods carried practical advantages. Questions could be assembled in real time to respond to data as it emerged in my encounter with research participants (Ross et al., 2009), rather than having to be decided in advance.

Having determined that I would use qualitative methods, I explored which specific tools I would use. Researchers have employed interviews (Anderson & Holden, 2008; Bright, 2012; Rohse et al., 2020) and embodied and experimental methods (Robson, 2024) to examine affect. Scholars' choice of tools vary depending on the extent to which they understand 'affect' as something that can be gleaned through language (Rohse et al., 2020). Whilst there are disagreements, most agree that interviews can be used to gain significant insight into understanding people's states of feeling (Anderson & Holden, 2008; Bright, 2012; Rohse et al., 2020), even if affects cannot be fully linguistically represented.

I thus chose to use interviews as my primary method. Recognising the opportunities of creative methods, I supplemented this with other tools, namely audio-visual props, mobile techniques, and ethnographic observation. These helped me further attune to intensities and moods in my fieldwork site. I return to my use of create methods in sub-section 3.iii, where I detail the opportunities and challenges of my research tools for examining affective life.

Questions of positionality

I opened this thesis by sharing my experiences on Westminster City Council, where I described how I became heavily involved in a campaign to declare a Climate Emergency. Since then, I have continued to serve as an advisor to climate commissions and advisory boards. Some of the issues I examined in West Cumbria – in particular, that many of my research participants desired the opening of a coal mine – were thus at odds with my own normative and political commitments.

I navigated this tension by embracing methodological relativism during fieldwork, seeking to suspend normative judgements whilst collecting data. In so doing, I sought to get closer to understanding the worldviews of my research participants, even whilst I recognised that the gap between my subjectivity and those of my research participants were necessarily always at some distance (Alasuutari et al., 2008).

I found that I was generally able to pause my own political-environmental commitments during fieldwork because of my life experiences and academic background. As a child and young person, I lived in different countries (the UK, Thailand, Peru, and India). I came to intuit that my own worldview was the product of a particular set of cultural norms and

practices, and, as such, necessarily partial. It was only later in life that I was able to articulate this appreciation on these terms, but it was a feeling that I had early on in life. This sensitivity gained intellectual coherence when I read Social Anthropology as an undergraduate, where I sought to grapple with the multiplicity of cultural perspectives which permeate the world (Lewis, 2012).

Embracing methodological relativism helped me navigate, rather than resolve, the tensions my research project involved. I remain committed to use my research to advance the imperatives of rapid climate action. I cannot disentangle my interest in climate politics from my own attachments. Indeed, despite my commitment to methodological relativism, in certain moments I found myself affected by controversy over the coal mine. I experienced strong emotions when I read online forums where some people articulated support for the new mine. At times, feelings of dismay and even anger surfaced because of the threat these articulations posed for deepening the climate crisis.

Yet, I recall experiencing these strong emotions most strongly in the build up to conducting fieldwork. During my time in West Cumbria, I found myself absorbed in the work of trying to attune to my research participants' feelings. In conversations I sensed that very few interviewees deliberately obfuscated climate change facts. Rather, their perspectives rested on an internal logic which seemed rational when understood on its own terms. A new mine would bring new jobs; connected with people's sense of heritage and identity; and was justifiable when understood through the lens of discourses of delay (which, as I argue in paper 3, had been internalised by many residents).

Nonetheless, my own normative commitments sometimes surfaced. In an interview with a member of the 'We Support West Cumbria Mining' group, I questioned his support for the mine, pointing out that opening new coal extraction threatened to derail international climate targets. He responded that "[humans] will adapt and overcome whatever comes at us". I was startled and momentarily bemused. He seemed to accept the argument that the coal mine would be bad for the climate; yet he still supported it. But this feeling dissipated as the conversation progressed, as I found myself drawn back into seeking to understand the discourse he articulated.

Since completing my fieldwork research, I have deployed my research to explain why it is that some people desire new fossil fuel extraction, and how policymakers and campaigners can sow the seeds of support for a transition away from coal and other high-carbon industries (e.g., Fearn & Lewis, 2024). In doing so I hope to play a small part in helping political actors respond to and rework attachments to fossil-fuel industries towards alternative ends, in dialogue with communities.

Ethical challenges

My positionality raised challenges. I occupy a position of privilege (I am an educated, middle-class, heterosexual, cisgender male) (Alasuutari et al., 2008). I sought to navigate this by being aware of how I presented myself to people, communicating verbally and through my body language that conversations should be conducted on an entirely consensual basis. I told my research participants that they had the right to end our conversation whenever they wanted to.

I found that my interviewees were keen to share their views. Most seemed to enjoy the fact that I was there to listen and have extended conversations with them. In this sense, the very act of carrying out interviews seemed to generate an ethic of attentiveness that my research participants appeared to appreciate and respond positively to.

Using what some argue is best practice (Warnock et al., 2022), I compensated my interviewees, providing a £20 voucher for their time or donating the money to a local charity if they preferred me to do so. Those who accepted a voucher payment gladly accepted it. All interviewees were provided with a participant information sheet before the interview began and signed a consent form. The documents I provided to research participants are included in appendix 3.

I held unplanned conversations during fieldwork in October and November 2022. Unlike my interviews, these were not recorded. Instead, I noted down key memories from these conversations after having them. In these conversations, I asked people whether they were happy for me to use the information they had given me. In the rare occasion that people said they were not happy for me to, I did not write down any notes after our encounter. As these were unplanned and usually shorter conversations, I did not record participants' names or provide them with compensation.

Although I tended to steer clear of talking about my political persuasions, I assume that my research participants intuited that I was unlikely to be a supporter of the coal mine, given that in interviews I explained I was based at Lancaster University's Environment Centre. Interestingly, very few of my research participants asked me for my opinions. They seemed happy to assume a social role as 'interviewee', whilst I adopted the position of 'interviewer'. This generated some ethical dilemmas. I wondered whether I was placing myself in an extractive relation with my research participants – where they offered me 'data' without fully understanding my own political-environmental commitments.

The question about whether I navigated this challenge effectively has returned to me multiple times since completing fieldwork. It might be argued that I should have been more upfront about my convictions given my background. Perhaps it would have been more transparent to make clear from the outset that I thought that opening a new coal mine was irresponsible in the face of a climate emergency. I will likely return to this question when I undertake comparable research in the future.

I was surprised how little data I gleaned regarding gender issues. I had expected this to surface repeatedly as a theme, given the rich literature on gender and (de)industrial lives in the UK has evidenced (Renold & Ivinson, 2014; Walker, 2020). It seems very likely that I was less likely to notice gender dynamics because of my own positionality. More generously, it could be that my position as a man prevented this type of data from surfacing.

3.ii. Context for research: West Cumbria

West Cumbria is located in north-west England, south of the border with Scotland. It is geographically isolated from the rest of England and has poor transport connections with the rest of the UK (Chapman, 1993; Kalshoven, 2022). Many say that it feels like a place which is rather forgotten (Davies, 2012).

During the early period of the Industrial Revolution, the area was a hub for coal extraction. This made it economically important for England and empire, with its dozens of coal mines helping to power imperial expansion (Davies, 2012; Donaldson, 2022). Coal-based industries declined in the twentieth century (Whitehaven Town Council, 2023), but unlike other parts of the UK, deindustrialisation did not lead to widespread deprivation, even though some communities faced hardship. Many workers transitioned from working in coal to being employed in the nuclear industry which arrived in the area in the 1950s (Whitehaven Town Council, 2023).

Since then, nuclear has continued to be an important employer. 'Sellafield' – as the nuclear complex is now known – is based in what until recently was known as Copeland district, the area where the Copeland People's Panel was held.[5] It currently employs more than ten thousand people (Oxford Economics, 2017). Many workers receive relatively high wages; their jobs are unionised and relatively secure (Davies, 2012; Kalshoven, 2022; Oxford Economics, 2017).

In recent decades, the West Cumbria area has seen the arrival of renewable industries, in particular the installation of wind farms – some onshore, but mostly offshore. As I explain in paper 4, these have provided relatively little local employment. The wind farms are foreign owned, with little connection to the area (Cumbria Action for Sustainability, 2021; Robbins, 2021). Since the controversy over the Whitehaven mine erupted, policymakers have focused attention on how the area might house new green industries, including new wind farms (Cumbria Action for Sustainability, 2021), green hydrogen plants (Robbins, 2021), and steel recycling factories (Bedendo, 2019).

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[5] Following the reorganisation of local government boundaries in the area, Copeland has now become part of a larger area – 'Cumberland'.

3.iii. Fieldwork research in West Cumbria

I carried out fieldwork research in two stages. First, I explored people's everyday relations with industry. I used this data to write paper 3 ('Re-attaching to coal in a climate emergency') and paper 4 ('Why the promise of green jobs fails to resonate'). Second, I examined individuals' experiences in and after the Copeland Panel, using this data to write paper 2 ('Fluid hope in a climate emergency'). The data I collected is summarised in table 3.

In what follows, I explain how I collected data in the field and, second, how I interpreted and reported on that data. This reflects the chronological stages that I followed. Yet, the way I made sense of my data was not as linear as the stages I outline below might suggest. Whilst I was immersed in the field, I engaged in data analysis – during interviews themselves, where I drew patterns between themes and issues as they emerged in real time; and in the exploratory writing that I conducted. The boundaries between data collection, organisation, and reporting were thus not strictly separately but, rather, intermeshed (Alasuutari et al., 2008).

(A) Data collection

Table 3: Data sources

	Title	Authors	Dataset	Data collection method
Paper #1	The messy politics of local climate assemblies	Lewis, P.; Ainscough, J.; Coxcoon, R.; Willis, R.	NA	No data was used for this paper. It drew on existing empirical research about climate assemblies (CAs) and authors' experiences of running or advising CAs
Paper #2	Fluid hope in a climate emergency: Lessons from an English citizens' jury	Lewis, P.	Dataset A	Three sets of data were used: i. Interviews with 11 Panel participants ii. a focus group with four of them iii. relevant sections from the Copeland People Panel's report (Shared Future, 2021).

	Title	Authors	Dataset	Data collection method
Paper #3	Re-attaching to coal in a climate emergency: The case of the Whitehaven mine	Lewis, P.	Dataset B	Two sets of data were used: i. Interviews with a sample of 24 residents chosen using purposive sampling ii. ethnographic data (ethnographic data included notes about my own observations in the area, and notes from spontaneous conversations with residents (15))
Paper #4	Why the promise of green jobs has limited resonance: Industrial attachments in a net zero transition	Lewis, P.		

Affective experiences of industries and deindustrialisation (October & November 2022)

Interview recruitment

I used a purposive sampling approach (Flick, 2022), recruiting twenty-four residents for interviews who were broadly representative of the area, by age and gender (as I detail in the appendix of papers 3 and 4). I chose this approach to help increase my chances of being exposed to a variety of perspectives.

I deliberately avoided using a 'snowball' approach, which risks a situation where the researcher speaks to people with similar perspectives (Parker et al., 2019). Instead, I recruited interviewees through different channels – through my contacts at Cumbria Action for Sustainability, through political party networks, and through an individual I was introduced to with connections across different social groups in the area.

In qualitative research, it is common for scholars to use a 'saturation' approach, whereby the researcher stops recruiting new interviewees when new issues or themes no longer surface (Brinkmann & Kvale, 2014). My interviews however explored people's life experiences and feelings in depth, generating new issues in every interview. I consequently used a method of data 'sufficiency' (Malterud et al., 2016), where I stopped recruiting participants when a clear pattern of common themes and issues had been generated, even though full 'saturation' had not been achieved. It seems unlikely that saturation can be achieved when conducting affect research (Knudsen & Stage, 2015).

My sample included residents and stakeholders, many of whom had a special interest in energy issues. On the issue of the Whitehaven coal mine, of the twenty-four people I interviewed, eight were directly involved in a professional capacity or as campaigners in debate about whether the mine should be approved. The rest were aware of the controversy over the mine and were mostly able to speak to the issue at considerable length. My interviewees typically had extensive firsthand knowledge of Sellafield, not least because many worked in the industry. Finally, on the issue of green industries, the majority were able to speak with some confidence about the topic. But some people had relatively few things to say about renewable industries, given the lack of connection in the area to industries that they thought of as 'green'. This proved a significant finding, a point I return to in paper 4 ('Why the promise of green jobs has limited resonance').

Approach to interviews

I was energised by a desire to pay attention to how my interviewees 'thought-felt' (Ingraham, 2023) their relations with industry. I allowed myself to be oriented by feelings and energies as they surfaced in conversations, following issues which seemed to exert a gravitational pull on our conversation (Knudsen & Stage, 2015). This included paying attention to tone of voice, gestures, and other forms of embodied communication.

I prepared a topic guide, provided in appendix 2 of this thesis, to ensure that key issues were covered (Brinkmann, 2014). Attending to the flow of conversation whilst attempting to hold onto the topic guide outline meant that I moved back and forth between structure and fluidity. Working with this dynamic seemed to work well in ensuring that interviews were sufficiently contained, such that they did not overflow into entirely novel areas, whilst allowing them to be flexible. As I now detail, I supplemented my interviews with creative tools – visual methods, walking interviews, and ethnographic notes.

Creative methods

First, at the end of interviews I showed research participants photographs of coal mine infrastructures, Sellafield, and wind farms (provided in appendix 2) to explore whether this elicited additional data (Davey, 2024). I found that pausing to look at photographs typically generated interesting observations. Hence, paper 4 ('Why the promise of green jobs lacks resonance') draws on exchanges with my interviewees whilst looking at photographs.

Second, where possible conversations were conducted as walking interviews along Whitehaven harbour (Ross et al., 2009). Mobile methods lend themselves to attuning to feelings which are set in motion alongside the movement of bodies (Ross et al., 2009). In addition, mobile interviews had the practical advantage of allowing interviewees and I to walk past landscape markers (windfarms in the sea and statues of miners) to comment on during the interview. In total, only five conversations were conducted as walking interviews. I offered walking interviews to all my interviewees, but it was often not practical: it was raining; my research participant was not especially mobile; or they preferred to stay put.

Unlike prior researchers employing mobile methods have suggested (Ross et al., 2009), I did not find that there was a very strong difference between walking and static interviews. I used the same topic guide and a similar style of interviewing; as such, the content and focus

of conversations was the same. Likewise, I did not notice significant differences in regard to how participants commented on the landscape.

Where differences surfaced, they concerned the extent of flow during conversations. Although static interviews typically followed a relatively fluid rhythm, there was a slightly greater sense of ease when I conducted walking interviews. Conversations about the coal mine and the nuclear industry seemed to unfold in a way which were less prone to generating a defensive posture. Perhaps the movement of my body and that of the interviewee – the fact that we moved in the same direction, rather than facing one another – lent itself to a dynamic where participants felt slightly more relaxed.

Third, I used ethnographic observation methods (Alasuutari et al., 2008), noting down my experiences and thoughts in a notepad and as voice messages that I later transcribed. This included my feelings whilst walking past derelict coal infrastructures, and my experience of driving up to the Sellafield site. I did not systematically compare these notes and feelings with those of my research participants. Rather, they were used to alert me to my own experiences and observations of being in the field. I make use of this data in paper 3 ('Re-attaching to coal in a climate emergency').

Affective experiences of the Copeland People's Panel (January 2024)

Interview and focus group recruitment
To research people's experiences of the Copeland climate jury, I contacted all thirty participants who took part in the Panel (Shared Future, 2021). I did so with the help of Shared Future, a Cumbria-based community engagement company who were commissioned to run the Copeland People's Panel on behalf of Copeland Council. Their CEO kindly sent all of the Panel participants an email on my behalf inviting them for interview. Eleven people responded, and I interviewed all of them. Eight of the interviews were conducted in person, and three online.

I invited all of my interviewees to take part in a focus group, with four of my research participants taking up the offer. The focus group was conducted on the last day of my fieldwork in West Cumbria. I outline my approach to and rationale for conducting a focus group below.

Approach to interviews

As with my research in October and November 2022, I used a topic guide to loosely structure interviews whilst allowing space to explore unexpected issues. Echoing the methods I used to research experiences of industry, I was keen to create an atmosphere which was conducive to flow and to gleaning people's affective experiences (Knudsen & Stage, 2015). I thus attempted to pay attention to my research participants' verbal and non-verbal forms of communication, following intensities and moods as they surfaced.

At the end of my interviews, I showed participants a short, four-minute film. The advantage of audio-visual methods is that it allows for the expression of feelings and emotions that might otherwise remain at bay (Denton, 2016), especially when the interviewer and interviewee are new to one another. The film I used has been used in international climate summits (United Nations, 2021). It features images of natural landscapes interspersed with visuals of extreme weather events, and communicates the opportunities afforded by tackling extreme climate change. I found that interviewees were typically moved when they watched the film. Most interviewees commented that watching the film reminded them of the dangers of failing to act on climate change.

Approach to focus group

When I completed my first round of fieldwork in 2022, I felt that my research would have benefited if I had had an additional opportunity to speak to my research participants. Even though my interviews had reached data 'sufficiency', there were issues and themes that had been thrown up during interviews that seemed to beckon me into exploring them further.

Upon commencing my second round of fieldwork in 2024, I thus decided that it would be good to create an opportunity to hold a follow-up conversation with interviewees. I chose to run a focus group. This seemed like an efficient way of speaking to multiple interviewees at the same time. I was also curious to see how research participants would reflect back on their experiences of the Copeland Panel in a group setting.

On reflection, I suggest that I could have approached this challenge differently. If my goal was to create a space to follow up on issues that I anticipated would emerge during interviews, I could have planned to conduct a second round of one-to-one interviews, rather than a focus group. A focus group is a distinctive method that differs sharply from interviews – where the object of focus is the exchange between participants, with the researcher

playing a more minor role than in interviews (Wynne & Waterton, 2007). My plan for data collection could have done more to acknowledge and incorporate these differences in method and the types of data that they generate.

Copeland People's Panel report

Finally, I selected a section of the Copeland People's Panel report for analysis. The Panel report is a long, 106-page document (Shared Future, 2021). Much of it concerns procedural questions which were not relevant for my research question. I therefore did not include most of the Report as material for analysis. Yet, page 29 includes a 'panel statement', where jury members communicate their vision for a hopeful future for Copeland. Pages 30 to 42 subsequently detail a list of policy recommendations. For example, page 30 contains recommendations about the provision of jobs for a green economy, and page 31 talks about the need to improve local transport. Given the importance of this material for my research project, I selected these sections (pp.29-42) to include in my analysis.

(B) Data organisation and reporting

Table 4: How I interpreted and reported my data

	Title	Authors	Dataset	Data analysis method
Paper #1	The messy politics of local climate assemblies	Lewis, P.; Ainscough, J.; Coxcoon, R.; Willis, R.	NA	No data was used for this paper. It drew on existing research and each author's experiences of being practically involved with climate assemblies
Paper #2	Fluid hope in a climate emergency: Lessons from an English citizens' jury	Lewis, P.	Dataset A (interviews; a focus group; a section of the Copeland Panel report)	Coding of all of my interviews, focus group data, and the relevant sections of the Copeland People's Panel report (Saldaña, 2014). Reporting my findings by writing freely whilst checking against coded material to ensure what I was writing accurately represented my data.
Paper #3	Re-attaching to coal in a climate emergency: The case of the Whitehaven mine	Lewis, P.	Dataset B (interviews and ethnographic data)	Coding of all of my interviews and ethnographic data, including notes following spontaneous conversations and my observations in the field.
Paper #4	Why the promise of green jobs has limited resonance: Industrial attachments in a net zero transition	Lewis, P.		Reporting my findings by writing freely whilst checking against coded material to ensure what I was writing accurately represented my data.

I used a similar analytic process to examine datasets A and B. In both instances, I adopted conventional forms of analysis using coding (Saldaña, 2014) and creative techniques (Marvasti, 2008). I followed three steps, detailed below.

Step 1: Creating a codebook

To begin with, I digitalised, transcribed, and imported all of my data into coding software NVivo. With all of my data in one place, I embarked on creating a codebook. First, I selected a sample of interview data[6] to develop a draft codebook. Second, I tested the codebook, using another sample of interview data. In so doing, I added new codes and amended existing ones to create categories which were collectively exhaustive (Saldaña, 2014). After a further round of iteration, I found that I no longer needed to create additional codes or amend existing ones to code new data. I thus determined that the codebook was robust and did not require additional amendments.

Codebooks for datasets A and B typically contained two or three layers of code: a header code, a sub-code, and a sub-sub-code. Header codes for dataset A were mostly developed deductively to resemble the structure of my topic guide. Thus, they were organised to attend to people's experiences in the jury, people's feelings after its completion, and broader issues – including the potential for citizen deliberation and action to respond to the climate crisis. I followed a similar, primarily deductive, process to develop header codes for dataset B.[7]

All sub-codes and sub-sub-codes for datasets A and B were developed inductively to respond to core themes emerging from the data. For example, for dataset A, sub-codes included issues such as 'council lack of accountability and communication' and 'lack of leadership', both of which sat under a header code entitled 'experiences after the Copeland Panel'. For dataset B, sub-codes included 'jobs' and 'environmental impact', which sat under a code entitled 'Whitehaven coal mine'.

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[6] It made sense to use interview data for this purpose, rather than other forms of data (e.g., ethnographic, or focus group data) given that interviews were my main source of data in both datasets A and B.

[7] In a small number of cases, I used an inductive process to develop header codes for datasets A and B. I did so when I encountered themes which did not fit the structure of the topic guide. For example, for dataset B, one of my header codes referenced people's experiences of politics. This was not a key theme which featured as a key topic of conversation in my topic guide, but it appeared frequently in conversations. It made sense to make this theme into a headline code for data organisation purposes.

Step 2: Coding data and exploring ideas

I subsequently coded all of my data. My experience coding data sometimes sparked an idea. I creatively explored these thoughts as they formed by using freewriting techniques (Marvasti, 2008). I would sometimes write for long periods of time, for up to forty-five minutes or an hour, before returning to coding. Thus, by the end of the coding process, I had additional text that I could draw on for paper writing purposes.

Having all of my data organised into categories was very helpful. The codes organised a large and otherwise unwieldy dataset into categories so I could trace continuities and discontinuities in participants' responses with more ease. I subsequently proceeded to draw on coded data for paper writing purposes.

Step 3: Using coded data for paper writing

As outlined earlier in section 2, I conceptualise 'affect' as that which is entangled with and constitutive of discourse and verbal forms of communication. Consequently, I approached my coded interview data as expressive of people's affective states of feeling, rather than being separate to or existing in dichotomous relation with other forms of affective experience (e.g., embodied experience). Thus, papers 2, 3, and 4 draw extensively on verbal and written data (interview data; focus group data; notes from informal conversations through ethnographic encounters; and relevant sections of the Copeland People's Panel) to make sense of people's states of feeling as they related to my core objects of study.

Yet, this approach generated its dilemmas. It is arguable that focusing on discursive forms of representation without attending to elements like embodied experience and forms of non-discursive communication risks backgrounding valuable data which provides a more complete appreciation for people's affective states (Knudsen & Stage, 2015). This presented me with a challenge: how to interpret and write about coded data in such a way that extra-discursive elements could shine through, even whilst these forms of data were not my main data source.

I sought to navigate this challenge in different ways. First, my interview data and the informal conversations I had recorded in my research diary sometimes contained notes which I had jotted down to capture my perception of people's embodied communication.

Where possible, I drew on this data in my papers to describe aspects such as tone of voice and gesture. See, for example, paper #3 ('Re-attaching to coal in a climate emergency') – where I recall the gestures and facial expressions of a conversation with a woman in her 80s, who recounted anecdotes about local life felt like when coal mines and other industries were still in operation.

Second, whilst writing my papers, I allowed myself to cast my mind back to my experiences in the field to complement my fieldwork notes. I dwelled on what it viscerally felt like to spend time walking around the centre of Whitehaven or interviewing research participants. Thus paper #3 includes elements of my own memories and diary notes wandering around Whitehaven. I describe finding points of connection with participants' experiences of Whitehaven as a "ghost town" – a description which is haunting and connotes an atmosphere[8] that jolts the body.

This links to a third point. Verbal data often foregrounds people's embodied experiences. I thus sought to pay attention to this kind of data where it existed. To give one example, in interviews for paper #2 ('Fluid hope in a climate emergency'), participants used language that pointed to their embodied sensations following feelings of disappointment in the jury's aftermath. This included words like "deflated", a descriptor which points to an embodied sensation – a feeling of emptiness when aspirations are not realised. Despite the three points I articulate above, it might be argued that my fieldwork would have benefited from a more systematic approach to collecting experiential data, which I reflect on further now.

Research limitations

There are two limitations I would like to draw attention to. First, I could have done more to get closer to embodied forms of data. One route would have been to more systematically record participants' non-verbal forms of expression, taking more time to jot down my observations and doing so more systematically. Another approach would have been to use

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[8] In this sentence, I use the word 'atmosphere' in its everyday, colloquial sense. But it is worth pausing to note that 'atmosphere' has been conceptualised within affect studies to carry its own particular meaning. Melanie Rohse and her colleagues argue that atmosphere "provides a more 'grounded', place-based notion of affect and one that gives more attention to material aspects" (2021: 138). My use of 'affect' arguably contains similarities with the concept of 'atmosphere' as it is described here and comparable literature. Yet, I do not draw on it conceptually in this thesis, in part because I offer a more capacious conceptualisation of 'affect' which is broad enough to encapsulate some of its elements. Indeed, my use of 'affect' is thoroughly material insofar as I see it as emerging within energy systems, such that I speak of 'coal affects' and 'nuclear affects'.

diary methods, asking participants to reflect on their own felt experiences. Perhaps I could have used creative methods including performance and dance or painting methods, as some have done (Robson, 2024).

Second, my study would have benefited from a more immersive ethnographic approach. This would have allowed me to become more embedded in the rhythms and atmospheres which flow through West Cumbria, doing more to get closer to my research participants' experiences of the world (Alasuutari et al., 2008). This is a critique that anthropologists make of social scientists whose methods include more limited forms of ethnography or none at all (Kalshoven, 2022), an argument which I find persuasive.

Having thus outlined issues regarding my methodological approach, the context for my fieldwork site, and how I analyse and interpreted my fieldwork data, I now turn to sharing the four journal papers in this thesis. I begin with a bird's eye view of UK politics (paper 1) , where I seek to contextualise local climate assemblies as embedded within messy political processes, part of which are affective, before zooming in to examine affective attachments as they form in West Cumbria (papers 2-4).

Section 4: Journal papers

Paper 1: The messy politics of local climate assemblies

Lewis, P.; Ainscough, J.; Coxcoon, R.; Willis, R.

ESSAY

The messy politics of local climate assemblies

Pancho Lewis[1] · **Jacob Ainscough**[1] · **Rachel Coxcoon**[1] · **Rebecca Willis**[1]

Abstract

In recent years, many local authorities in the UK have run local climate assemblies (LCAs) such as citizens' assemblies or juries, with the goal of developing citizen-led solutions to the climate crisis. In this essay, we argue that a 'convenient fiction' often underpins the way local authority actors explain the rationale for running LCAs. This convenient fiction runs as follows: LCAs are commissioned as a response to the climate threat, and local decision-makers work through LCA recommendations to implement appropriate policies in their locality. We suggest that this narrative smooths over and presents as linear a process that is in fact messy and political. LCAs emerge as a result of political pressure and bargaining. Once LCAs have run their course, the extent to which their recommendations are implemented is dependent on power dynamics and institutional capacities. We argue that it is important to surface the messiness and political tensions that underpin the origins and aftermath of local climate assemblies. This achieves three things. First, it helps manage expectations about the impact LCAs are likely to have on the policy process. Second, it broadens understandings of how LCAs can contribute to change. Third, it provides a complex model that actors can use to understand how they can help deliver climate action through politics. We conclude that LCAs are important — if as yet unproven — new interventions in local climate politics, when assessed against this more complex picture.

Keywords Deliberative democracy · Climate emergency · Local authority · Climate assembly · Climate politics

1 Introduction

Since 2019, dozens of UK local authorities have commissioned citizens' assemblies, citizens' juries, or similar processes to develop citizen-led solutions to the climate crisis (Bryant & Stone 2020; Wells et al. 2021) — we will refer to these as LCAs (local climate assemblies). The proliferation of LCAs is part of a wider 'wave' of deliberative forums which aim to deepen democratic participation and practice, through giving citizens the opportunity to discuss complex policy problems including, but not limited to, climate change (OECD 2020).

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LCAs involve recruiting citizens who are demographically representative of a locality to form a citizens' assembly or jury. Usually, between twenty and a hundred people gather for multiple meetings to hear from experts and deliberate about how to achieve net-zero (Bryant & Stone 2020). Once recommendations are developed, they are presented to the local authority which responds to and usually commits to taking forward (some of) their recommendations.

As authors, we are researchers of climate politics and deliberative democracy. In addition, all four of us have been involved in setting up, advising or running LCAs. In this essay, we draw on our experience of being practically involved with LCAs as well as existing academic research.

Our argument is that a 'convenient fiction' often underpins the way local authority actors and others explain the rationale for running LCAs. This convenient fiction smooths over and presents as linear a process which is messy and political. It is important to surface the messiness and political tensions that underpin the origins and uses of local climate assemblies. In practical terms, this helps manage expectations about the limited direct impact LCAs are likely to have on the policy process and broadens actors' appreciation of how LCAs can contribute to change. Complicating the convenient fiction, as we will do here, also contributes to existing academic literature in this journal and elsewhere which makes the overarching point that LCAs (Wells et al. 2021) and the accompanying climate emergencies they usually flow from (Howarth et al. 2021) should be understood as complex and inherently political processes which cannot be understood through recourse to simplistic analytic frameworks. We now turn to describing the outline of this convenient fiction regarding the origins and use of LCAs.

2 A convenient fiction

The following narrative about LCAs is often used by political actors:

Step 1: Climate change is identified as an existential threat by scientists.
Step 2: Local authority (or other local body, e.g. a local climate commission) announces a LCA after declaring a climate emergency.
Step 3: Citizens are invited to participate through a process of sortition. The LCA meets over the course of various meetings, produces and presents its recommendations, which the local authority then accepts and/or combines with its own net zero policies.
Step 4: Net zero policies are enacted locally.
Step 5: The local area has fulfilled its climate responsibilities.

We present this narrative in Fig. 1, which makes explicit the role that different groups of actors are imagined as playing at each stage of the process.

To give one example of this story in use, on the Oxford City Council website, the council provides an explanation about why it set up a LCA. It points to the 2018 IPCC report as the starting point for the decision to set up a LCA. It then says that the 'citizens assembly… consider[ed] the measures that should be taken in Oxford… to reduce Oxford's carbon emissions to net zero' (Oxford City Council 2019). The website implies a narrative: there is a start (the IPCC report), a middle (a citizens' assembly) and an end (climate change is addressed). Similar narratives are found elsewhere (e.g. Copeland Borough Council 2021; Lancaster City Council 2019; Nottingham Climate Assembly 2020).
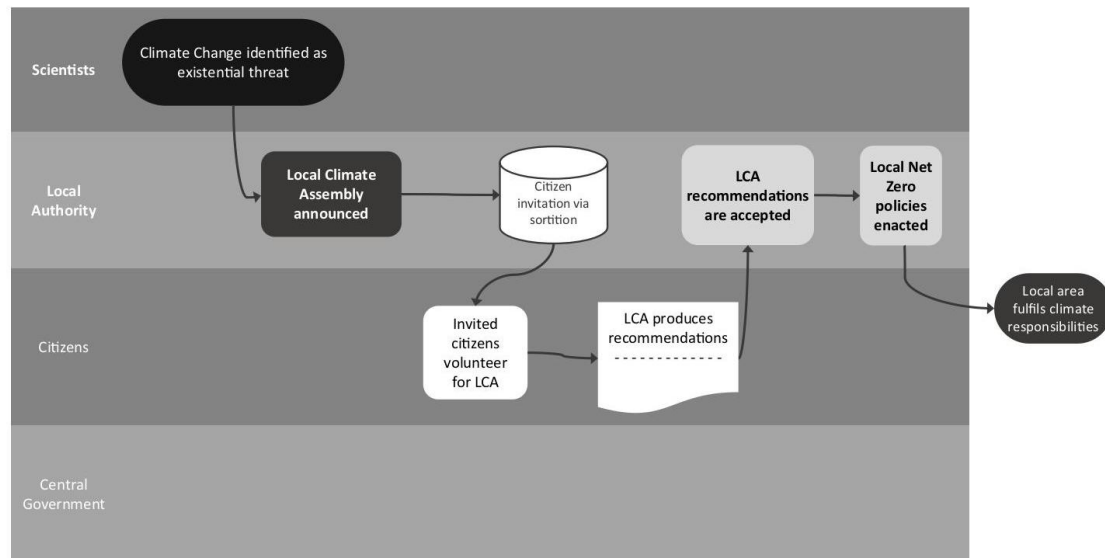
Fig. 1 Role that different groups of actors are imagined as playing at each stage of the process

Note the presentation of an *orderly* and *linear* trajectory — each stage progresses unidirectionally from one stage to the next, until the process is completed. Furthermore, the narrative is told in *depoliticised* terms — dynamics of coalition-forming and contestation by different groups of social actors are not incorporated within it.

Presenting LCAs in this way could be perceived to be tactically helpful. It provides a clear rationale for why LCAs are worth setting up, which is important given the costs and other resources involved in running LCAs. Furthermore, by presenting the origins of LCAs as driven by imperatives emerging from scientific consensus, and by minimising the role played by different political actors, the narrative pre-emptively addresses criticisms of undue influence on local authority decision-making by specific political groups. However, as we will argue in Sect. 4, deploying an overly simplified convenient fiction risks leading to unintended consequences and missing the political potential of LCAs. In the analysis that follows, we will surface the messy dynamics that LCAs are enmeshed within, and which are absent from the official accounts. In so doing, our intention is to provide a tool that local authority actors, citizens and others can use to amplify the productive political uses to which LCAs can be put.

3 The messy politics of local climate assemblies

Figure 2 is an alternative depiction of the origins, uses and potential aftermath of LCAs. It incorporates messiness, feedback loops and political contestation.[1] In this section, we will guide readers through this diagram. See Fig. 3 in the diagram keys.[2]

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[1] It should be noted Fig. 2 is not exhaustive. There are factors and dimensions which we have not included due to lack of space. It should be read as one potential diagrammatical representation that builds in messiness and politicisation.

[2] The key for the diagram is in the Appendix of this article.
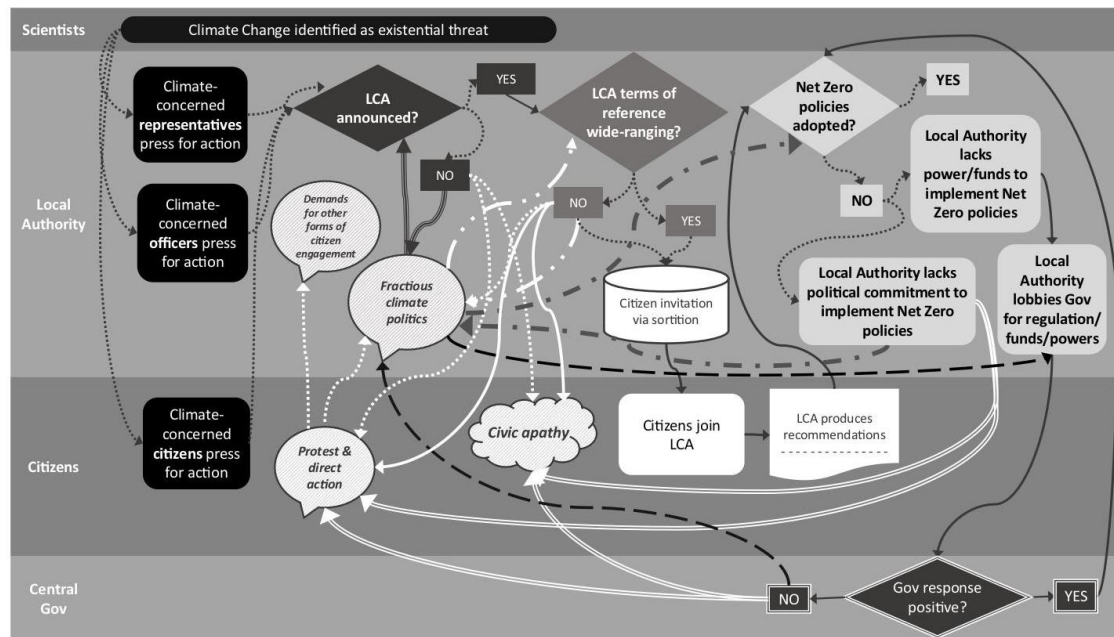
Fig. 2 Alternative depiction of the origins, uses and potential aftermath of LCAs

3.1 The origins of LCAs

On the left-hand side of Fig. 2, we include the role that different groups of actors played in starting the LCAs wave. In contrast to Fig. 1, Fig. 2 explicitly recognises the political and sometimes contested nature of the origins of different LCAs. Thus, there is recognition of the role played by citizens and different actors within local authorities, in addition to climate commissioners and scientists.[3]

In some areas, climate-minded representatives acted within councils and/or (tacitly) joined forces with citizen groups to press local authority leaders to pass motions in favour of introducing an LCA. The tactics of citizen groups varied widely, from conventional methods like petitions through to disruptive tactics like blocking roads. Whilst confrontational citizen tactics drew criticism, they created an atmosphere of pressure, which climate-minded representatives were able to take advantage of by arguing for the need to respond by implementing climate action plans, including LCAs. Many climate-minded representatives had been advocating for bold climate policy for years, often unsuccessfully, and saw an opportunity to advance the agenda they had faced barriers in lobbying for. Some pre-empted that setting up a LCA would give the green light to specific policies they wanted to see and which they had not been able to pass as elected representatives due to the lack of political pressure. As Wells et al. (2021) argue, in effect, this meant that some LCAs led to 'the introduction of pre-planned or pre-existing policies rather than a direct impact by truly being citizen-centred policy making processes or conducive to new climate policy' (p. 4). We can add the role that local authority officers sometimes assumed. Some had been quietly building support for a LCA with officer colleagues and elected representatives; this

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[3] Through research publications like the 2018 IPCC report, scientists provided a knowledge base for understanding the severity of climate crisis. This was a very important factor in the LCAs wave.

contributed to generating an environment of support for LCAs within council bureaucracies, which in turn facilitated their eventual adoption.[4]

In other contexts, however, there was little buy-in for LCAs from 'within' (from Council officers and representatives), and motions in favour of introducing LCAs seem to have been generated almost uniquely by intense pressure from 'outside' (lobbying by citizen groups). Some local authority leaders failed to make a clear commitment about the extent to which they intended to implement LCA recommendations — their decision to run a LCA represented a capitulation to citizen demands, rather than a genuine belief in the transformative potential of LCAs (Bryant & Stone 2020; Willis et al. 2022). The fact that motion templates committing to a LCA appear to have been passed between councils — sometimes with only minor modification made to motions before they were passed — is evidence that this appears to have happened in a number of cases; decisions were made in haste, rather than carefully thought through (Howarth et al. 2021).

These are just two examples of the way political forces pressed for LCAs. Other examples could be given, and other groups of actors that we have not included in the diagram could be added to it to add further layers of complexity.[5] The advantage of Fig. 2 is that it provides an account of the way messy, political dynamics underpinned the origins of the LCA wave, thus problematising the simple narrative in Fig. 1.

3.2 The aftermath of LCAs

Readers can now track back to Fig. 2. The flow chart moves to a decision point on the top right-hand corner with the following question: '[Are] net zero policies adopted?' It then splits into two potential outcomes — 'yes' or 'no'. In the short term, local authorities are unlikely to adopt wholesale the policies recommended by LCAs, for two reasons.

First, local authorities across the UK face a shortage of statutory powers and funding (c.f. Howarth et al. 2021). Thus, even local authorities with strong political buy-in for transformative climate action are likely to face considerable difficulties in implementing change. This begs the question "why did Local Authority (LA) leaders commit to running LCAs, if they knew they lacked the power to meaningfully take forward LCA recommendations?" In our experience, one reason is that some LA leaders wanted to develop an evidence-base to lobby central government for the decentralisation of powers and resources. They saw in LCAs an opportunity to use them tactically to make the case to government that there is both (a) local appetite for transformative climate action, and that (b) LAs, as custodians of a given area, are well placed to deliver that change.

This tactical move has the potential to generate two outcomes, illustrated in Fig. 2. One is that government responds positively, devolving powers and resources that facilitate the adoption of net zero policies. The other is that national government ignores such calls. If the latter were to transpire, the failure to empower LAs to enact LCA recommendations could generate a backlash — citizens would find themselves in the position of having had their expectations raised, only to find those hopes dashed, thus generating an increase in

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[4] Two of the authors were until recently local authority councillors. This is a phenomenon we have observed in our roles.

[5] For example, LCAs were sometimes instigated by local climate commissions. In these instances, they were less likely to be interpreted by non-state actors as a cover for advancing local authority political objectives or interests. Thus, the fact that these were started by local climate commissions was not purely procedural, as might be imagined, but instead had political implications.

citizen apathy or, conversely, leading to citizen discontent and protest. Thus, in Fig. 2, we have looped this potential outcome back to an increase in fractious climate politics — this is a 'feedback loop' as it returns to the environment within which many LCAs emerged. More widely, if citizens feel let down by politicians, heat in the political system may well rise further. From this vantage point, the failure to live up to LCA expectations could contribute to increasingly fraught political dynamics.

There is a second reason we believe LAs are unlikely to adopt net zero policies in the short term. We have already stated that some LAs were pressed into running LCAs without thinking through how they intended to use LCA recommendations (Bryant & Stone 2020). Lack of commitment to fully working through the implications of running a LCA may lead to rather timid climate action and policymaking, in turn feeding back into citizen discontent and/or citizen apathy.

The final loop in our diagram shows the compromise some local authorities attempted to make. Wary of their limited powers and funding, some asked citizens to deliberate only on recommendations that the LA felt it could meaningfully implement — for example, in relation to waste policy or planning, both areas that lie within the remit of local authorities. Even in these instances, feedback loops still exist. LAs which opted for this course risked coming under pressure to widen the remit of LCAs among groups who felt they were being under-ambitious.

We can see then that the aftermath of LCAs does not escape the messy dynamics that the origins of the LCAs wave were enmeshed within. As with the origins of the LCAs wave, there are additional scenarios and factors which we have not included which could be added to Fig. 2 to add further layers of complexity.

4 Implications

In contrasting the convenient fiction of LCAs with the messy realities, we are not suggesting that political actors are ignorant of the messiness. Our argument is that the convenient fiction is a common narrative used to explain the rationale for running LCAs, not necessarily a common cognitive frame. Political actors are often very aware of the messiness of political decision-making and are skilled in navigating it. Neither is this argument new — more generally, political scientists have long analysed the complicated ways in which policies and strategies emerge from governing institutions (see, for example, John Kingdon's (2011) much-cited 'multiple streams' model and Yuille et al.'s (2021) description of how local decision-makers navigate their institutions). Building on this scholarship, we suggest some advantages to being more explicit about the messiness of LCAs. We are not suggesting that political actors should always be explicit about this messiness, but that in some circumstances, being upfront about the mess, complexity and opportunity involved in LCAs would be helpful. Below, we outline three reasons accompanied by examples of tactical communications.

4.1 Expectation management

Within the linear framing, success for a LCA is usually considered to require direct policy change or, at least, changes in the thinking of key decision makers. The implied 'end point' in the process also suggests an objective point in time from which one can judge an LCA to be a success or a failure. This places an undue burden on LCAs to 'prove their worth', often within a relatively short time of reporting on their findings, making it easy for detractors to attack LCAs as ineffective, and for perceived failures to feed into apathy and dissatisfaction amongst LCA proponents and participants.

Understanding the messy political processes leading up to and surrounding LCAs helps clarify that they cannot side-step the complexity of political decision making. The messy frame surfaces barriers that may be faced both internally and externally as local authorities seek to act on LCA findings. In so doing, it can help those involved in LCAs to understand them as part of an on-going and open-ended process of political change, rather than a discrete intervention with a definite pre-determined outcome.

How might local authority actors deploy this appreciation to achieve specific tactical goals? One way is for council representatives to proactively point to the external barriers that they will face in implementing LCA recommendations to citizens who pressed for LCAs and members of the LCA. They might explain that they intend to use LCA recommendations to lobby for the devolution of power and resources, whilst committing to doing what they can to implement recommendations within their control. This would help to manage expectations, thus minimising (although as we have established not entirely avoiding) negative feedback loops.

4.2 Broader understanding of LCA impacts

As well as highlighting the difficulty of enacting change, the messy model helps to surface different ways in which LCAs can generate impact. Individual LCAs, or the wider popularity of LCAs, could contribute towards political pressure to devolve more power and resources to the local level. Such impacts could materialise even if specific LCA recommendations are not immediately acted upon. This might help increase support for LCAs among LA actors who were previously sceptical of them. This in turn might help build political support for running other deliberative initiatives in the future.

Impact assessment frameworks for citizens' assemblies have started to take a broader view of the types of impacts they consider and the timeframe over which they might materialise (Knowledge Network on Climate Assemblies 2022). Our messy model, or detailed context-specific versions of this, could help to identify impact pathways and contribute to better impact assessment frameworks.

4.3 Help actors to orientate within the process

Understanding LCAs as part of a messy and constantly unfolding political process can help different actors to orientate themselves regarding the assembly/jury and its aftermath. We would encourage citizens, local authority actors and other relevant groups to use Fig. 2 to help improve their practice, thereby drawing out the productive political uses to which LCAs might be put in advancing climate goals.

The diagram and the argument we have presented clarify that LCAs are not just a source of policy ideas, but a potential tool for overcoming feelings of civic apathy, or increasingly fractious politics. This understanding may influence how council officers and representatives interpret and communicate the process and plan follow up work that builds on good will generated through LCAs. For example, local authority actors could use the diagram to identify points in time when they could design further interventions to advance net zero political objectives, like rolling out new citizen engagement activities to build support for new funding arrangements for specific decarbonisation activities.

Actors outside of councils campaigning for LCAs might use this analysis to gain a better understanding of the barriers officers and representatives face and the political battles and calculations involved in acting on recommendations. This more nuanced understanding may help in the process of relationship and coalition building that is central to any political change.

Finally, there would be merit in a more systematic academic analysis than we have provided in this essay, of the ways in which political actors navigate the LCA process. This could, for example, involve researchers working alongside political actors (be it local authority representatives or citizens) at each stage of a LCA process to map the dynamics and tensions, and to encourage reflection on the part of practitioners.

5 Conclusion

The recent wave of LCAs has been a significant development in local climate politics, as part of a wider trend in the use of deliberative processes aimed at deepening democratic engagement for climate action (Willis et al. 2022). However, we argue that if LCAs are justified using too simplistic or linear an account of change — what we call a convenient fiction — then there is a danger that their contribution will be dismissed. They will have been set up to fail. Instead, we argue that LCAs do not transcend local politics, but are themselves an intervention in a messy, political reality. Their impact should not just be judged against the question of whether policies recommended by LCAs were adopted, but against the wider question of whether they contribute to an emboldened local climate politics able to enact the ambitious changes necessary to meet climate goals. In addition, as we have argued, there are tactical advantages of understanding the messiness of LCAs, which involves better communicating their potential to a range of stakeholders (from citizens to internal local authority actors) as well as identifying new pathways for advancing net zero goals at the local level.
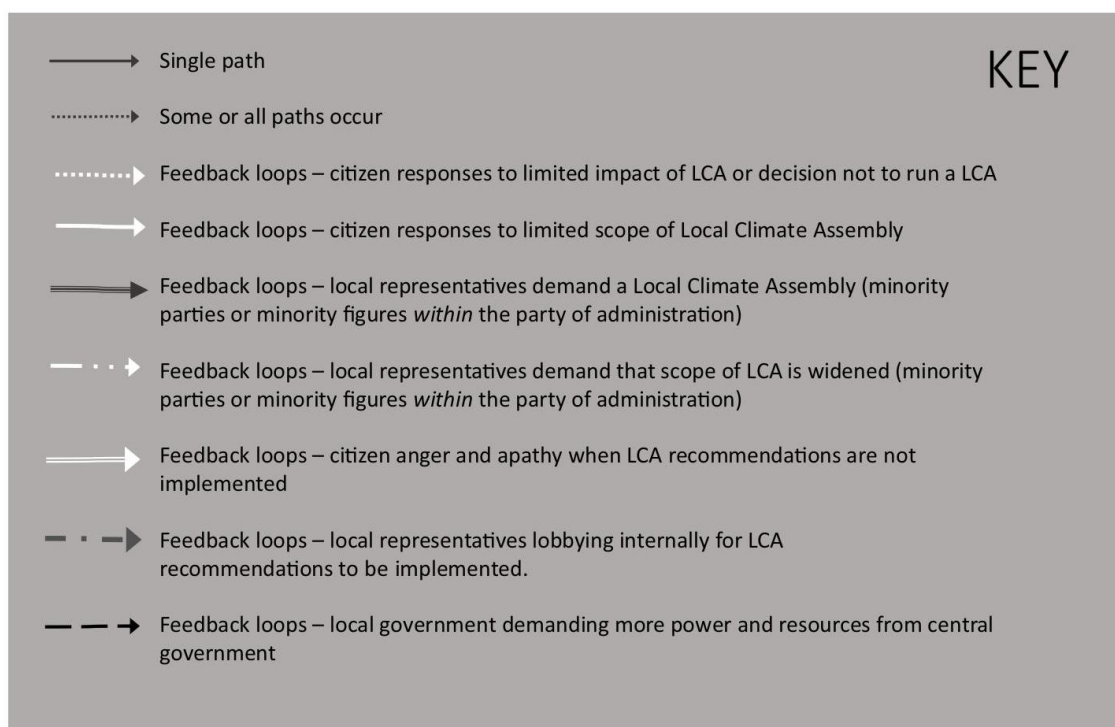
Appendix

Fig. 3 Appendix: Figure key

Data availability Not applicable.

Declarations

Competing interests The authors have no relevant financial interests to disclose. As actors involved in local authority politics in different capacities, we have a non-financial interest insofar as we have in varying ways been involved with local climate assembly projects and have a personal belief in their utility. Rebecca Willis and Rachel Coxcoon have appeared as expert speakers at local climate juries. Pancho Lewis, Jacob Ainscough, and Rachel Coxcoon have sat on local climate assembly oversight panels. No payment was received for these roles.

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Paper 2: Fluid hope in a climate emergency: Lessons from an English citizens' jury

Lewis, P.

Abstract

What does it mean to build an authentic politics of hope in a climate crisis? Researchers have explored this question by examining the emergence of different forms of climate hope. This includes urgent, slow, and radical hope, each of which express different promises for the future. In this paper, I make the case for attending to 'fluid hope' to foreground how different forms of climate hope are subject to being re-configured and can be co-constitutive. I do so by drawing on a case study, that of the Copeland People's Panel, a climate citizens' jury in northern England, where people's experiences of hope changed in and after the Panel. I conclude by explaining what possibilities the concept of fluid hope affords for empirical study and normative debate about hope in a climate emergency.

Word count

8011

Keywords

Hope; affect; climate emergency; time; citizen jury

1. Introduction

As the risk of climate breakdown drifts closer on a darkening horizon, researchers are examining what it means to assemble an affective politics of hope in a climate emergency (Cassegård, 2024; Mauch, 2019; Stuart, 2020; Thaler, 2024). One question that is receiving increasing attention proceeds as follows: How do people construct hopeful futures which face up to, rather than downplaying, the climate risks that humans face? As existing literature has shown, social actors have responded to this challenge in different ways, drawing on divergent ideas about the proper nature of climate hope. This includes urgent (Klein, 2019; Nissen & Cretney, 2022), slow (Mauch, 2019), and radical forms of hope (Stuart, 2020; Thaler, 2024).

Yet, less attention has been paid to how forms of climate hope morph when people experience changing circumstances demanding novel responses. Another area that is under-explored is the way that different forms of climate hope can be co-constitutive, such that the lines between them can become blurred. In this paper, I build on existing research about climate hope by arguing for the need to attend to the fluid workings of hope, or what I call 'fluid hope'. As I will argue, seeing hope through this lens sensitises researchers to the temporal dynamics of hope and holds implications for normative debate about hope in a climate crisis.

My argument emerges from the analysis of a case study, that of the Copeland People's Panel (Shared Future, 2021). A citizens' climate jury which took place in 2021, the Copeland Panel followed in the footsteps of other climate juries in the United Kingdom (UK) and elsewhere. These gave diverse groups of people not ordinarily involved in policy-making the opportunity to have a direct say in how local (and in some cases national) governments should respond to the climate crisis (Willis et al., 2022).

The jury I focus on was held in north-west England. Residents explored how to chart a climate-friendly future for the area, and how a green transition could address other issues – including limited job opportunities and poor local infrastructure (Shared Future, 2021). As I will show, jurors in the Copeland Panel became absorbed by the event's affective atmospheres, one which hinged on the promise of rapid transition. They subsequently experienced disillusionment after the Panel failed to follow through on its promises of change. I trace what happened to people's feelings in the event's aftermath, arguing that the changing nature of hope after the jury is symptomatic of climate hope's fluid nature.

The arguments I make echo those of Ersnt Bloch (Bloch, 1998). Writing in the mid twentieth century, Bloch emphasised hope's ability to persist despite the way hope is necessarily always bound up with experiences of disappointment, thus pointing to hope's inherently fluid motions. Whilst nodding to Bloch's enormously influential writings, I attempt a more specific contribution. I analyse people's experiences in and after the Copeland panel to draw and expand on existing concepts of climate hope, providing a vocabulary to analyse hope's shapeshifting manifestations amid a climate emergency.

I proceed in six parts. Following this introduction (section 1), I review emergent concepts about the divergent forms that hope takes in a climate crisis (section 2). I subsequently describe my methods and detail my case study (section 3). I then share the findings from my case study (section 4) and finish by explaining what a focus on fluid hope achieves, both for empirical study and normative debate about hope in our conjuncture (sections 5 and 6).

2. Hope in a climate emergency

Social actors have assembled urgent, slow, and radical hope in response to the climate crisis (Cassegård, 2024; Mauch, 2019; Stuart, 2020; Thaler, 2024). These sketch different promissory futures which people attach to as ways out or routes through a problem which is existential in nature (Anderson, 2023b). The specific shape that hope takes in these imagined futures varies, as do the affective rhythms and normative commitments assembled by its different forms. I summarise these in Table 1 and examine them in detail below.[9]

Table 1

	Urgent hope	Slow hope	Radical hope
Central promise	Rapidly reducing greenhouse gas emissions	Gradual change	Possibility after catastrophes
Shape of hope in imagined futures	Relatively clearly defined hopeful future	Hazier hope	Hope less visible
Affective rhythms	Acute possibility, excitement, fast work	Deceleration and patience	Mourning and resignation
Core normative commitment	As long as extreme climate change can be averted, act with urgency	Maintaining slow hope in the face of crises	Deconstructing 'false hope' to lay the ground for radical hope

2.1. Urgent hope

Urgent hope centres on the promise of dramatically reducing global greenhouse gas emissions to achieve internationally agreed targets. It is a capacious category which describes the impulses of an array of actors. This includes policy advisors and scientists pressing for change within state institutions and bureaucracies (Radunsky & Cadman, 2021). It also includes people involved in political movements, like activists campaigning for Climate Emergency declarations (Nissen & Cretney, 2022) and a Green New Deal (GND) (Klein, 2019).

The worldviews of people who embrace urgent hope are thus extremely varied. So too are the tactics that they employ to press for change. People who work within institutions typically seek consensus-building (Willis et al., 2022), whilst those engaging in overtly

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[9] This is not an exhaustive account of different forms of hope in a climate crisis. Rather, there are other typologies of hope that I do not include here (e.g., Cassegård, 2024).

politicised spaces are more likely to adopt contestatory dispositions (Klein, 2019). Despite these differences, urgent hope actors maintain that rapid decarbonisation is still within reach, even whilst recognising that greenhouse gases continue to rise after years of political action to reduce them.

In inspiring fast work to enable societal decarbonisation, the promise of urgent hope can inspire excited affects and an acute sense of possibility (cf. Anderson, 2017). At the same time, feelings of fear and despair surface as actors oscillate between optimism and pessimism, depending on feelings about the likelihood of success (Andrews, 2022). Urgent hope actors typically articulate relatively clear agendas for change (e.g., Climate Assembly UK, 2020; Klein, 2019). Concerted action of the type that urgent hope mobilises seems to rely on the ability to sketch a more or less clear promissory future. In doing so, a relatively defined goal emerges that actors can coalesce around to push for change.

Urgent hope is readily identifiable in the behaviours of individuals directly involved in climate action and policymaking. Yet, it should be seen as circulating within wider social arenas, such that it might be felt by wider publics not immediately involved in change-making activities. This might include people engaging with climate change through film who find themselves moved by the spectacle (Sakellari, 2015). As Nadine Andrews' (2022) paper about the Scottish Citizens' Assembly on Climate Change suggests, urgent hope can stir the feelings of people chosen to take part in climate assemblies and juries, even if many of those involved had limited prior involvement with climate action. My empirical research echoes Andrews' (2022) findings, as will become clear later in this paper.

2.2 Slow hope

The affective pull of urgent hope contrasts sharply with that of 'slow hope'. Coined by the historian Christof Mauch (2019), slow hope philosophies suggest that genuine hope for the future is not located in projects attempting rapid change. Rather, hope is nurtured by paying attention to the small steps that communities are taking to show that living otherwise is possible. The concept is an inversion of Rob Nixon's (2011) notion of slow violence. In making this conceptual reconfiguration, Mauch makes the case for attending not only to the gradual ways that "climate change ha[s] created violence…[but also to] actions that work quietly towards a more hopeful future" (Mauch, 2019: 20).

Mauch points to communities that embody slow hope, from the Slow Food movement in Italy through to efforts to rewild university campuses in Taiwan. Despite their different geographies, those engaged in these practices are committed to a "longue durée perspective on hope" (Mauch, 2019: 17). They maintain faith that small actions can add up to building a more climatically and ecologically balanced world.

Mauch pre-empts the charge that it is incongruous to celebrate gradual change in the face of rapid environmental breakdown, suggesting that slow hope's power lies in its commitment to slowing down. In doing so, slow hope disentangles itself of late capitalist rationalities of increasing acceleration, which arguably underpin the climate crisis (cf. similarities with Rosa, 2016). Implicit within the logics of slow hope is a view that more or less severe crises cannot be entirely avoided. Yet rather than seeing this as a reason to abandon hope, slow hope

readily "acknowledges setbacks" (Mauch, 2019: 17), operating through a "dialectics of ecological crisis, environmental awareness, and necessary action" (Mauch, 2019: 17). Crises inspire further, albeit patient, action.

Slow hope foregrounds what geographer Angharad Closs Stephens has elsewhere described as the importance of "calmness, determination [and] the art of endurance" (Stephens, 2022: 74). It induces affects which decelerate the body's rhythms. Whilst urgent hope attempts to inspire publics to mobilise around relatively clear agendas for change, slow hope sketches promissory futures with a less determinate shape. As geographer Lesley Head might put it, hope for the future is more "fragile and messy" (Head, 2016: 80). Individuals are asked to adopt a sensibility which is "attentive to the [need to]… adapt, navigate, and improvise" (Stephens, 2022: 74). There is an explicit appreciation that crises require creative responses as circumstances continually change.

2.3 Radical hope

A third form emerges with radical hope. Articulated by the philosopher Jonathan Lear (2009), radical hope centres on the ability to maintain hope in ostensibly hopeless circumstances. Lear developed the concept to describe how Plenty Coups, a Native American chief of the Crow tribe, led his people through the cultural devastation wrought by settler colonialism.

Environmental politics researchers have borrowed the concept to explain hope's logics among post-apocalyptic groups (Stuart, 2020; Thaler, 2024). For political scientist Mathias Thaler (2024), this includes the Dark Mountain Collective (DMC). DMC refuse to entertain the view that anything can be done to "redeem us on an environmentally ravaged planet" (Thaler, 2024: 318). Thaler suggests that by adopting this disposition DMC sow the seeds of genuine hope for the future. He draws on sociologists Carl Cassegård and Håkan Thörn's analysis of the "paradox of hope – the fact that hope is sometimes gained not by promoting explicitly hopeful messages, but by ostensibly denying hope" (Cassegård & Thörn, 2018: 571).

If hope for the future is 'hazy' in slow hope philosophies, in radical hope its outlines are blurrier still, possibly undetectable. As such, radical hope can lead to withdrawal and disengagement from the possibility of short to medium term change (Cassegård & Thörn, 2018; Thaler, 2024). Actors take part in an extreme waiting game, pushing the most stoical to their limits.[10]

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[10] There is some disagreement here. Sociologist Diana Stuart (2020) examines the experiences of Extinction Rebellion (XR), arguing that the radical hope which XR campaigners experience inspire its own distinctive form of activism. XR activists embrace the view that there "is not a hope for a world without global warming and species extinction, as it is too late for that world" (Stuart, 2020: 488), but they simultaneously engage in disruptive political action. They do so "because they believe it is the right thing to do regardless of the outcome" (Stuart, 2020: 498), not because "they think XR will succeed" (Stuart, 2020: 498). Note here that Stuart seems to be making a case for the need for political action to accompany hope. In so doing, she echoes arguments made by climate justice authors, including Maddy Lauria (2022) and Rebecca Solnit (2010). Both articulate the view that hope is most meaningfully realised when accompanied with action, reminding readers that hope without action is a privilege which not all social groups can afford.

According to political theorist Bonnie Honig (2015), radical hope involves elements of practice with a calming function. Drawing on D.W. Donald Winnicott, Honig argues that radical hope relies on the creation of 'holding environments' which can carry people "through the end of life as they know it and out the other side" (Honig, 2015: 626). For Winnicott these are "the performative product[s] and postulate[s] of transitional activity (e.g., being held and handled, hand holding, play)" (Winnicott 1964, quoted in Honig, 2015: 627). Children reach out to these for stability during the chaos that child development entails. Yet, as Honig argues (2015) (and as I will show in section 4) holding environment objects serve as objects of continuity which anyone reaches out, regardless of age, when everything threatens to fall apart.

Environmental researchers have, as noted, examined how post-apocalyptic groups express radical hope (Stuart, 2020; Thaler, 2024). But I suggest that actors in varying situations can experience forms of hope which are akin to radical hope – ranging from how teachers find hope in contexts of uncertainty (Edgoose, 2009) through to how academic publishers navigate rapidly changing, hostile worlds (Joy, 2014).

In so doing, the specific form that radical hope takes varies. In some cases, hope is barely detectable (Thaler, 2024). In others it is located on a stretched out horizon but slightly more visible (Joy, 2014). The point is to note how radical hope surfaces in diverse contexts and is articulated by actors who otherwise might escape attention. Building on this intuition, I will suggest that forms of climate hope which are comparable to radical hope can be expressed by people who have been involved in citizen climate juries, even if they do not have a history of association with climate activism.

2.4 Normative differences

Urgent, slow, and radical hope mobilise divergent views about the proper shape of hope in a climate crisis. Urgent hope springs forth from the premise that there is still time to avert extreme climate change (Klein, 2019; Nissen & Cretney, 2022). The view that emerges is that as long as the possibility of averting runaway climate change remains, the only appropriate response is to continue acting at pace.

Slow hope advances different normative commitments. It suggests that projects aimed at rapid transformation promise too much, perpetuating the problem they seek to address: Accelerating in response to the problem of acceleration (Mauch, 2019). The appropriate response is to celebrate and embrace slower actions.

Radical hope shares slow hope's conviction that the promise of rapid transformation should be approached with caution. But it takes this suspicion much further. It advocates that the best response is not to resist collapse but to embrace or, at the very least it, accept it. Only by doing so does authentic hope for the future surface (Stuart, 2020; Thaler, 2024).

Contrasted in this way, it is unsurprising that we find some of those who valorise different forms of hope accusing each other of a reckless response to the climate emergency. Those advancing urgent hope criticise actors who articulate post-apocalyptic narratives as "passivizing, defeatist and apolitical" (Cassegård, 2024: 2). This includes eco-Marxian

researchers like Andreas Malm (2021). Malm says that post-apocalyptic voices misconstrue the future as pre-determined rather than relatively open. In so doing they eschew their responsibility to act. Radical hope actors retort that those promising urgent change are only adding fuel to fire. They perpetuate the false belief that there is still time to prevent catastrophes. The ethical response is to "stop investing faith in [tales of] redemption and resolution" (Thaler, 2024: 319).

Notwithstanding the importance of normative debate about hope in a climate emergency in section 5, I will argue that normative discussion should be conducted cautiously. Doing so is important to avoid obscuring how different forms of hope can be co-constitutive and mutually dependent. I do so by drawing on my own findings in section 4. These make explicit hope's shape-shifting nature. With this in mind, I turn to describing the background to my case study and the methods I used to examine feelings in and after the Panel.

3. Case study and research method

3.1. Case study

Copeland is located in north-west England and lies south of the Scottish border[11]. The area faces several challenges, including poor local transport services and socio-economic deprivation in some of its neighbourhoods (UK Government, 2019). A large nuclear complex is the main employer in the region and provides well-paid, secure jobs for thousands of residents (Oxford Economics, 2017). But there is a sense of over-reliance on the nuclear industry for work, and it is common to hear residents express desire for more diverse employment options (Lewis, 2024; Wynne & Waterton, 2007).

Copeland is vulnerable to extreme weather events because of its proximity to the sea and susceptibility to heavy rainfall (Cumbria Action for Sustainability, 2021). But its access to natural resources like wind could make it a prime spot for investment in low-carbon industries. There has been considerable policy focus about how to make the area a hub for new green jobs (Cumbria Action for Sustainability, 2021).

The People's Panel was set up in 2021 for residents to have a say about how to meet these challenges. Thirty residents were selected to take part, chosen to be demographically representative of the area (Shared Future, 2021). Panellists learnt about climate change by listening to expert testimonies and deliberated about potential solutions. Upon completing the process, they wrote a series of recommendations in a report (Shared Future, 2021) and handed it over to the Copeland local government authority – which I will refer to as the local authority, or simply Council. The expectation was that the Copeland local authority would implement the recommendations in part or in full, with the help of other organisations. As suggested in the local newspaper, hope seemed to build up during residents' deliberations that the Panel would help usher in a new era of socio-environmental change (The Mail, 2021).

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[11] The local authority area recently merged with a larger local authority area known as Cumberland as is no longer known as Copeland (Cumberland Council, 2023).

3.2 Method

Data for this paper was collected from three sources: interviews, a focus group, and the Copeland People's Panel report (Shared Future, 2021). All 30 jurors were contacted and 11 agreed to be interviewed. I spoke to a sample of people who were roughly representative of the jury's diversity to capture a range of perspectives (cf. Flyvbjerg, 2006). The appendix in this paper outlines in detail the demographic data of those I spoke to in contrast to the thirty people who made up the jury.[12]

Interviews were conducted in January 2024, two years and three months after the Panel was completed. This timing was chosen so that jurors could speak about their experiences of the jury with hindsight and express their feelings about what had happened since, but not so long after that memories of the Panel would be more diminished.

Conversations lasted between forty-five minutes and an hour and a half, and the focus group lasted for an hour and a half. Both the interviews and the focus group were lightly structured to cover key issues, whilst allowing flexibility to delve into new areas as unanticipated topics came up (Brinkmann, 2014). I asked research participants what it felt like to take part in the Panel and what had happened after the jury's completion – in particular what effect the Council's response had in relation to how they now felt about the event. I showed my interviewees a short four-minute film about climate change (United Nations, 2021) to draw out emotions they might have experienced during the Panel (Denton, 2016).

All data was coded (Saldaña, 2014). A similar codebook was used for both sets of data, verbally expressed (the interviews and focus group) and written (the report). The codes organised data by chronology. Temporal differences between the Panel report (written at the end of jury process) and interviews and focus group data (captured more than two years after the end of the jury) helped me explore how hope changed in and after the event.

4. Findings

4.1. Urgency in the Panel

Recounting their experiences of the Panel, my research participants spoke about the intensities of being a juror. They deliberated with other panellists for many hours and grappled with a crisis which they were aware of, but which most had not had to engage with in depth before.

As the jury progressed, a sense of urgent possibilities seeped into the Panel's affective atmospheres. In their report to the Council, jurors recommended a pathway which imagined fast, transformative change – kick-starting low-carbon development for Copeland; re-working the local economy to provide diverse employment opportunities; overhauling the

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[12] Panellists who took part in the jury were recruited to be demographically representative of the area by levels of deprivation, local geography, and disability (Shared Future, 2021). I did not recruit interviewees using these factors, because my sample was too small to apply these additional criteria (Flyvbjerg, 2006). Data was collected following ethics approval from the Research Ethics Committee at Lancaster University's Faculty of Science and Technology (approval number FST-2024-3979-RECR-3).

area's public transport system; among others (Shared Future, 2021). The language jurors used valorised actions where communities "have moved quickly to seize…opportunities" (Shared Future, 2021: 29), and invoked the need for "energetic" leadership (Shared Future, 2021: 29). Jurors wrote that they had "become hopeful of what could lie ahead" (Shared Future, 2021: 29).

Reflecting back on the Panel, some research participants described experiencing excitement as jurors. In doing so, they drew attention to affects where the body's rhythms accelerate in anticipation of something significant occurring. Most indicated that the Panel was something out of the ordinary, distinguishing it from the more mundane rhythms of everyday life.

The event's extraordinary nature hinged on the way jurors felt like they were part of an empowered collective. The event created a sense of togetherness and of common endeavour (Collins, 2005) which seemed to significantly contribute to the event's palpable sense of hope.

> "Usually, it feels as though you're just one little voice. But when we come together like at the People's Panel we felt as though we weren't just one little person, we were part of a big team of people. I felt like *'oh this is good…things are going to happen'*." (male, 65+, ex-teacher; *emphasis added*)

> "So I think we had that sort of hopefulness, that camaraderie, that sense of we've got a bit of power here, we're all in agreement and we feel like we know what we're doing." (female, 25-29, consultant)

The event's urgency interweaved with promises with a slower, calmer rhythm, expressing itself in recommendations aimed at gradual, bottom-up change – for example recommendations to set up local shops encouraging sustainable agriculture (Shared Future, 2021: 70). Yet recommendations of this nature were not front and centre. Most of the recommendations pointed towards faster, large-scale changes.

The jury ended with a meeting with Council leaders, where they handed the Panel's report to them. Some described the Panel finale as a high point to end on.

> "I think that felt really empowering…It was a place where we could put our voice across…It felt like everybody was engaged and listening…Yeah, it felt like a nice high to end on." (female, 65+, ex-council worker)

4.2 Decelerating rhythms after the event

More than two years had passed since the Panel's completion when I conducted my interviews. I asked research participants if any of the recommendations they had put forward had been implemented. Most could not say. The Council had not been in touch to explain their intentions or plans. In the absence of communication from the local authority, many concluded that the local authority had either forgotten about or chosen to ignore the report. Some were more forgiving, but they were in the minority.

I asked my research participants how the Council's lack of response made them feel. Most people described feelings of disenchantment, using words like "disappointed", "frustrated",

"sad", "powerless" and "deflated". One described the Panel as "fizzling out", suggesting an image of energy packed into a concentrated space, only for it to disintegrate with limited trace for the promises it had contained.

We discussed the political barriers that had stopped the Council from implementing the Panel's recommendations. Some decried funding cuts that local governments have been subject to (Fearn, 2024). Others pointed to technocratic reasons, including a reorganisation of local government structures, arguing that these might have slowed attempts to enact the recommendations.

I proceeded to ask what hope there might now be for local change. I expected that in the aftermath of the event most would feel pessimistic about the possibility of change. But many continued to adopt relatively hopeful dispositions. In their imaginations of the future, they now foregrounded forms of hope which relied on smaller, more patient work. They spoke about the potential to establish new neighbourhood projects, like community hubs to raise awareness about the climate crisis, and centres to provide advice for how people might access green jobs. Others spoke about supporting local charities and the opportunity to run more politically oriented local campaigns.

They linked these ideas directly to the learnings that they had taken from the Panel, emphasising that grassroots projects were important for change. They also saw the act of embracing smaller change projects as a pragmatic response to the political barriers that they had experienced following the Panel's completion. In the absence of local government leadership, community action thus emerged as a practical route to work through the impasse they confronted.

Some ideas for local projects had been enacted in a limited way. One panellist had set up a climate change book club which had met a few times since the Panel's completion. That same interviewee was in the midst of starting a voluntary network to promote sustainable initiatives. She signalled that she saw this as a way to attempt to reclaim citizen power in the context of the failure of the Council to affirm it in their response to Panel. Another research participant, a woman in her late 30s, was so inspired by her experience on the jury that she returned to university to study an undergraduate degree in innovation. She hoped to use these skills to start a sustainable business.

Even whilst smaller hope was foregrounded, the promise of faster, structural changes occasionally came to the fore in my conversations. Some argued that the slower changes might have a ripple effect, leading to larger-scale impact. One interviewee articulated his feelings as follows:

> "It's like dropping a stone into a pond. You get that little ripple to start with and then what happens if you get a few more people involved, well that little stone will turn into a pebble, so that ripple…it's faster, it's larger. Then eventually once you start to talk to more and more and more people that join you drop a big boulder into the pond and, like, a big tsunami comes out you know." (male, 55-59, teacher)

I pressed him about how the slow changes he envisaged amounted to a meaningful response to the climate emergency. Was he investing too much hope in forms of practice which risked amounting to little change? He acknowledged that there was no guarantee that the change he envisaged would deliver large-scale transformations. Yet, he suggested that maintaining faith in small acts was the right thing to do, seemingly echoing Christof Mauch's (2019) argument that slow hope persists in the face of adversity.

4.3 Hope after catastrophe

Not all interviewees were overtly hopeful following the event. A small proportion expressed a gloomier outlook. I was struck by the stark depictions of a climate-ravaged future by one young woman. She recalled feeling the intensities of urgent hope during the Panel ("It's how much hope we had….We all felt we can actually make a difference. We can actually do this"). In the event's aftermath, she foregrounded a stark depiction of the future where ongoing crises have become the norm.

> "Every time there's an emergency, there'll be emergency measures put in place. I think we'll just all be living in a constant state of stress, almost…you know, no one knows what's coming next, so you just react to each disaster as it happens." (18-19, female, student)

Her imagination of the future exceeded her experiences on the Panel. It was shaped by her understanding of the threat of climate change as a young person in contemporary society. Life after the event thus seemed to cement pre-existing pessimism, rather than having created it. Yet, the shift from urgent hope to another state was striking. Hope had been palpable; now it was barely detectable.

But even within her bleak depiction of the future, hopeful images surfaced. This took some probing and only emerged towards the end of our conversation, seemingly evidencing Mathias Thaler's (2024) argument that radical hope holds out hope for the future "however deeply buried it might be within the recesses of…bleak stories" (Thaler, 2024: 324). She identified how the things that she most cherishes in life might find a way of enduring after catastrophes. Movingly, this included mountains and a lake by her house which she regularly visits with friends and family.

> "But as long as the lake is still there and the mountains are still there, still got my family, it will be all right in the end. The lakes by me are the most beautiful place in the world, you know?" (18-19, female, student)

Hope thus seemed to be made possible through the availability of objects, the lakes and her family, which took on a comparable shape to Winnicott's 'holding environment'. In an imagined future of extreme volatility, these objects endured. In doing so, they provided a calming function. As Honig might put it, they promised to carry her through "the end of life… and out the other side" (Honig, 2015: 625). Holding environments appeared in a small number of other interviews, a point I return to in the next section of this paper (section 5).

4.4 Hope in and after the Panel

Experiences of hope in and after the Panel thus proved to be remarkably fluid. During the jury, panellists embraced the possibility of rapid transformation, whilst slower change was in the background. After the event's disappointment, my research participants improvised, re-configuring the event's promises. Slow hope was foregrounded to respond to the perceived possibilities of the present.

Different forms of hope – whether of a faster or a slower nature – were not experienced as bounded. Rather, they fed into each other. During the event, urgent hope was buttressed through the seeds of slow hope. After the event, some imagined that slow hope might scale up for systemic change. They recognised that political barriers existed, and were clear that grassroots change might not amount to transformation. Yet, they saw it as a pragmatic and necessary response given the political constraints they now faced.

The contours of jurors' imagined futures also altered. Amid the event's intensities, hope for the future had a definite shape. Copeland was to embark on a purposeful journey to bring down carbon emissions and transform the local area. This vision seemed to reflect how urgent hope articulates relatively clear agendas for change. Following the event, hope's future seemed less certain, reflecting slow hope's hazier form.

It is less clear how the more radical articulations of hope I analysed connected with slower and more urgent expressions of hope. Yet, as I will argue in the next section, we should remain attentive to how forms of hope which are akin to radical hope might be bound up with other hopeful forms.

5. Fluid hope in a climate emergency

5.1. Foregrounding fluid hope

I can return to my research participants' experiences of hope to speculate how hope's temporalities might be further recomposed. Although hope decelerated after the Panel, it is possible to imagine that my interviewees might re-engage with urgent hope in the future. This might occur if participants had the opportunity to reconnect in a similar event, recreating the sense of togetherness they had experienced during the Panel (Collins, 2005). Or it might transpire if the Council chose to recognise its failures, demonstrating commitment to implementing the recommendations.

Conversely, hope might be reconfigured in other ways. If those who experienced slow hope after the Panel found that small-scale community projects amounted to little change, their practices might gravitate towards promises which are more akin to radical hope. This could happen if my interviewees experienced an onslaught of climate-induced events, leading them to distance themselves from slow hope practices. Or it might occur if my research participants gravitated towards spending more time with people who invest less faith in grassroots change, opting instead to engage with forms of practice more akin to radical hope.

Through the above scenarios, I speculate how hope's shifting temporalities are shaped by multiple factors, as different events and situations bring differing objects into focus. The

scenarios illustrate writer and activist Rebecca Solnit's rather poetic depictions of the always altering, shifting nature of hope. As Solnit puts it, hope is "not an army" (2010: 20) moving steadily and predictably forward. Rather, it is more like "a crab scuttling sideways" (2010: 20). Its unpredictable movement means that hope sometimes moves slowly like "a drip of soft water wearing away stone" (2010: 20). At other points it transforms and accelerates ferociously, like "an earthquake breaking centuries of tension" (2010: 20).

The changing temporalities of hope also find expression in interdisciplinary researcher Nadine Andrews's (2022) analysis of the Scottish Citizen's Assembly on Climate Change. She depicts how optimism during the Assembly was followed by relative pessimism, following the Scottish government's underwhelming response to members' recommendations. In her conclusion, she points out that further research is needed to "determine if and how members' emotional experiences change over the longer term" (Andrews, 2022: 17). Assembly members' experiences of hope might intensify following the election of a government inclined to take its recommendations more seriously. Or, alternatively, as with Copeland, gloom might be foregrounded if political responses continue to disappoint.

Thus, it is important to be sensitive to hope's shape-shifting nature for the purposes of empirical research. We should be attentive to the intricate nuances of the patterning of hope and its accompanying motions – whether changes in hope's forms are sudden or ebb and flow more slowly. As my analysis also showed, it is also important to bear in mind the political conditions within which climate hope forms – how these create and constrain perceived opportunities for action.

5.2 Risks with normative debate

Attending to climate hope's fluidities is important not only for empirical research. Staying with its motions holds implications for normative debate about the proper nature of hope in a climate emergency.

As I outlined earlier, scholars have argued that some forms of hope have greater normative value than others (Cassegård, 2024; Malm, 2021; Thaler, 2024). Some contend that embracing urgency is the only appropriate response in a climate crisis. They criticise those who believe that rapid emissions cuts cannot be achieved, foreclosing possibilities for just eco-social change (Malm, 2021). Others say that those who maintain faith in the promise of dramatically reducing emissions risk deluding themselves. The ethical response is to abandon belief that extreme climate change can be prevented to pave the way for more genuine, radical forms of hope (Thaler, 2024).

Engaging in normative debate of this nature is very important. It paves the way for researchers to contribute to wider public debate about how humans can navigate the climate crisis (cf. Cassegård, 2024; Malm, 2021; Thaler, 2024). Whilst stressing this point, I want to suggest that debate about proper hope in a climate emergency should be conducted cautiously. As I detailed through my case study, different forms of hope are not always distinct. Rather, they sometimes seem to support one another. During the panel, jurors felt that grassroots networks and local practices could sow the seeds of large-scale change. After the event, some people retained this view, pointing to how slow hope might be scaled up to

gain an urgent, faster rhythm – even whilst they recognised that this ambition faces political challenges.

The connection between practices of urgent and slow hope has been noted by geographer Angharad Closs Stephens. She draws attention to how urgent politics relies "on a range of emotions and affects, including calmness, determination, the art of endurance, and seeking enjoyment even in the most desperate and inhuman situations" (Stephens, 2022: 74). Stephens critiques:

> "accounts of political action as animatedness [which] may…obscure other ways we pursue change in the world, such as by making ourselves present and staying alongside others, or by enduring long-term political work without becoming 'hardened, calloused and indifferent to life'" (Stephens, 2022: 74)

Stephens is cautioning us not to put urgent politics on a pedestal, such that we ignore how smaller practices feed the emergence of rapid, more animated action. Politics which involves directly challenging an oppressor is always enabled by slower quotidian work, like daily acts of care. These provide resisting bodies with the energies to engage in more confrontational and obviously identifiable forms of politics (Stephens, 2022).

If slow hope can accelerate to adopt faster rhythms, we should consider how radical hope might enable urgent hope. In section four, I described a conversation with a young person who imagined a climate-ravaged future, one defined by perpetual emergency. For her, the lakes and the mountains by her house served as holding environments in the face of expected catastrophes. They allowed her to hold a form of radical hope for the future.

In a conversation with a woman in her 30s, similar themes surfaced. Following the jury, she foregrounded ominous depictions of the future, including dystopian scenarios where climate-induced extreme events compound the unleashing of uncontrolled Artificial Intelligence. I asked her whether there were coping mechanisms she used when she imagined the future in such bleak terms. She replied by describing what appeared to be a holding environment of her own, based on sound healing using Tibetan singing bowls. Like the young person's lakes and mountains, this practice helped her find footing in disorienting times, supporting her to move through crises ("I feel calm, just peace of mind…ignore what is happening").

We can speculate how these holding environments might act as wellsprings. They might serve to store up affective energies for these individuals to re-engage with accelerated rhythms in certain circumstances. Both had shown a capacity for urgent hope during the Panel. It seems likely that that they might reconnect with accelerating hope again, especially under certain political conditions. Seen as such, these holding environments would serve as incubators, allowing these individuals to "liv[e] on more daringly" (Stephens, 2022: 85).

It seems then that contained within specific forms of hope we find potentialities for other hopeful practices. Herein lies a pitfall which normative debate should avoid. In engaging in discussion about how some forms of hope hold more value than others, we must also attend

to how some hopeful practices make others possible, as well as the ways hope can morph to take alternative shapes.

Andreas Malm's (2021) criticism of post-apocalyptic voices illustrates what goes wrong if normative debate proceeds with insufficient caution. Malm argues that in abandoning calls for transformative change, post-apocalyptic thinkers engage in a "reification of despair" (Malm, 2021: 92). He mocks post-apocalyptic voices, depicting them as advocating that "we should cross our legs in a lotus position [in the face of emergency]. On the way down, Buddhist meditation can give us peace of mind" (Malm, 2021: 98). Malm is targeting leading post-apocalyptic intellectuals. But it is not difficult to see how this criticism might extend to others, including my research participants. As I have argued, withdrawing may help these individuals re-connect with urgent rhythms.

Criticism could be conducted differently. An alternative would be for those advocating for specific forms of hope to approach other hopeful practices as containing their own potentialities. Approached as such, they would not be portrayed as passive or insincere. Rather, they would be recognised as containing affective logics with their own political potential (Stephens, 2022). As I will now suggest in bringing this paper to a close, the need to be sensitive to hope's fluidity may become increasingly important in the years to come, for it is likely that climate hope's confluent workings will intensify further in the short to medium term.

6. Conclusion

In this paper, I have examined a case study, that of the Copeland People's Panel. As I have shown, jurors experienced morphing hopeful experiences in and after the Panel, following the Council's disappointing response. This has allowed me to argue that we should attend to hope's shape-shifting nature in our research as climate politics scholars.

Remaining attentive to climate hope's capacity to change is likely to be more important in the years to come. Global greenhouse gas emissions are on course to breach internationally agreed goals and show limited signs of abating. It is likely that an already heated set of climate politics dynamics will become more fraught (Lewis, 2024). In this context, politics will increasingly centre on what it means to navigate life through intensifying instability, with the question of what it means to hold hope for the future gaining more attention. There may be impassioned invocations for hope to become more urgent, to further decelerate, or to maintain itself positioned in longer temporal horizons. New forms of hope not yet envisioned may emerge, appearing in forms that appear unfamiliar and strange from the vantage point of the present (Waldow et al., 2024).

It is not only debate about the proper nature of hope in a climate emergency which is likely to intensify. Hope's fluid workings may become more marked, emerging with increased intensity as people navigate changing circumstances which demand further improvisation. Researchers might thus find themselves drawn into examining hopeful forms which become ever-more confluent. Were this to transpire, hope's workings would be characterised less like that of a predictable ripple, as one of my research participants suggested. Instead,

hope's motions would more likely resemble stormy conditions, drawing us into new, unchartered waters as we grapple with hope's inherent openness and capacity for re-invention as we face a radically uncertain future.

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Appendix

Table 2: Demographics of interviewees and Copeland People Panel members

	Demographics in the Copeland People's Panel	Demographics of interviewees
Gender	• Male: 50% (15) • Female: 50% (15)	• Male: 36% (4) • Female: 64% (7)
Age	• 15-19: 3% (1) • 20-24: 7% (2) • 25-34: 13% (4) • 35-49: 23% (7) • 50-64: 30% (9) • 65+: 27% (8)	• 15-19: 9% (1) • 20-24: 9% (1) • 25-34: 9% (1) • 35-49: 18% (2) • 50-64: 18% (2) • 65+: 36% (4)
Ethnicity	• White or White British: 93% (28) • Ethnically diverse communities: 7% (2)	• White or White British: 91% (10) • Ethnically diverse communities: 9% (1)

Paper 3: Re-attaching to coal in a climate emergency: The case of the Whitehaven mine

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Re-attaching to coal in a Climate Emergency: The case of the Whitehaven mine

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Abstract
This paper draws on the concept of 'attachment' to examine pro-coal sentiment in Whitehaven – an English town at the centre of global political controversy because of a plan to open a coal mine in the area. Drawing on fieldwork data, I show that pro-mine persuasions among some residents are underpinned by a process of 're-attaching' to coal. I argue that the case of the Whitehaven mine is a warning about how fossil fuels might re-emerge as promissory objects in other parts of the world, even when a transition away from fossil fuels has been completed. Paradoxically, the very disorientations and deepening traumas that climate change is causing threaten to spur on the rise of fossil fuel (re-)attachments. The paper also examines how pro-coal discourses linked to wider vested interests are received in a context where coal exists as 'afterlife'. Consequently, local actors construct narratives that legitimise new coal extraction by (re)articulating discourses of delay. My findings are thus a reminder of the need to guard against over-valorising 'the grass-roots', arguably a risk in environmental justice scholarship. I conclude by calling for further empirical research on the way attachments to high-carbon objects are (re/de)composed, an urgent task given the need for rapid societal decarbonisation – one which has received very little attention to date.

Introduction

In 2015, the United Kingdom (UK) and 195 other countries signed the Paris Agreement on Climate Change. This committed to limiting global temperature increases to reduce the risk of dangerous climate change (United Nations, 2015). To achieve this objective, the global economy must rapidly reduce its dependence on fossil fuels. In practice this means halting new sites of fossil

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fuel extraction and keeping half of all fossil fuel reserves already granted extractive permission in the ground (SEI et al., 2021). Whilst this rationale applies to oil and gas, it is especially important for coal, the most carbon-intensive fossil fuel (SEI et al., 2021).

Despite this, fossil fuel extraction continues apace. Governments continue to grant permission for new oil and gas wells across the world, with demand for oil and gas expected to continue to increase until 2030 (IEA, 2023a). Meanwhile, global coal supply has continued to rise (IEA, 2023b). In recent years, China and India have opened hundreds of new coal mines (IEA, 2023b), whilst other countries like Russia and Australia have continued to give approval for new coal extraction (Statista Research Department, 2023; The Australia Institute, 2023). Given how difficult it is proving to reduce fossil fuel dependency to avert dangerous climate change, institutions and governmental authorities across the world have rung alarm bells by proclaiming that we are experiencing a 'Climate Emergency' (e.g., Hamilton et al., 2023).

One country which appeared to have transitioned away from new coal extraction is the UK. Coal mining declined in the country throughout the twentieth century and largely came to a halt in the 1980s, following then Prime Minister Margaret Thatcher's dramatic defeat of the mining unions (e.g., Bright, 2012). However, in 2017 it was revealed that an Australian mining company had applied for permission to open a new coal mine in the northern English town of Whitehaven (Willis, 2024). This set in motion a prolonged political and legal battle over whether the mine should be granted approval or turned down, culminating in the UK Government giving it the green light in December 2022. With a new mine potentially on the verge of opening, new coal could once more become part of the UK's domestic industry landscape.

In this context, critical researchers have turned to examining the political dynamics of the Whitehaven mine. Rebecca Willis (2024) has examined governance issues related to the plans, whilst Petra Tjitske Kalshoven's (2022a) ethnographic work recognises that, despite condemnation by national and international actors, plans for a new mine are popular with Whitehaven residents. In this paper, I add a new dimension to this literature by arguing that pro-mine persuasions in the town are underpinned by a process of 're-attaching' to coal – a peculiar process which defies linear time to bring the past back into the future. However, my focus is not on Whitehaven per se. Rather, I ask what challenges the unexpected re-emergence of pro-coal politics in Whitehaven might portend for attempts to build a world without fossil fuel dependency. As I outline in the implications section of this paper, my argument is that the case of the Whitehaven mine signals a warning for the way high-carbon attachments can re-surface many decades after fossil fuel extraction has ceased. The paper is thus a cautionary tale about the 'afterlife' of fossil fuels and how this might disturb efforts to build net zero futures – not only in England, but across the world.

To begin to understand this dynamic of re-emergence, we must consider Whitehaven's history. Like other post-industrial areas in the UK, mining activity in Whitehaven came to an end in the 1980s. But in contrast to other parts of the country, the end of pit activity in Whitehaven did not lead to widespread or lasting social deprivation because mine closures dovetailed the arrival of a new major employer to the area, the nuclear industry (Davies, 2012). The industry came to pay a generous wage to the many thousands of people it now employs, making the area unusually wealthy given its location in the north of England (Oxford Economics, 2017). As I will elaborate and has been suggested by others (cf. Davies, 2012; Kalshoven, 2022b), nuclear came to be a better employer than working down the pits ever was. It is the fact that the area seems to be well served by the nuclear industry that makes affective attachments to the new coal mine intriguing. These cannot be explained by pointing to socio-economic factors of deprivation alone. A more careful analysis is needed which attends to the area's material and cultural history, and how this lends itself to the generation of intensified pro-coal persuasions under certain political economic conditions.

The significance of the transition from coal to nuclear for locals crystallised for me whilst I was walking along Whitehaven harbour with one of my informants, Sheila. Sheila is a young project manager who until recently had worked for the nuclear industry. We were discussing Margaret Thatcher's legacy for ex-coal communities.

> I remember as a child, and my grandma still says it now, don't mention that name in our house…See, I think it was probably the large-scale impact [her actions were] having. But it's a hard one because even though we've got really deep mining roots, they do seem quite different to the likes of County Durham [another ex-mining community]. We seem to kind of – not be forgetting about it, but slightly moving on.

Coal: 'Not forgetting about it, but slightly moving on'. Yet the reason Sheila and I had met was to discuss support for the controversial new mine, a plan which ostensibly aroused passionate pro-coal sentiment among many locals. If residents had 'moved on' from mining, why were many of them supportive of plans for the new mine? What might explain this apparent dissonance?

This tension animates the pages that follow. To answer these questions, I structure the paper as follows. In the next section (section 2), I introduce my use of recent conceptual work on attachment, together with an analysis of its political economic dimensions as it relates to fossil fuels. I then detail my case study and research methods, before showing how reattaching occurs in Whitehaven (sections 3, 4 & 5). The paper ends by examining the implications of my findings (sections 6 & 7). In this section, I call for further empirical research on the way attachments to high-carbon objects are (re/de)composed – an urgent task given the need for rapid societal decarbonisation which has received very little attention to date. In addition, I ask what the Whitehaven case means for commitments to democratise research practice in critical environmental analysis. If, as Eva Lövbrand and others put it, we are to 'devise research agendas … that allow local knowledge holders to rename, reclaim and redefine environmental research' (2015: 215–216), how do we respond to the challenges posed by grassroots spaces where there is mostly desire for fossil fuel futures? I now turn to outlining my conceptual framework.

Conceptual framework

The political economy of fossil fuels

As extensive research has shown, societies are 'locked into' fossil fuel dependent trajectories (Urry, 2014), partly as a result of the infrastructures that have been set up to service the exploitation, dissemination, and consumption of fossil fuels. These physically structure the material layout of societies. However, the durability of these infrastructures is fortified by the vested interests of fossil fuel constituencies. These have exerted themselves into political decision-making processes to argue for the maintenance, rather than the replacement, of infrastructures dependent on extractive industries (Stoddard et al., 2021).

The contemporary proliferation of discourses which attempt to legitimate new coal, oil, and gas extraction – despite warnings from scientists about the perils of doing so – should be understood within this context. For decades, fossil fuel companies built alliances with political leaders, the media, and think-tanks to sow doubt about the science of human-induced climate change (Dunlap and McCright, 2011). In recent years, as the science of climate change has become more difficult to challenge, denial discourses have given way to 'discourses of delay' (Lamb et al., 2020). Rather than denying that burning fossil fuels causes climate change, delay discourses advocate that carbon mitigation should be deferred. This serves to protect incumbent interests instead of enabling rapid decarbonisation pathways (Franta, 2022). While actors who benefit from continued fossil fuel dependency often spur these arguments, they gain social currency

when articulated by other groups – including influential media outlets (Wright et al., 2021) and groups of citizens who appropriate these in ways that are either advantageous to or 'make sense' from the position they occupy (Ayling, 2017). Thus, ideologies which legitimate more fossil fuel extraction continue to circulate.

Yet, efforts to justify new extraction cannot be reduced to material-economic considerations alone. It is important to consider the ways people's lives are affectively bound up with the workings of fossil fuel industries, including the way place-based, cultural-emotional considerations can inform support for new extraction.

Coal as emotion and affect

Energy social scientists have shown how support for new extraction is often high in communities with intimate experiences of extractive industry (e.g., Della Bosca and Gillespie, 2018; Herrero and Lemkow, 2015; Svobodova et al., 2021). In their study of a small mining community in Australia, Hannah Della Bosca and Josephine Gillespie (2018) document how plans to expand an existing coal mine is supported by residents for the way coal is folded into the town's sense of self-identity, one shaped by many decades of coal extraction. The value of coal is 'more-than-economic' (2018: 738), they write, and is integral to 'the emotionality of people-place connection' (2018: 738). Note here parallels with Rebecca Scott and Elizabeth Bennett's work (2015) and wider rural sociological literature (Jacquet et al., 2021) exploring fossil fuel support among extractive communities. Scott and Bennett draw attention to 'the "complex personhood" of residents of extractive communities' (2015: 279). This conception acknowledges that even whilst communities desire better working conditions within industry, there is strong community 'identif[ication] with the history and landscape of extraction' (2015: 279) which buttresses support for new extractive activities. An additional similar study is Amaranta Herrero and Louis Lemkow's (2015) analysis of resistance to mine closures in Spain. In their case study, they reveal a gendered dynamic, one where the 'figure of the miner as a working class, hypermasculine "tough guy"' (2015: 230) informs desires to keep coal mines open.

The multiple ethnographies of affect in post-mining communities in the United Kingdom has undertaken comparable research (Bright, 2012; Rohse et al., 2020; Walker, 2020; Walkerdine, 2010). In these studies, the concept of 'affect' is preferred over 'emotion' for the way it attends to feelings which are embodied and interpersonal – rather than being cognitively and individually felt. Studies like Geoffrey Bright's (2012) show that even though mining is no longer operational in their communities of study, coal retains affective value for the way it continues to shape gendered and classed identities, and people's sense of self and place. In these contexts, coal exists as 'afterlife' and has a strange present-absent dynamic – it shapes people's dispositions and outlooks whilst the source of these affects (extractive activity) no longer exists. Coal affects are described as haunting the communities they circulate among; they are 'ghosts' (2012: 319) which linger from a lost past.

Linked to discussion of mining afterlives, it is worth considering the role of 'nostalgia'. Scholars studying North American communities like Eric Kojola, show how nostalgia 'evokes longing for an idealized past' (Kojola, 2023: 117). Romantic renderings of the past serve to relegate or erase negative aspects of past experiences, including the experiences of workers labouring in hazardous conditions underground. What is important to stress is the *performance* involved in acts of nostalgic remembrance. They project a particular image of the past which glosses over that which is too uncomfortable or inconvenient to factor into contemporary depictions.

Coal as attachment

I would like to suggest reading these empirical studies by drawing on cultural geographer Ben Anderson's (2022) recent work on 'attachment'. Anderson's interest in attachment emerges in

conversation with the relational turn in the social sciences. Inspired by the work of cultural theorist Lauren Berlant, he is interested in certain types of subject-object relations, namely those where objects 'come to feel necessary to a way of life' (2022: 1). As opposed to other types of relations (i.e., connections, associations, entanglements), attachments are defined by the way the thing that the subject becomes attached to is felt as 'a promissory object' (2022: 1), one 'that … opens a valued future – whether of continuity from the present, or return to a lost past, or of something better' (2022: 9). In doing so, they give people an affective orientation to continue moving through disorienting worlds. Appreciated as such, 'attachments' differ from their use in evolutionary psychology, where they relate specifically to parent-child relationships and are seen as more straightforwardly nurturing. From a relational perspective, people can and in practice do become attached to a myriad of things: to 'Gods, Brexit, lost hopes, how another person laughs…land, whiteness, nation, a phrase' (2022: 2). Further, attachments are not necessarily straightforwardly positive but can 'simultaneously sustain and harm … [unsettling] the line between sustaining/flourishing and harming/damaging' (2022: 3).

Reading the above case studies through this conceptual lens, coal is foregrounded as a promissory object in each study. Herrero and Lemkow's (2015) miners rise to defend the mines when the government threatens to close them because of the affective ties coal provides for constructions of masculinity. Coal allows identities to continue to exist, even whilst mining is dangerous – for the threat it poses to workers who labour in hazardous conditions in pits. Geoffrey Bright's (2012) communities appear to be attached to coal because it harks back to a time when the mines organised a way of life around them. Despite the timespan between mine closures and the present, coal still 'feels necessary' to contemporary life. These attachments are not just sustaining. They are also disorienting, for the object of attachment no longer exists.[1] Note that in each of these examples coal signals a valued future, albeit in different ways. In Della Bosca and Gillespie's (2018), and Herrero and Lemkow's (2015), coal means continuity from the present; in Bright's (2012) it signals the promise of return to a lost past.

It is worth underscoring the temporal nature of these attachments. Like all attachments, they are not fixed but, rather, are subject to change. In Herrero and Lemkow's (2015) case study, when the object in question is threatened, attachments to it expand and intensify, igniting impassioned feelings which translate into confrontational forms of political action. In Bright's ethnography, coal attachments are of a different nature: They are more subdued, latent, and appear to be gradually diminishing over time. Casting these studies in this light draws attention to how attachments can ebb and flow, flare up, or lose their strength. Further, just as attachments can wane over time, such that processes of *de*taching unfold, processes of *re*-attaching can occur when an object which appeared to no longer be important re-appears as something which once more signals a valued future. In this scenario, re-attaching can corral fresh political energy around the object of promise, especially when it appears to be at risk of being withdrawn. Understood in this light, attachments scramble otherwise comforting notions of linear time, moving in sometimes unpredictable, erratic ways. As I will go on to show, this has important implications for the net zero transition – even if we successfully transition away from carbon-intensive energy sources, they may yet come back to haunt us in the future.

Drawing on attachment as a concept to read these cases provides a complementary (not an alternative) frame to the use of 'emotion' and 'affect'. It foregrounds the object which works affectively on the people in each case study, underscoring the way it constitutes a type of relation which is 'hard to end or exit' (Anderson, 2022: 5). In addition, reading these cases as attachments to coal is helpful for analytic purposes. As I will show, it opens a path for understanding how the cultural-affective scale connects with the multi-scalar political economic dynamics analysed earlier – in particular, how fossil fuel delay discourses are drawn down to make sense of re-attaching to coal in a Climate Emergency. In this context, the act of re-attaching seems to provide a propelling force for the (re)circulation of pro-fossil fuel discourses. With this appreciation in mind, I now detail my case study.

Case study and research method

Whitehaven, northern England

Whitehaven is a small, remote town with 23,000 residents in the west of the county of Cumbria (City Population, 2023). It is poorly served by transport connections, with the closest major road and train line forty miles away from the town. Although it is close to the edge of the Lake District national park, it is in cultural terms very different from the 'Lakes' (Davies, 2012). The Lake District is a place composed of tranquil waters, rolling hills, and was once home to the English romantic poets. The landscape in Whitehaven and the wider west Cumbria area, by contrast, tells a story of a history of heavy industry and subsequent deindustrialisation (Chapman, 1993; Davies, 2012). Visit the area and you will see the relics of chimneys, plants, and pits overlooking the Irish Sea. A handful of industrial complexes are still in operation and continue to belch smoke into the sky.

From the seventeenth to the twentieth century, various industries including mining shaped the contours of local economic activity (Whitehaven Town Council, 2023). Deposits of coal and iron ore and sea access made the region both nationally and internationally important. Its harbours exported resources across the world, including to Ireland – a country which once relied on Whitehaven's harbour for seventy-five percent of its coal imports[2]. Industry attracted migration to the area – villages in the area expanded; the town of Whitehaven grew. The mines and other industry came to organise social life around them and shaped gendered and classed relations. Further, mining and industry moulded people's sense of local identity. The area proudly saw itself as a home to abundant 'black gold', a resource which promised work to those who laboured underground in hazardous conditions. But work in the mines and other industry was never secure. Industrial activity experienced booms and busts, like in the aftermath of the Great Depression of the 1930s which inflicted widespread hardship on the area (Apperley, 2020). As the century progressed, coal-based industry slowly and steadily declined, with the last of the mines closing in 1986 (Whitehaven Town Council, 2023).

Yet, as mentioned already, Whitehaven is unusual for a UK post-industrial area in that it bucked an otherwise widespread trend, where closure of coal industries in the 1980s resulted in widespread underemployment and deprivation. The arrival of the nuclear industry in west Cumbria in the 1950s and its growth over the following decades meant that many workers who lost work in the steadily declining coal industry were able to transition to work in nuclear (Davies, 2012). By the turn of the twenty-first century, almost all industry other than nuclear had disappeared. Nuclear had become the sole major employer. The nuclear operator is now called Sellafield, employing more than 10,000 people and thousands more through its supply chain (Oxford Economics, 2017).

Whilst Sellafield provides a handsome wage to many, it has its drawbacks. It is the only major employer with well-paid, secure jobs in the area. Some argue that there is a sense of 'dependency' on nuclear (Wynne and Waterton, 2007; see Kalshoven, 2022b for a critique of Wynne and Waterton's use of 'dependency'). Sellafield has recently entered full decommissioning, causing some anxiety about future work prospects in the area, although the extensive work involved in decommissioning the plant means it will generate employment for many decades to come (Subramanian, 2022).

Research method

Whilst in the field, I was animated by a desire to probe the nuances of people-coal relations. To employ a term used in affect research (Ingraham, 2023), I wanted to understand how people 'thought-felt' coal as an object given its ambivalent status. On the one hand, coal is imbued with emotional weight given its historic importance. On the other hand, its allure has

dimmed in recent decades, even whilst it never occupied the romanticised status it is sometimes portrayed as having had, both due to the social traumas inflicted by the demise of industry, and because of widespread public recognition that coal has played a very significant role in causing climate change.

I used interview and ethnographic methods, allowing myself to be oriented by these questions as animating issues. Many of those I chose for interview were actively involved in local debate about the mine. This included local politicians and a handful of residents who had become involved in campaigning for the mine. I used a purposive sample so that interviewees were broadly demographically representative of the area by gender and age (see appendix 1), to avoid disproportionately interviewing some groups.[3] Ethnographic observation was recorded in a diary and spontaneous conversations with people were noted down after the encounter.

I held thirty-nine long conversations in total, the majority over the course of five weeks in October and November 2022. Twenty-four residents were interviewed, and fifteen substantive conversations were held through ethnographic encounters. I recorded the interviews and anonymised the names of participants following ethics protocols. Five were carried out as walking interviews, a method used to create a fluid and open encounter between interviewer and interviewee which can be helpful when discussing controversial issues (Ross et al., 2009).

All quotes in the findings section are from interviews. Demographic information of interviewees is provided, including occupation. As many of those interviewed were Sellafield workers, I specify whether Sellafield interviewees work on the 'shopfloor' as manual labourers or in 'administration', which refers to office-based roles. Given there is a relatively low number of political representatives in the area, I do not specify when someone I interviewed is a politician to protect sensitive opinions expressed to me.

Re-attaching to coal

Coal as afterlife

Even though four decades have passed since the last of Whitehaven's mines closed, coal continues to shape Whitehaven's milieu – in two ways. The first is in the material make-up of the town. Whitehaven harbour, once a hub of bustling industrial activity, has been regenerated into a site for leisure purposes, mainly as a place to moor sailing boats. It looks and feels very different to its prior incarnation as a dirty, polluted industrial space. However, vestiges of mining are visible around the harbour. This includes a large ventilation shaft and memorials to pit workers which recount evocative stories about the area's coal past. Texts accompanying statues of pit workers speak of 'the end of an era' and describe past times as a period when 'there w[ere] … mines, steelworks, nobody had any problems with jobs, they just hadn't' (Figure 1). The museum by the harbour dedicates almost half of its exhibition space to the historic importance of coal to Whitehaven. Note here the way pit worker statues perform an idyllic imagined past with nostalgic elements (Kojola, 2023). They present past social worlds as largely problem-free ('nobody had any problems with jobs, they just hadn't').

Dotted elsewhere are numerous other mining relics, the largest of which is Hague Pit, an impressive red-brick building with an enormous mining wheel attached to it (Figure 2). The area's landscape and the narrating of history through official channels underscores a sense that Whitehaven is indebted to coal; without coal, the town would never have come to exist in the way it does today.

The second way coal continues to shape Whitehaven's milieu is in the way it informs contemporary constructions of community identity. This is most pronounced among older generations who have a personal memory of mining. In their accounts, coal interweaves with kinship relations, evoking memories of intimate relations bound up with industrial activity.

Figure 1. Statue to miners.

Figure 2. Haig Pit.

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My dad, he worked in [one of the biggest local pits]. He were down the mine for 30, 39 years, something like that…Obviously coal mining is a big thing around here. We've got history in coal. (male, 60 s, ex-nuclear union official)

Some older people argue that the legacies of coal-based industry lie behind the formation of close-knit bonds in the area today (cf. Walker, 2020).

I think that's the history of the coal mines as well. … Everybody is in one community. (male, 40 s, ex-nuclear worker)

The meaning of prior coal activity for younger people who do not have a personal memory of mining is less clear. The young people I spoke to see coal as an important part of the area's heritage, but not closely tied to their personal identity.[4]

Detaching from coal

Mining activity thus exists as material and relational afterlife in Whitehaven. However, an afterlife is more akin to residue than an object of future-oriented promise. My informants agreed that prior to plans for the new colliery being made public it was widely assumed that mining activity was unlikely to return to the area.

When I came out of the coal mines, I was convinced, like everybody else, that coal was a thing of the past, that they didn't need it anymore. (male, 70 s, ex-miner)

It was strange when it first presented again. I was like: Coal mine? What? I thought it was in the past. (female, 40 s, health professional)

Following the end of mining in the 1980s, communities in Whitehaven came to see themselves as predominantly defined through a nuclear identity, rather than their coal heritage (cf. parallels with Kalshoven 2022b).

[The] nuclear industry has probably taken over from where coal and mining had been previously. So, in the same principle that you grew up as a mining community, you grow up as a nuclear community and work in the same industry. (female, 40 s, public relations professional)

Many came to see Sellafield as a source of optimism, in particular because of its generous pay packages. In an area that is inexpensive, a good monthly wage provides ample opportunity for Sellafield employees to access different material goods. It also offered rewarding careers for those able to access them.

The wages up in West Cumbria are pretty good in the nuclear sector, but the housing prices have remained really cheap…It's always been a good place to live…you see young 20-year-olds driving around in BMWs and Mercedes. (male, 60 s, Sellafield administration)

Plenty of young people went on to be apprentices there, got a good trade, moved throughout the world, had some success. It's been a great – eventually – a great employer. (male, 70 s, ex-factory worker)

In these descriptions, we see the emergence of objects of attachment (flashy cars, homeowner-ship, a career) which the promise of working in Sellafield clusters around. What is noticeable is the

absence of coal as an aspirational object. It has been relegated to occupying a backdrop which no longer seems to be affectively potent in signalling a valued future. Yet, as discussed earlier, attachments should be understood as subject to flux, not immutable. Even when subjects appear to detach, affective ties can linger in a way which is not visible to the naked eye. 'Afterlife' should thus be read as a descriptor indicating a process of distancing such that the affective potency of the object loses much of its strength, rather than as indicating full *detachment*, which would imply closure. Afterlives could be understood, then, as containers which carry within them an object with the potential for reignition, such that that object might then transmorph into something that signals a promise.

Re-attaching to coal

Indeed, when plans for the mine became public, some people (although certainly not everyone) began a curious process of reattaching to coal. When I asked my informants to explain why many people in the area support the mine, they invariably stressed the employment that the mine promises to deliver (Kalshoven, 2022a). Pressed on the details of what is valuable about jobs in the mine, most did not feel the need to elaborate on the value of new employment – they implied that the provision of more jobs for the area had self-evident value (cf. parallels with Kalshoven, 2022a, who speaks of a 'jobs incantation' in the area). Some pointed to the high wages that have been promised. Others stressed a sense of cultural familiarity with the types of jobs the mine is expected to provide. The mine was imagined as mirroring certain aspects of work in Sellafield that are valued, including the job security, the predictable nature of employment routines, and the industrial nature of the work.

At the same time, many people argued that anxieties about Sellafield underpinned local support for the mine. A theme that came up very frequently in my conversations was a feeling that the local population relies too much on Sellafield for work.

> I think we're over reliant on nuclear. We're far too reliant on it. We're so over reliant on it that people are getting desperate for a coal mine. (male, 30 s, Sellafield administration)

Sellafield's total dominance over the labour market is disliked for different reasons. A handful of interviewees spoke about limited employment opportunities for those seeking a career outside of the nuclear industry.

> We lose our brightest brains…people will go elsewhere, to find a decent, you know, a good job. Well, my own son's gone. He said he wouldn't come back here to live. (male, 60 s, ex-teacher)

Worries about dependency relate to existential concerns. Last year the plant entered full decommissioning. Although this will take more than a hundred years (Subramanian, 2022), some are concerned that nuclear jobs will be lost in the years to come and that, without other industry to replace nuclear, there will be little left to support people in the area (cf. parallels with Wynne and Waterton's (2007) study).

> I do worry that there won't be anything to fill the gap when Sellafield eventually closes. We don't want it to be left as a ghost town. [If] there was no alternative employment, people would have to leave the area. (female, 20 s, Sellafield administration)

Further, some interviewees expressed concern about the local inequality that Sellafield produces. Indeed, statistical data shows that some of those who are locked out of employment opportunities in nuclear face economic hardship (Department for Communities and Local Government, 2019).

[Some neighbourhoods are] high up on the areas of deprivation in the country…So you've got the haves and the have nots. We don't have that diversification of industry, for, everybody to be working. … So having coal here, that's great. (male, 60 s, Sellafield administration)

In these conversations, the coal mine evoked feelings of hope given concerns about Sellafield. It seemed to exert a gravitational pull in promising to address multiple problems caused by overreliance on Sellafield.

In some conversations the mine appeared to hold up an additional promise. Some of my interviewees spoke about pride in the area given Whitehaven's history as a hub of diverse industrial activity. In one conversation, the face of a widow of a miner lit up as she listed the range of industries which once existed in the area – a large chemical plant; a pram factory; a high duty alloys plant; a tannery; a hat factory; a chocolate factory; an oats factory; a rope factory; several steel plants. One interviewee painted vivid pictures of a vibrant Whitehaven which was once, many years ago, a centre of global innovation.

[Whitehaven] was the Silicon Valley of the day. [We had] cutting edge technology…that was driving the industrial revolution. So, advances in steam locally were right at the edge of technology. (male, 60 s, Sellafield administration)

This description chimes with historical literature which shows that Whitehaven was in earlier centuries both an important centre of industrial innovation and an attractive town. When Salmon Pit opened in 1732 it was widely regarded as one of the wonders of the age (Donaldson, 2022: 1) for the technical ingenuity it employed. There are stories of foreign visitors travelling from abroad including Benjamin Franklin to see the pit (Donaldson, 2022). In another surprising connection with the USA, Whitehaven is credited with being the first town in the world to be designed using a grid system; it is said to have been the source of inspiration for the design of New York City. In 1845, Whitehaven was described as one of the most handsome towns in the country' by a prominent newspaper.[5]

A small number of interviewees explicitly juxtaposed the town's past grandeurs with the way the town exists in the present.

We were one of the biggest ports in the world … now no-one knows us … we're just a little old town that people pass through to get to [other places] … there's nothing here to call us a town. (male, 18–19 youth worker)

It's quite tragic…all the shops are shutting down, we're turning into a ghost town. No-one knows where Whitehaven is…we used to be one of the biggest spots and now it's just dead. (female, 18–19, youth worker)

These descriptions resonated with my observations of the area. I was frequently struck that parts of the town centre, including old buildings with ornate facades, were in disrepair. There were many boarded up shops (Figure 3) and buildings left abandoned (Figure 4).

One interviewee commented on the loss of industrial diversity as follows:

We've lost such big things…Mining was a big thing and there was a massive chemical plant … [Things were] more industrious. … It's rich, the history. I'm a big supporter of the mine. (male, 60 s, ex-nuclear union organiser)[6]
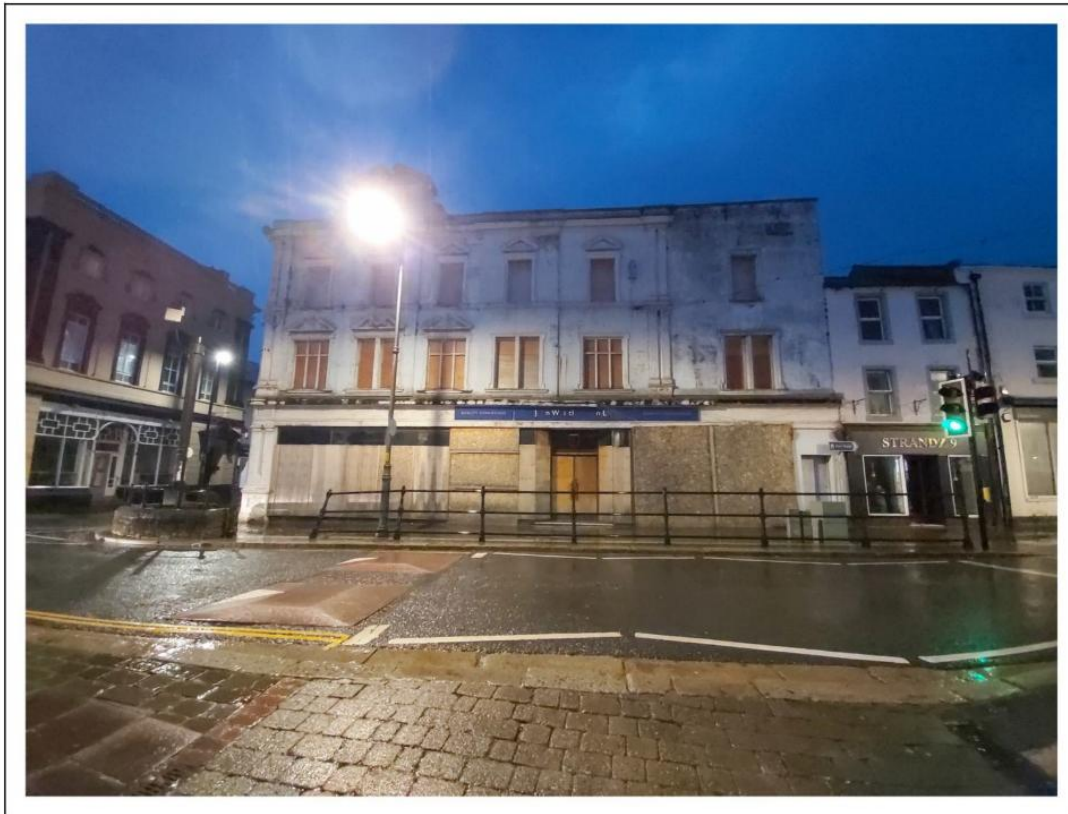
Figure 3. Example of a boarded up shop.

Note he implicitly connects a more industrious past with the possibilities that the new mine might reignite. This chimes with the views of the young people quoted above.

> Coal mines and stuff are like the only things to really kick us back up and make us a known spot. (female, 18–19, youth worker)

> Once we get a coal mine that means more money coming into town which means more shops, which means more people wanna move in and start growing their businesses. At least then there's hope. (male, 18–19, youth worker)

What is intriguing about the descriptions I quote immediately above is the following. On the one hand, they were hopeful about the possibilities afforded by the mine. On the other, they were acutely aware of the environmental damage that opening a new coal mine would contribute to. They drew on apocalyptic imagery to describe imminent threats which they saw the mine as hastening including 'water rising because of ice melting' and the different ways climate change is "ruining us faster and faster'. One of them described his fears of climate change as a spectral future which haunts the present:

> It's like a ghost. Nobody gives it attention until it destroys stuff that we love…I've read that the Maldives could be submerged within the next ten years, if we keep on doing what we're doing. Which is weird because the whole island might be submerged completely underground. It's horrible. (male, 18–19 youth worker)

Figure 4. Example of a building left in disrepair.

For these young people, then, attaching to the coal mine generated hope and profound concern. But they were not alone in communicating climate change anxieties. All my informants, including those who were passionately pro-mine, accepted that human-induced climate change was real and expressed varying degrees of concern about what climate instability might inflict upon the planet. Given this, how then could so many of them rationalise supporting a mine which would, if opened, pump an extra 8.4 million tonnes of carbon emissions a year (Moss et al., 2020)? What explains this disconnect?

New coal in a climate emergency

As argued in section two, discourses of delay (which state that carbon mitigation should be deferred) have in recent years largely replaced denial arguments (which reject or question scientific consensus on climate change). In Whitehaven, it was clear that pro-coal delay discourses found circulation. These centred on the notion that it 'made sense' to open a new mine in the area, despite the climatic consequences of burning coal. Anti-mine arguments were, by contrast, depicted as 'idealistic' and 'out of touch'.

One argument that gained social currency was the view that the transition to a low-carbon energy mix could not be achieved without coking coal. Some residents argued that metallurgical coal is needed for the steel industry to produce steel for low-carbon technologies, like wind turbines and electric vehicles.

> How are you going to get the steel if you don't have coal? I looked at the new processes that were coming in, hydrogen and things like that…I realised it was in its infancy and they could only do it in small amounts at present. (male, 70 s, ex-miner)

Others argued that it is better to extract coal locally than import it from other countries, suggesting that overall emissions would be reduced because the coal would not have to be transported from abroad. [7] Some also argued that there would be better working conditions for workers in Cumbrian pits than mines in other countries like China.

> Steelmaking in the UK uses coking coal which we import from Australia…the fact that we're no longer importing and using locally is a positive for me. (female, 20 s, Sellafield administration)

An additional argument suggested that local coal was 'clean', in contrast to coal from abroad which is 'dirty'.

> This coal, it's quite clean coal apparently. … They say it's going to create very little carbon dioxide, it's a different type of coal apparently. (male, 60 s, ex-teacher)

West Cumbria Mining (WCM), the company behind the plans, played a role in injecting these delay discourses into local arenas. They ran community engagement events where they presented these and similar arguments. In her ethnography, anthropologist Petra Tjitske Kalshoven describes visiting one of these events, where she was greeted by young, enthusiastic staff who showed her around an exhibition space the company had set up. 'Large graphic panels [were displayed] depicting hi-tech remote operations', she writes, which 'looked very different from the grimy photographs of coal mining and its disasters in the old days' (2022a: 10). These depictions appear to have been intended to portray the new mine as safer than prior mining operations. However, they may also have been an attempt to instil the feeling that the proposed mine would be 'futuristic' and with more stringent environmental conditions attached to it. This tactic has been advanced elsewhere by WCM. On their website they explicitly make the argument that the mine will provide coking coal for 'world leading "net zero" steelmaking' in the UK (West Cumbria Mining, 2024) – even whilst this flies in the face of the scientific evidence.

WCM built an alliance with local politicians who in turn rehearsed pro-coal discourses in resident meetings, in the local media, and on social media platforms (Jenkinson, 2022). Delay discourses – including the argument that it is 'greener' to extract coal locally than import it from other countries – found repeated circulation in wider regional, national, and international arenas (Willis, 2024), in arguments made by national politicians and media sources on television channels like Sky News (Sky News, 2022) and newspapers like *The Daily Mail* (White, 2023), all of which are media sources that Whitehaven residents would likely have encountered.

Yet, I suggest that these arguments did not gain traction in Whitehaven arenas only because of the actions of powerful actors. Rather, it seems they found resonance in part because of the material, historic, and cultural context within which they were received. As shown earlier, coal persists as material and relational afterlife, acting as a reminder of Whitehaven's historic indebtedness to coal. Discourses about the legitimacy of a new coal mine appeared to connect with the way coal is folded into the area's sense of memory and time. This message was explicitly articulated to me by one of my informants.

> You've got that history and heritage as well … Coal powered the country didn't it? Everything we needed, whether we needed steel or we needed electricity … I think we've got a massive opportunity … if we open this mine as well it gives us more opportunity for jobs. It gives us an opportunity for the coke, we don't have to then ship it from Australia to fetch it out. (male, 60 s, ex-nuclear union organiser)

Implications

Re-attaching to fossil fuels

What are we to make of some people re-attaching to coal in Whitehaven, and deploying pro-coal discourse to legitimise their position? I suggest there are two core implications. The first is about the dangers of social groups re-attaching to fossil fuels. As we have seen, empirical studies have shown that communities with intimate experiences of extractive industries can feel a sense of cultural-emotional connection with fossil fuels (e.g., Bright, 2012; Della Bosca and Gillespie, 2018; Rohse et al., 2020). What is unique about the case of the Whitehaven mine is the way it shows how attachments to coal which had previously been loosened can be brought back to life many decades later. It is worth dwelling on the significance of this process of unforeseen reattaching and what it could portend for developments elsewhere. To help me do this, we can turn to cultural theorist Lauren Berlant.

Perhaps more perspicaciously than any other theorist, Berlant (2011) explores the affective consequences of the wearing down of people's agency under neoliberal conditions. They[8] write about how the promise of the 'good life' as a guiding orientation for Euro-American political programmes in the post-war years has been undermined in recent decades. This in turn has eroded the modest social democratic gains achieved during those decades. Berlant suggests that a strange thing has occurred. Even whilst the conditions required to socially enact the promises of liberal democratic meritocracy have diminished, attachments to meritocratic narratives have persisted. For Berlant, this is a form of 'cruel optimism', the act of desiring something that is 'actually an obstacle to your flourishing' (2011: 1) – for, in continuing to desire meritocratic fantasies, individuals make themselves responsible for a failure to enact them, rather than construing alternative narratives which challenge the premise of liberal narratives (Berlant, 2019). Further, Berlant seems to suggest that conditions of precarity and trauma provide the very fuel for the persistence of these damaging attachments (Berlant, 2011).

This suggests that at times of uncertainty subjects will reach out to objects of attachment to help counteract the disorienting effects of insecurity, even whilst those attachments may generate a deepening sense of dislocation. Berlant's observation could portend a troubling warning for the future of climate politics. Given that climate instability and extreme weather events are likely to lead to deeper and more profound traumas, it is not unforeseeable that fossil fuels – the very things which cause climate change – could increasingly become the very objects which some reach out to as a means of gaining orientation in a disorienting world. Perhaps, then, it would not be surprising if we see the resurrection of attachments which rebind people to high-carbon forms of living in the years to come – renewed support for extractive industries, heightened attachment to high-carbon transport, etc. This might occur even whilst progress is made in forging attachments to objects which enable more sustainable ways of living (e.g., reduced energy consumption patterns, an increase in renewable forms of energy, etc).

Researchers have pointed to contexts where similar processes may already be occurring. Political scientist Cara Daggett's (2018) work on 'petromasculinities' examines how affective ties to fossil fuels are bound up with constructions of toxic masculinity in reactionary political movements, in the USA and elsewhere. Her work shows how, under conditions of uncertainty about the future, petromasculinities provide a guiding orientation to groups attracted to authoritarian politics. Similarly, governance researcher James Patterson (2023) focuses on public backlash to climate policy. He identifies instances of 'abrupt and forceful negative reaction by a significant number of actors within a political community … [involving] a volatile and *largely unexpected* pushback' (2023: 69, emphasis added), pointing to examples like protests against infrastructure siting. Whilst these do not necessarily signal a process of *re*attaching insofar as they heighten

already *existing* attachments, both Patterson's and Daggett's research warns about the way these objects which emerge in unexpected circumstances can undermine attempts to turn away from fossil fuels towards alternative energy sources.

In this light, the challenge is to assemble a politics of promise which channels people's need for attachments towards ends which are compatible with stabilising climatic conditions. The focus should in part be about helping people detach from fossil fuels and other objects which lock society into high-carbon trajectories. Yet, as I have suggested, the challenge is also to pre-empt *pre-emergent* high-carbon attachments. I suggest, then, that this is a pertinent and fertile area for future research, which I expand on in my conclusion.

Caution against over-valorising the local

A second implication of this case study concerns the way the value of 'the local' is imagined in the energy social sciences and humanities. In environmental justice (EJ) and related fields, it is common to advocate for the imperative of attending to locally situated, culturally diverse voices through empirical research. This sensibility is shaped by political-ethical considerations, which underscore that foregrounding marginal voices is important because these have been historically ignored or victimised (Holifield et al., 2018). There are also instrumental reasons for doing so. Sidelined voices can articulate novel critiques vis-à-vis fossil fuel hegemony (Brown and Spiegel, 2019; Lohmann, 2008; Lövbrand et al., 2015; Schlosberg, 2004).

Some voices within EJ have nuanced these arguments. Eva Lövbrand and others (2015) argue for democratising environmental research agendas and simultaneously acknowledge that doing so is 'a challenging task that does not promise better or more complete understandings of environmental change…[for] the vision of the less powerful by no means is innocent' (2015: 216). Despite this, I suggest there remains a tendency in EJ scholarship to advocate for the value of attending to community voices *without always acknowledging* the way that 'the local' can be constituted by, and be reproductive of, high-carbon trajectories. It remains common to centre empirical studies on the grassroots for the way it is thought of as a site where resistance to extractive industries emerges (Brown and Spiegel, 2019; Chatterton et al., 2013; Chomsky and Striffler, 2014). Even whilst scholars complicate romanticised depictions of the local by recognising elements of 'residual support for coal' (Brown and Spiegel, 2019: 159), emphasis tends to be on the way 'social mobilizations against coal set the stage for competing visions of the future' (2019: 155) and help achieve 'the realization of a just transition' (2019: 151). I suggest that these arguments are sometimes made without sufficient consideration about how some communities might desire futures which perpetuate high carbon lock-in.

Another common position is to advocate for attending to locally situated voices for the way they foreground people's lived experience in otherwise abstract, expert-oriented discourse about climate change (e.g., Lohmann, 2008). The argument is that doing so provides more open, inclusive ways of mapping environmental futures and that taking such an approach will help pave the way for more desirable socio-environmental outcomes (e.g., Lohmann, 2008). Attending to local voices in some places may undoubtedly achieve such an objective. This includes recognising how indigenous voices challenge logics of capital accumulation which structure globalised economic activity. Yet, here too, I suggest that there is sometimes not enough recognition of the way the grassroots can become a site of the entrenchment of high-carbon political sentiment. It would be beneficial to take stock of Eva Lövbrand and her colleagues' (2015) call to guard against the risk of over-valorising the local. The case of the Whitehaven mine serves as one such reminder, together with many other studies cited in this paper (e.g., Della Bosca and Gillespie, 2018; Herrero and Lemkow, 2015; Svobodova et al., 2021).

Conclusion

How do we assemble low-carbon attachments and simultaneously pre-empt re-emergent attachments to high-carbon objects? These questions have received very little explicit attention. In part this is because the concept of attachment has only recently been elaborated for the purposes of empirical study in geography and other social sciences (Anderson, 2022).[9] Where attachment has been used to describe human-carbon relations, the term surfaces fleetingly without conceptual elaboration (e.g., Daggett, 2018; Furnaro, 2021).

There are different ways researchers can explore the questions I pose above. One approach is to build on work by Harriet Bulkeley, Matthew Paterson and Johannes Stripple (2016), which examines devices, desires, and dissent – 'the materialities, subjectivities and resistances through which power and everyday life are organized' (2016: 9) – and their role in enabling net zero social arrangements. Researchers might pay attention to attachments in different spheres of social life most relevant to the net zero transition, such as home heating (Lovell, 2016), travel (Bartling, 2016), and consumption practices (Rice, 2016). In so doing, considerations should be given to the reasons why, and the mechanisms by which, certain devices come to be experienced as promissory over others, and how the act of composing attachments is always responsive to a set of wider political economic dynamics.

However, it is important to draw attention to the way that cultivating attachments to net zero practices faces profound challenges. One problem is that enacting a net zero transition means bucking a historical trend that has been in place since the start of the industrial revolution. When new energy sources have been discovered in the past, they have rarely replaced older energy sources (York and Bell, 2019). Rather, they have been added to the existing energy mix to meet increasing demand. The discovery of oil, for example, did not lead to the substitution of coal. Instead, it meant more energy (coal *and* oil) was available for higher production and consumption. There is a need, then, not just to continue to scale sustainable forms of energy, but also to find ways of actively removing high-carbon energy sources. Moreover, it is unlikely that this is feasible without reversing historic trends of ever-increasing energy supplies.

But it is difficult to overstate the sheer transformation in people-energy relations that such an objective requires. What is needed is a re-configuration of the hegemonic imaginaries which have powered social and economic change for centuries (Garrigou, 2016). In place of the promise of an infinitely expanding pool of energy – which arguably lies at the heart of the project of modernity – a radical new promise which runs against the tide of modern history needs to be sown. This needs to recast energy not as boundless, but as something to be used with moderation. In practice, this requires placing certain social practices out of bounds, at least in the short to medium term. A range of activities might be mentioned, but an obvious example is regular flying. Whilst most humans have never been on a flight, a small but sizeable number of people are more than accustomed to jumping on a plane to achieve the objective of traveling hundreds or thousands of miles within hours. The politics of cultivating detachment from regular flying is littered with hurdles, not least stiff resistance from wealthy and powerful social groups who have come to take frequent flying as a taken-for-granted activity – or from the aviation industry itself which profits from these attachments and will fight hard to protect those (Brown, 2016).

A separate challenge concerns the issue this paper has centred on – the risk that high carbon attachments might return or intensify. As suggested, it is possible to imagine that in future years we might see the rekindling of attachments to high carbon objects, even in contexts where progress has been made in binding people to sustainable ways of living. One might imagine a scenario where there has been global progress in significantly scaling up low-carbon technologies and rapidly scaling-down fossil fuel extraction, such that real cuts in global carbon emissions are being achieved. In this scenario it might only take a few unfortunate events for that consensus to

unravel, and for a successful counter-hegemonic project wedded to petromasculinities and fossil fuel expansion to re-emerge. To use the typology employed by theorists Geoffrey Mann and Joel Wainwright, this would represent a resurgence of a 'Climate Behemoth', a politics 'animated by a chauvinistic capitalist and nationalist politics that denies – until it can only denounce – the threat climate change poses' to national polities (Mann and Wainwright, 2019: 1).

We can turn to this year's US presidential elections to think of a real-world scenario which illustrates this point – although the analogy is imperfect, given that real global emissions cuts are not yet being achieved. At the time of writing, it looks all but certain that Donald Trump will be the Republican party's presidential nominee. In recent months, his politics has grown more ethnonationalist and fossil fuel friendly. If he wins, Trump has promised that he will reverse the limited but significant progress that has been achieved by the Biden Administration through the passing of the Inflation Reduction Act (Milman, 2024). He boasts that he will 'drill, baby, drill' for new fossil fuel extraction. Even if he loses, this does not mean the end of this form of politics. It will find articulation in the USA and other countries for years to come. The scenarios I paint above are admittedly nightmarish. However, it is precisely their dystopian nature which makes the task of attending to the (de/re)composition of attachments in the net zero transition so important.

At the beginning of the paper, I described walking along Whitehaven harbour with one of my informants, Sheila. She implied it was strange that the mine had become such a prominent political issue, because it otherwise very much looked like the community had 'moved on' from its coal days. I agreed with her – it felt strange. And despite the time I have now spent thinking about the case of the Whitehaven mine, the unexpected reemergence of pro-coal politics in Cumbria continues to feel strange to me. As I have argued, it is the peculiar nature of fossil fuel re-attaching which makes examining cases like the Whitehaven mine important and, moreover, makes carrying out pre-emptive work to prevent the re-kindling of high-carbon attachments all the more crucial. If we are to avert dangerous climate change, in future detaching from coal and other fossil fuels must entail gaining sufficient distance such that the allure of high-carbon objects no longer retain their shine. Or, to put it in terms that Sheila might: In future 'moving on' from fossil fuels must also mean not moving back. The stakes could barely be higher.

Highlights

- This paper draws on the concept of 'attachment' to understand people-coal relations.
- Pro-coal discourses promoted by vested interests are (re)articulated by local actors in a context where coal exists as afterlife.
- The case study I examine is a warning about how fossil fuels can unexpectedly re-emerge as promissory objects.
- The findings are a reminder of the need to guard against over-valorising 'the local' in environmental research.
- More research about how attachments to high-carbon objects are (re/de)composed is needed, given the urgent task of societal decarbonisation.

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Notes

1. A comparable analysis might be made of Australian communities in Della Bosca and Gillespie's (2018) study. Incidentally, Della Bosca and Gillespie (2018) make use of 'place attachment' as a concept in their study. However, this comes from social psychology, referring "to the ecological, built, social, and symbolic ... bond between individuals and the place they live" (2018: 736). This is different to Anderson's (2022) ontological use of the term, where attachments can occur with a (potentially infinite) range of objects.
2. Statistic noted during fieldwork at Beacon Museum, Whitehaven.
3. This was not used to attempt to replicate statistically generalisable methods which would misunderstand the nature of qualitative research (Flyvbjerg, 2006).
4. Readers will note that, in the above analysis, I foreground the concept of 'afterlife' over 'nostalgia' as the principal concept to understand how the past informs the present in Whitehaven. This is for two reasons. The first is a slight difference in what the two foreground as analytic categories. Whilst nostalgia is necessarily bound to acts of performative remembering, i.e., how *people* conjure up the past, afterlife draws attention to the residues of coal pasts and *their* effect in unearthing certain feelings in people in the present. This includes the materiality of old coal mines, like the abandoned mining vestiges which generate feelings in those passing by them, their 'ghostly' qualities (Bright, 2012) rendering the past more affectively indeterminate than the term nostalgia would allow for. Second, whilst nostalgia explicitly foregrounds romanticised notions of the past which minimise negative aspects, afterlife does not wed itself to a positive relation with the past – afterlife can connote nostalgic *and* negative feelings. Afterlife thus mirrors the way I use the concept of 'attachment', which underscores the simultaneously sustaining and disorienting nature of promissory objects.
5. Quotation noted during fieldwork at Beacon Museum, Whitehaven. Quotation attributed to the Parliamentary Gazette in 1845.
6. Note here that decline affects in Whitehaven are shaped by a loss of industrial diversity and the town centre's disrepair. These affects circulate even whilst many people's (although not everyone's) economic standings in the area have improved in recent decades because of the nuclear industry.
7. These arguments do not stand up to scrutiny. See Willis' article (2024).
8. In their writing, Berlant used the pronoun 'they'.
9. I exclude research which uses 'place attachment' theory (e.g., Della Bosca and Gillespie, 2018). As discussed earlier, 'place attachment' is focused on understanding attachments where the object of attachment is a specific place, rather than a wider set of objects.

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Appendix

Sample of interviewees

Factor	Group	Percentage of area (Copeland) – to the nearest percentage point	Target	Number interviewed
Age	18–35	20%	5	7
	35–65	51%	12	10
	65+	29%	7	7
Gender	Male	50%	12	12
	Female	50%	12	12
Total			24	24

- Census data was used for gender and age (ONS, 2021).
- Roughly half of those interviewed were existing or ex-Sellafield employees, mirroring local employment figures (Oxford Economics, 2017).
- Population data available for Whitehaven is not detailed and robust. Therefore, data for the borough of Copeland was used as a proxy.
- The area is 98% white, so there was no recruitment target for BAME diversity (ONS, 2021).

Paper 4: Why the promise of green jobs has limited resonance: Industrial attachments in a net zero transition

Lewis, P.

Abstract

What happens when the promise of 'green jobs' is encountered by people who experience attachments to traditional industries? In this paper, I explore this question by examining a case study of an English town. Drawing on interview and ethnographic data, I argue that the promise of green jobs has limited resonance with my research participants. In contrast to proposals for new and continuing work in traditional industries, proposals for the delivery of green jobs are seen to lack credibility and do not affectively-culturally resonate with my interviewees. In making this argument, this paper puts forward a novel analysis of the challenges with green jobs discourse. The critique is pertinent given that many environmental policy actors frequently use green jobs language in an attempt to build public support for a net zero energy transition. I conclude by exploring how green jobs discourse might be rendered more promissory. One response lies in recognising and repurposing people's industrial attachments. I suggest that this necessitates forms of investment attuned to place-specific sensitivities which proves that green job creation is able to materially benefit communities.

1. Introduction

What happens when the promise of 'green jobs' is encountered by people who experience attachments to traditional industries? In this paper, I answer this question by attending to a controversy, one that unfolded in an area of northern England.

A rural and relatively quiet part of the UK, the town of Whitehaven looks out onto the Irish sea, south of the Scottish border. Bearing the hallmarks of deindustrialisation, and geographically isolated from the rest of England, the first thing that people who visit it tend to remark on is that it feels forgotten – a place that people in other parts of the UK seem to pay little attention to (Chapman, 1993; Davies, 2012).

But this changed rapidly in 2017. Whitehaven found itself thrust into the centre of international political controversy, following the announcement of a plan to develop the country's first deep coal mine in thirty years in the area (Willis, 2023). National and global political actors objected, including then US Special Climate Envoy John Kerry and youth climate activist Greta Thunberg. In the midst of a climate emergency, they argued, opening a

coal mine in a country that had turned its back on new coal extraction would be untenable (BBC News, 2021; Harvey, 2022).

In Whitehaven, people's reactions were largely different. Residents seemed to be mostly in favour, attracted by the prospect of 500 new jobs promised by coal mine developers (Kalshoven, 2022a; Fearn, 2024; Lewis, 2024). Environmental campaigners countered by saying that what is needed is a just transition, foregrounding the potential that creating thousands of 'green jobs' holds for the area (Cumbria Action for Sustainability, 2021; Green New Deal UK, 2021). The hope was that this might win hearts and minds, trumping the appeal of new high carbon industry.

The decision to mobilise 'green jobs' language by anti-mine campaigners did not occur in a vacuum. They drew on a discourse which circulates at different scales, internationally and nationally. On the international stage, green jobs language gained most prominence with the publication of a 2008 report by the United Nations Environment Programme (UNEP), entitled *Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World* (Renner et al., 2008). Since then, international policy actors have increasingly made the case for a mass transition to green forms of work to respond to a worsening climate crisis (Stanef-Puică et al., 2022).[13] Similarly, green jobs language has been used in national arenas. This includes the UK, where governments of different political persuasions have committed to rolling out hundreds of thousands of green and sustainable jobs (UK Government, 2020; UK Labour party, 2023).

The promise of green jobs is broadly similar in its use across scales and by different actors – namely, that new, well-paid jobs can be created *which simultaneously* help advance ambitious climate goals (Green New Deal UK, 2021; Pettinger, 2017). The hope is that this will help shore up mass public support for a net zero energy transition. But as I show by drawing on interview and ethnographic data I collected in West Cumbria, there is reason to question whether green jobs discourse always has that effect. Its promise may lack resonance among communities for whom traditional industries are more promissory and for whom the prospect of the roll out of green jobs seems unlikely.

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[13] Green jobs language was used prior to the UNEP report (Renner et al., 2008). But it seems that the 2008 report thrust the discourse into the centre stage of international debate (Stanef-Puică et al., 2022).

To explicate the lack of resonance of green jobs discourse, I draw on the concept of 'attachment'. Increasingly in use in cultural geographies (Strong, 2023; Zhang, 2023) following its elaboration by cultural theorists including Lauren Berlant (Berlant, 2011), attachment draws attention to the way subjects experience certain objects as promissory (Anderson, 2023).

'Objects' refer to anything that people encounter in their lives, whether in private or public spaces. They can include relationships, ideologies, material goods, expectations of work, social practices, or anything else, concrete or immaterial (Anderson, 2023; Anderson et al., 2023). What matters is the way the object in question comes to signal a sense of promise for the subject who attaches to it, such that it holds up the possibility of "something better to come" (Anderson, 2023: 399).

Attachments can be thought of as "trajectories that 'bring closer'" (Anderson, 2023: 392) the object in question, foregrounding "an ongoing movement of bringing closer [what it is] that...the object promises" (Anderson, 2023: 399). Using the language of attachment helps me explain why 'green jobs' are not encountered as promises. Conversely, it helps me explain why Whitehaven residents experience the potential of new and continuing employment in traditional industry as promissory.[14]

I proceed in four sections. I begin by reviewing existing literature about people's attachments towards traditional industries (section 2). I subsequently introduce my case study, where I examine how policy actors see 'green jobs' as an object which holds promissory potential. In this section, I also outline the methods I used in the field, namely qualitative techniques using conventional interview approaches with more creative methods. I used these to attune to people's affective relations towards industry (section 3). I then outline how attachments to traditional industries form in Whitehaven and why the promise of green jobs has limited resonance (section 4). The paper concludes by suggesting ways in which policy actors might render green jobs discourse more promissory in areas where people experience attachments to traditional industries (section 5).

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[14] 'Attachment' as conceptualised above has some comparisons with the concept of 'place attachment' (Della Bosca & Gillespie, 2018; Gormally et al., 2014; Walker & Cass, 2007). Both focus on an object that comes to feel necessary to a way of life. But 'attachment' as I use the concept explicitly focuses on the multiplicity of objects that people can attach to and focuses on the *promise* these communicate.

I now turn to examine how attachments to industries take shape. As I explain, these take two broad forms – economic and cultural. I begin by examining the former of these, where I situate the formation of attachments to industry within broad political and economic trends.

2. Industrial attachments

2.i. Industry as economic attachment

As extensive research has shown, levels of trust in democratic institutions across Euro-American countries are declining (Citrin & Stoker, 2018; Crouch, 2020). This includes the UK, where trust in politics is at its lowest in forty years, with politicians, ministers, and other government actors regularly ranking among the least trusted professional groups in the country (Ipsos Mori, 2023).

The reasons for decreasing trust in democratic institutions are multi-faceted (Merrington & Gillespie, 2021; Quilter-Pinner et al., 2021). But some political scholars have argued that it needs understood in relation to structural changes to the UK's political economy stretching back half a century (Crouch, 2020; Gilbert & Williams, 2022). During the post-war years, the state acted as owner-manager of the economy, using its power over industries and other spheres of economic life to promote relatively well remunerated, secure forms of work. Coupled with a redistributive welfare state and widespread trade union representation for workers, this led to rising living standards and relative economic security for many (Gilbert & Williams, 2022).

From the 1980s, however, industries were privatised. Concurrently, social security mechanisms were cut back (Gibbs, 2020). The consequence was the creation of more competitive social relations in an economy governed by increasingly competitive rationalities (Gilbert & Williams, 2022). Whilst economic opportunities increased for some social groups, others have been increasingly subject to harsher economic conditions under regimes of neoliberal governmentality (Brady, 2014). For these people, the promise of economic security – the mainstay of post-war forms of government – has receded into the distance

(Berlant, 2011)[15], including in areas experiencing deindustrialisation (Bright, 2012; Walkerdine, 2010).

Affected constituencies have attempted to hold democratic institutions to account, pressing them to shore up livelihoods and promote economic security (Cant, 2020). But in a context where the state faces structural constraints to shape economic outcomes, institutions have often faced constraints in their ability to respond meaningfully, fuelling resentment towards leaders (Gilbert & Williams, 2022)

Even whilst precarity and insecurity have become more pronounced for many, patterns in changing economic circumstances have mapped unevenly onto national polities, including in the UK. Employment arrangements which resemble post-war arrangements have endured in some places, including in areas where incumbent industries have survived waves of deindustrialisation. Workers in manufacturing plants (Gibbs & Kerr, 2022), steelworks (Smith et al., 2023), nuclear industries (Kalshoven, 2022b), among other sectors often access relatively secure and well-remunerated employment, buttressed through continued trade union representation – even whilst the threat of further deindustrialisation is often present.

Although scholars who examine affective relations in these industries do not use the language of 'attachment' as I do here (Gibbs & Kerr, 2022; Kalshoven, 2022b; Smith et al., 2023), they signal that workers in these contexts imagine promissory futures where these industries continue to survive because of the conditions they afford them and their communities. Employees see these forms of employment as especially valuable in a context where others endure the fraying of 'good life' aspirations (Berlant, 2011).

Yet, attachments to industries can pose a significant threat to efforts to enact a net zero transition (Barry, 2022; Scoones et al., 2015). Incumbent industries are often high carbon and difficult to decarbonise (industries like steel production or automobile manufacturing) or impossible to without unproven technologies (e.g, fossil fuel extraction) (Newell & Mulvaney, 2013). In a context where there is low trust in the capacity of democratic institutions to coordinate a transition away from high-carbon industries (Ainscough et al.,

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[15] Note that Lauren Berlant is discussing promises of a good life in the specific context of the United States of America (USA). There are important differences between the USA and the UK. But there are arguably similarities insofar as both countries have undergone comparable structural changes in the state's relation to the economy (Gilbert & Williams, 2022).

2024), opposition can surface, locking incumbent industries into economic development trajectories (Pettinger, 2017). This dynamic is reinforced given that some new green forms of employment are associated with low pay and insecure employment (Phillips, 2022).

The above literature foregrounds how people can become affectively bound to industry in a context of neoliberal insecurities. But as many researchers have been at pains to draw attention to, affective ties to industries are not merely economic. Rather, other considerations including the more or less-than-economic shape relations with industry, an issue I now turn to exploring.

2.ii. Industry as cultural attachment

People's relations towards industry are always shaped by cultural, place-based factors (Cass & Walker, 2009; Della Bosca & Gillespie, 2018; Kalshoven, 2022b; Lewin, 2019; Rohse et al., 2020; Walkerdine, 2010). When people have lived alongside industries for long periods of time, industrial infrastructures become sites of resonance which create a bridge with the experiences of prior generations, creating a sense of congruency between 'then' and 'now'.

Coal mining and steel communities imbue "large factories, mines, canals, train tracks, roads" (Rhodes II et al., 2020: 5) as sites of meaning; their place in the landscape signal connection with industrial pasts (Della Bosca & Gillespie, 2018). Nuclear communities see domes, chimneys, and securitised buildings as something that connects their experiences with the efforts of previous generations (Kalshoven, 2022b). Attachments form when industry's presence is imagined as extending into the future. By envisioning industry as reaching into temporal horizons beyond the here and now, a line is drawn connecting past, present, and imagined futures – one which holds out the promise of reproducing inter-generational ways of life[16].

Complicating this further, feelings of place-based identification with factories, mines, and installations can remain after industry has closed down (Bright, 2012). Abandoned infrastructures affectively resonate with contemporary generations, even when they are part of a past that is unlikely to be resurrected (Bright, 2012). Likewise, communities who have

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[16] As I will gesture towards in this paper's findings, among nuclear communities this promise is not least a result of the materiality of nuclear waste – one which demands painstaking work to sift through carefully, generating employment which lasts many decades.

detached from prior industry continue to feel the affective pull of industrial pasts (Lewis, 2024). In such contexts, the afterlives of defunct industries linger, "unsettl[ing] certainties between 'then' and 'now'" (DeSilvey, 2012: 56).

Empirical studies have also examined the relation between pride of place and industry, illustrating how infrastructures orient communities in relation to the wider world. Social historian Ewan Gibbs (2020) attends to Scottish coal workers' experiences, who saw local mines as part of a moral economy enabling wealth generation and international expansion. Similarly, historian Lorna Arnold (2007) describes the pride that nuclear communities experience when observing nuclear pile stacks. Counter-intuitively, she compares their feelings with Italian patriotism known as 'campanilismo' – the pride rural communities feel in beholding a local church bell tower. Despite obvious differences between the two, Arnold underscores that both create a sense of a 'us' and of 'them' – those who form part of the community, and those who do not and cannot lay claim to its proud histories (Arnold, 2007).

Industrial infrastructures and their place on the landscape, then, can be important in the making of inter-generational identities which reinforce feelings of place-based pride. However, feelings of *dis*identification can surface when landscapes change in ways which do not chime with ideas of place. Sociologist Shawn Olson-Hazboun's (2018) study of a coal community in Utah is a case in point. She documents the emergence of "'us' versus 'them'" (2018: 372) mentalities following the arrival of renewable energy industries in the area, in part because new forms of infrastructure were seen as incompatible with local ways of life. This, she argues, generated resistance among the community, who interpreted renewable energy as aligned to outsider "political agendas" (2018: 372).

Similarly, Sarah Padyk (2024) describes how rural identities in Ohio and Indiana underpin opposition to wind and solar technology installations. Her research participants saw their development as a "disruption to their rural lifestyle" (2024: 8) and "a violat[ion of] place-based identities" (2024: 9). Earlier research into communities' experiences of wind farms in the UK has comparable similar reactions (Cass & Walker, 2009). Thus, in these circumstances, green industries emerge not only as objects which hold little to no promise for the interviewees in question. Rather, they mobilise feelings of strong opposition and resistance.

Thus, many geographers argue that it is important to centre cultural sensitivities when designing policy for a net zero transition (Devine-Wright, 2022; Thomas et al., 2022b; Gormally-Sutton, 2014). Gareth Thomas and colleagues posit that sustainable development trajectories must attend to the "experiences of and relationships embedded in industrial places" (2022: 81) to meet the desires of local communities. They caution that to date the "deployment of new energy…infrastructure has often been received locally as damaging emotionally and socially valued aspects of place" (2022: 82). Patrick Devine-Wright argues that "adopting a place-based approach is fundamental to the success of industrial decarbonisation" (Devine-Wright, 2022: 1). He proposes "a research agenda…that go[es] beyond a superficial or ephemeral *appropriation* of place" (Devine-Wright, 2022: 1; emphasis added). Doing so entails genuinely centring what it means to be attached to the identities that form within place.

Implicit in Devine-Wright (2022) and Thomas' (2022b) papers is a warning – made explicit by Shawn Olson-Hazboun (2018), Sarah Padyk (2024), and other researchers (Cass & Walker, 2009). Unless place-based considerations are accounted for, communities might mobilise against net zero infrastructures. But, as I will show, disidentification with infrastructures might not lead to direct opposition. Rather, communities might respond with more ambivalent feelings, like hesitation and uncertainty. I share these findings in section 4. Before, however, I further detail this paper's object of critique, namely the promise of green jobs as articulated by environmental actors.

3. Case study and methods

3.i. The promise of green jobs in Whitehaven

As outlined in the introduction, plans to open a new coal mine in Whitehaven were announced in 2017. Environmental actors mounted a campaign against it, foregrounding the deleterious effects of opening a new coal mine in a climate emergency (Fearn, 2024). In addition, they articulated another overtly positive message – the argument that West Cumbria could be the beneficiary of the mass creation of green jobs. These, they said, could be delivered in the thousands in coastal Cumbria, many times more than the five hundred new jobs promised by coal developers. The hope was that this might persuade residents to drop, or at least lessen, their support for the mine (Fearn, 2024).

Detailed research was commissioned to evidence their argument. This led to the publication of a report by a climate charity called *The Potential for Green Jobs in Cumbria* (Cumbria Action for Sustainability, 2021a). It argued that "9,000 net [green] jobs [could be created] during a 15-year transition period" (Cumbria Action for Sustainability, 2021: 3) in the county, with a further "3,800 jobs supported in the long term" (Cumbria Action for Sustainability, 2021: 3). Further, it specified that "4,500 [of the 9,000 jobs] would be in West Cumbria (the site of the Whitehaven mine)" (Cumbria Action for Sustainability, 2021: 3), 3,500 of which would involve installing renewable infrastructures, mainly wind energy.

Campaigners hoped that the promise of new jobs in green industries might resonate with residents given the area's history. Indeed, West Cumbria is profoundly industrial in its character. Coal mining industries, which operated in the area during the Industrial Revolution and ended in the 1980s, have left a deep imprint on the area and continue to inform identities (Chapman, 1993; Davies, 2012).

West Cumbria has also been profoundly shaped by its relations with nuclear energy. The world's first civilian nuclear power plant in the world opened in West Cumbria in the 1950s. This is a source of pride for some residents (Kalshoven, 2022b)[17]. Although nuclear energy is no longer produced in the area, there is still a large nuclear complex where nuclear waste is stored, called Sellafield. More than ten thousand jobs are provided by Sellafield because of the challenges associated with disposing of nuclear waste and decommissioning the site safely (Subramanian, 2022).[18] The omnipresence of Sellafield means that many people see themselves as being part of a nuclear community (Bickerstaff, 2022; Kalshoven, 2022b).

Environmental campaigners were right, then, to point to Whitehaven's deep ties with industries. But, contrary to their assumptions, my research suggests that this does not mean that West Cumbrians encounter the promise of new green industries as promissory. Section 4 of this paper sheds light on why this is the case. It does so by showing that proposals for

[17] Note, however, that the politics of nuclear pride has been the subject of recent research. Geographer Karen Bickerstaff argues that West Cumbrian communities resist the slow 'slow violence' of living next to Sellafield, "emphasising modes of pragmatic resistance – subtle and contingent ways in which residents challenge the identity and structural relations of being nuclear". This reading does not, however, negate that feelings of pride exist. Indeed, one of her interviewees articulates pride in the industry. What it does is, rather, argue that these feelings can co-exist alongside forms of resistance to the industry.

[18] In recent decades, Sellafield has pivoted away from producing nuclear energy to being a site where nuclear waste from across the world is contained. Because of the amount of waste that is stored on site, it generates a lot of employment and will continue to for more than a hundred years (Subramanian, 2022).

the delivery of green jobs are seen to lack credibility and do not affectively-culturally resonate with my interviewees. Before expanding on this argument, however, I describe the methods that I used whilst carrying out fieldwork in the area.

3.ii. Methods

I conducted fieldwork in Whitehaven in November and December 2022. My preoccupation was to explore people's affective relations toward energy industries, and to examine how these might provide openings or challenges for a low-carbon transition in the area. I used qualitative research methods, including interviews and ethnography, attempting to attune to what it means to live alongside contemporary industries as well as experience the afterlives of past industries (Lewis, 2024).

My interviews were conducted using a topic guide, where I explored people's feelings about three types of industry – coal, nuclear, and 'green' industries. The topic guide was used to lightly structure my conversations, so I could ensure key issues were covered whilst allowing space to explore unexpected themes that emerged (Brinkmann, 2014). Interviews lasted between an hour and a half and forty-five minutes.

Twenty-four people were selected for interviews using a 'purposive sampling' approach (Flick, 2022). In doing so, I attempted to speak to people with a variety of different perspectives (see appendix for further details). Many of the people I spoke to worked in the nuclear industry; it was not difficult to find people who worked for Sellafield given its omnipresence as the main major industrial employer in the area. My interviewees also had connections with mining pasts, usually because family members had worked in the pits. None of my interviewees worked in industries they instinctively recognised as 'green', although in some conversations some people said that the nuclear sector is a green industry.

As well as having occupational ties with industry, many of my interviewees had a special interest in energy issues, including the net-zero transition. This included local politicians elected to serve in the local authority area who I spoke to, and people involved in the politics of the Whitehaven mine.

In my conversations with my interviewees, I often referred to 'green' jobs and industries in a general sense, without specifying the exact industry in question (i.e., wind, solar, hydrogen

plants, or any other). I chose to take this approach to echo the language that environmental campaigners used, such that I was able to test how people responded to it. I also, however, asked them about jobs in wind industries. I spoke to them about this particular industry over others because of the prominence that wind energy jobs were given in the aforementioned *The Potential for Green Jobs in Cumbria* report (Cumbria Action for Sustainability, 2021a).

I complemented my interviews with creative and embodied approaches. This included using photo-elicitation methods (Davey, 2024), where I showed my interviewees photographs of wind, coal, and nuclear industries. This method has been used by energy social scientists to surface feelings and instinctive responses which the use of verbal communication alone struggles to achieve (Davey, 2024;). The photos I used are included in this paper's appendix. I also brought a quote with me from the aforementioned *Green Jobs* report, provided in the appendix and in section 4.

Walking interviews were conducted where possible – a method that is helpful for discussing sensitive issues (Ross et al., 2009). However, in practice only five were conducted in this way. Finally, I spent time exploring West Cumbria, observing sites like Sellafield and abandoned coal infrastructures, and recording my own thoughts and feelings. During these visits, I had fifteen spontaneous conversations with people, noting down the key points that arose from them in a notepad. These informed my findings, but I do not use quotes from them in this paper. Upon completing fieldwork, I coded all of my data using a codebook, using my data and experiences in the field throughout the writing process to produce this paper.

4. Traditional and green industry in Whitehaven

4.i. Promissory objects, hazy objects

In interviews, my research participants explained that the nuclear industry fundamentally shapes what it means to be West Cumbrian. The sector has provided work to successive generations of workers and, as such, has become knitted into the area's historic fabric. As the sole major industrial employer in the area, it is omnipresent in people's lives and social relations. In people's imaginations, 'West Cumbria' and 'the nuclear industry' are almost synonymous to each other, such is the ubiquity of Sellafield.

[Sellafield is] just considered part of West Cumbria. It is not literally considered a company in its own right. (male, 60s, Sellafield administration)

During my interviews, identification with the industry interweaved with a certain degree of pride in the nuclear industry's history – although this point was contested, with some saying that being part of a nuclear community did not necessarily evoke proud feelings. Those who did pointed to the fact that there have been technological developments in the nuclear industry that were first pioneered in the area.

I worked there for the last 30 years, and obviously all them developments, when I first started, these weren't built. The trade unions, it was us in 1992 who got THORP [a nuclear fuel reprocessing plant] built. (male, 60s, ex-nuclear union official)

When I asked my interviewees what forms of employment they envisaged for the future of the area, most people's responses spontaneously coalesced around the promise of new or continuing jobs in nuclear. The promise of employment in the nuclear sector was sometimes described in affecting ways. One interviewee drew on kinship metaphors to describe people's feelings towards the sector, blurring the line between intimate lives and employer-employee relations (Kalshoven, 2021).

I think, you know, to take the nuclear element away from this community might raise a few heads and say, 'Well, hang on a minute, we've had this in our community for such a long time. You know, it's it feels part of *the family*', it feels part of what they've been brought on, brought up in their community (female, 40s, public relations professional; *emphasis added*)

Note how, in the description above, affective attachment to the nuclear industry seems to intensify the moment that my interviewee imagines that 'the nuclear element' might be 'taken away'. We here see the movement of attachment described in this paper's introduction, where attachment was described as a "trajectory that seeks to 'brings closer'" (Anderson, 2023: 392) the object in question. Only here, the movement occurs in relation to a threat of the object being taken away. In other interviews, I encountered similar movements of attachment towards the promise of continuing or new nuclear employment.

My interviewees indicated more ambivalent affective relations with the area's coal heritage. Older generations tended to emphasise connection with mining pasts, whilst younger generations indicated less proximity to coal cultures. Regardless of age demographics, in my interviews it became clear that coal attachments had waned in the past forty years, since the closure of the last coal mine in the area. People had come to conclude that coal was now 'a thing of the past' which had little relevance for the area's future.

But, as I have argued elsewhere (Lewis, 2024), when proposals for a new coal mine were proposed in 2017, many people experienced a process of re-attaching to coal. The mine held up the promise of the creation of new, well-paid jobs. For some, it reminded them of the ostensible grandeurs of the area's past – a period when Whitehaven was a centre of industrial production. The hope was that this might find a way of re-inserting itself in the future. As with new or continuing jobs in the nuclear sector, the promise of new coal employment thus exerted an affective pull on many people's desires for economic development.

When I pivoted to discussing the promise of jobs in new green industries with my research participants, most people told me that that they supported the delivery of new sustainable industries. They said that they understood that climate change demands creating new forms of energy. In one interview, I spoke to a Sellafield worker in her late 20s who had recently had a child. She suggested she supported green industries because of the threat that climate change posed for her daughter's future.

> My worry is that [climate change] will have a significant impact in my daughter's lifetime…I do think it is a huge, huge issue…[I worry about] some of the places that she might not be able to live because of rising sea levels. The extinction of animals she may not see. (female, 20s, Sellafield administration)

But even whilst she was supportive of new industries, she signalled distance with them, explaining that "green jobs just don't really exist around here at the moment". This message was repeated to me multiple times in interviews. In one conversation, I was comparing photographs of coal mines, Sellafield, and wind farms with an ex-miner, when he said the following:

[Pointing at a photograph of a coal mine] I know them people. He was a fitter. [Pointed at a photograph of the nuclear industry] I know a lot of people from Sellafield. Not in a working environment, but socially. I don't know many people about wind energy. (male, 70s, ex-pit worker)

Just as my interviewees struggled to name people who worked in wind industries, they struggled to tell me about the companies running them – despite their ubiquity on the landscape. The only person who was able to speak to this question was one of the local politicians I interviewed. Whilst we were looking at photographs of wind farms, he told me that wind industries in West Cumbria are owned and manufactured by foreign companies. In doing so, he signalled that they have little point of connection to his and other people's lives. This contrasted strongly with his – and other interviewees' – experiences of the coal and nuclear companies, both of which have historic roots in the area.

At night, if you were to go down and look out at sea, you will see thousands of red lights flashing, and they are the windmills. That was done by DONG, Danish Oil National Gas company. That's the first thing that comes to me. (male, 60s, ex-factory worker)

Some of my research participants suggested that they found it difficult to imagine what working in wind farms would entail. This provided another point of comparison with the way the coal and nuclear industries are seen as providing forms of (real and imagined) labour deemed valuable for their familiarity. One interviewee situated contemporary experiences of work in the nuclear industry in their historical context, describing how being a nuclear worker provides points of connection with coal mining.

It's industry…They're comfortable with it, they understand it…In Sellafield, everyday's pretty much the same. You go in, you work behind screens, you shower, you come home. And then you do the same thing over and over again. This is West Cumbria…I think about the day-to-day life of a miner – went in, got changed, went down a pit, worked with the coalface, came out, showered, changed, left. (female, 40s, council worker)

Other similarities between the mining and nuclear industries became apparent for me whilst I was conducting fieldwork. Both industries gather large numbers of labouring bodies within

concentrated spatial boundaries. In doing so, they provide the conditions for the production of feelings of shared endeavour and camaraderie among labourers (Rohse et al., 2020; Walker, 2020).

By contrast, those who expressed uncertainty about work in wind farms suggested that it might involve a rupture with traditional experiences of being a labourer. For one interviewee, this centred on the way labouring bodies are scattered across the landscape, contrasting with the spatial arrangement of work in the nuclear industry.

> The windfarms, I don't see any boats, any people. You just think, where's the employment once that's up and running…*It doesn't' look like it's busy with activity. Whereas if you went to Sellafield, you'll see that there's a lot of things going on there…* It looks nice and clean and environmentally friendly, but I just don't see the jobs" (emphasis added)... It's faceless, anonymous. I couldn't even tell you who the employer is for those things (male, 30s, Sellafield administration; *emphasis added*)

Viewed in the round, it was clear that green industries had not been rendered meaningful as symbols and material infrastructures of industrial capacity connected to people's lives. In stark contrast with coal and nuclear industries, they were thus an object without cultural or economic mooring. As such, my participants seemed to struggle to imagine what the delivery of green jobs would mean for their lives. From this vantage point, it was not so much that the promise of green jobs was encountered as undesirable per se. Rather, the object of green jobs was felt as hazy and indeterminate. One of my interviewees seemed to sum up the sentiment with extreme precision when she signalled that 'green jobs' are an unknown quantity to people in West Cumbria.

> I think that people's grasps on green jobs, future careers…it's almost a leap into the dark. (female, 40s, community engagement worker)

4.ii. Credible promises, and less credible promises

As mentioned, I brought a quote from a press release that accompanied the publication of the report on *The Potential for Green Jobs in Cumbria* (Cumbria Action for Sustainability, 2021b) with me to interviews. I did so to explore how my research participants spontaneously responded to the text when reading it for the first time. It read as follows:

Formerly industrial areas, like towns in West Cumbria, suffer from deprivation. They could be revitalised by shifting to green jobs. Green jobs exist in familiar sectors like manufacturing and construction, and in newer sectors like renewable energy. This includes offshore and onshore wind, hydroelectricity, solar panels, and tidal power (Cumbria Action for Sustainability, 2021b).

Upon seeing the text, the vast majority indicated that they understood the need to embrace more sustainable ways of producing energy. But the majority expressed strong scepticism about whether the promise could be relied on to become a reality.[19]

Many said that policy and political actors had made similar promises in the past, only for them to be broken later on. In one conversation, I met three policy stakeholders, each of whom worked closely with communities in their respective roles. They told me that programmes for green job creation had been planned in the area before, only for them to fail to be delivered. This included proposals for a tidal lagoon that was never built. In a follow up interview with one of them, he quipped that "green jobs are the forever promise that never delivers". A comparable concern was echoed to me in an interview with a nuclear worker. When I showed him the quote from the report, he responded as follows:

I agree but it's going to take intervention to happen. So, this isn't going to happen by just writing stuff. So, that's the challenge – how are we going to make this happen? (male, 40s, nuclear scientist)

He explained that his scepticism was in part caused by his lack of faith in the quality and competency of UK political leadership. This concern repeated itself across interviews, with many interviewees expressing low trust in the capacity of UK political institutions and actors to lead a green industrial renewal.

Some participants stated that even if green industrial jobs come to be delivered, they might not provide well-paid, secure forms of employment. Those who expressed these concerns seemed to see green jobs as bound up in changing patterns of the nature of work in the

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[19] A small number of interviewees were more enthusiastic and saw these jobs as part of a celebrated future for Whitehaven.

wider UK labour market, where employment is increasingly insecure and often poorly remunerated.

> They keep saying about green jobs, but I've never seen any green jobs that pay good money. It's all at minimum wage or things like that (male, 70s, ex-post office worker)

> I'm worried that if renewables do take off, I'm worried that they'll be as insecure as the tourism jobs (male, 30s, Sellafield administration)

Concerns about the credibility of the promise of new green jobs contrasted with the potential that my research participants saw in the nuclear and coal mining industries as continuing and/or new sources of employment. Sellafield was consistently described as an employer that can be relied on to continue to provide thousands of well-paid and secure jobs, even though concerns about long-term job losses due to decommissioning were expressed. One interviewee contrasted experiences of work in Sellafield with those of workers facing insecurity in other contexts, specifically employees of US social media company Twitter or 'X'. At the time of our conversation, the media had widely reported workers at Twitter were facing mass redundancy (Hughes, 2022).

> Given what's going on in the world, at the moment, if you brought a private company in, asked the employees of Twitter how secure they feel at the moment in their job. Would people feel the same way? …That understanding of [Sellafield] here, it isn't going away tomorrow. So, it's a *warm blanket to put around you*. (male, 60s, Sellafield administration; *emphasis added*)

Some explained that the promise of continued employment in Sellafield is credible because the site contains toxic nuclear waste which demands attending to. The imperative of decommissioning the site as safely as possible is one that no political actor, regardless of persuasion or circumstance, would feasibly turn their back on.

> Sellafield will always have jobs because you can't lock it up. You can't just walk away from it. De-commissioning is as bad as when I started 40 years ago. You're opening up all the old cells, [and] a lot of the ones now don't know about these cells. You need a lot of people to work it and look after it…You can't just leave it. (female, 60s, ex-nuclear radiation inspector)

Similarly, most of my interviewees saw the promise of five hundred new jobs as credible. Investment was being made available by a private company with a track record of opening mines across the world. They had the expertise and resources to develop a new mine and the profit-making incentive to do so (Willis, 2023). In addition, they invested significant resources in building strong community relations with local people. This included running community engagement events where they sold the mine's credentials to people, including its potential to deliver five hundred new jobs (Kalshoven, 2022a).

This provided another point of implicit comparison with proposals for green jobs put forward by climate campaigners. These were merely "hypothetical" (Fearn, 2024: 1408). Unlike promises for new coal jobs, there was not a green company in sight committing to deliver new secure employment for local communities.

4.iii. Green jobs: An object of non-promise

Viewed in the round, 'green jobs' thus emerged as an object of non-promise during my research in West Cumbria. First, campaigners' proposals for green jobs were seen as lacking credibility. Second, as I showed, my research participants signalled that green industries lacked cultural and economic mooring in people's lives and, thus, had not been rendered meaningful for people.

Drawing on this case study, we might speculate about how communities in contexts which are similar to West Cumbria might affectively respond to the promise of green jobs. As I showed in section 2, economic and cultural attachments to traditional industries are not unique to coastal Cumbria. Rather, they exist elsewhere in the UK and other countries (Gibbs & Kerr, 2022; Smith et al., 2023). In these and comparable contexts, it is possible that promises of green jobs might also be encountered as non-promises, in particular when green industries have either not materialised in people's lives or failed to provide economic benefits to people.

Further research would be needed to evidence this point of speculation. If we assume for the moment, however, that its promise might similarly be met with incredulity and hesitation in various contexts, this raises a problem. Many areas that currently host traditional industries are likely to need to house new green industries as part of a wider societal transition to net zero. Given the ethical and political imperative to gain community

support for net zero policies (Willis et al., 2022), the question thus becomes how we might sow the seeds of support for green jobs and industries in these areas. I now turn to briefly sketch three challenges and opportunities with making green jobs an object of promise in such contexts.

5. Conclusion: Can green jobs be rendered promissory?

First, as my case study showed, the effort to render green jobs promissory in West Cumbria partly failed because people were asked to assemble a radical new set of attachments to objects which were unfamiliar to them. As one of my interviewees suggested, this required that individuals take "a leap into the dark", which most seemed unwilling to do.

An alternative approach might proceed as follows. Rather than expecting people to embrace an entirely novel set of promises, political actors might start by acknowledging the cultural-material realities which shape people's affective-material lives. They might then explore whether there are specific types of net zero industries which would resonate with people in a context where industrial attachments endure.

It is likely that the promise of hydrogen plants, steel recycling factories, or other forms of green manufacturing (Robins, 2021) might resonate with people in areas with traditional industrial attachments, more so than the prospect of more wind industries. These industries possess the advantage of replicating some of the structures, rhythms, and routines of work in traditional industries. They congregate large numbers of bodies within concentrated spatial boundaries, providing conditions for the production of camaraderie; they typically offer a set of relatively predictable work routines; and they have a heavy industrial character which mirrors that of traditional industries.

I offer these suggestions speculatively. Research would need to be conducted to explore these options with host communities directly, perhaps by adopting a similar approach as that used by to environmental social scientist Catherine Cherry, where she and her co-authors explore industrial development opportunities in south Wales (Cherry et al., 2022).

Second, as my analysis gestured towards, one of the reasons why some people experienced disconnect with green industries is because communities do not know the entities who own them, in part because they are foreign owned. Studies have shown that when communities

own or part own industries, they typically experience a sense of greater affinity with them (Gormally et al., 2014; Warren & McFadyen, 2010). They are more likely to benefit from the profits that they make, and they are more likely to feel a sense of commitment that comes from being involved in owning any given asset (Warren & McFadyen, 2010).

Many studies of community-owned green industries focus on renewable energy (e.g., Warren & McFadyen, 2010), which my case study suggested that people felt little spontaneous enthusiasm for. It is possible that an ownership stake over wind industries might begin to shift people's feelings, helping them to take those initial steps towards forming those more novel attachments. In addition, it would be interesting to explore whether the heavy net zero industries discussed above might be delivered in a way that allows communities to have an ownership stake in them.

The third and final consideration relates back to the incredulity that people felt in regard to the capacity of democratic institutions to coordinate a green industrial renewal. The obvious way to overcome this challenge would be to prove to communities that it is possible to deliver green industries that meet people's material needs and expectations. There are areas of the UK where success stories for the delivery of green industries are being achieved (Bridge & Faigen, 2023). But, as my co-authors and I recently noted, there is a need to build greater levels of public trust in the state's capacity to deliver green economic renewal as part of a wider net zero transition (Ainscough et al., 2024).

Surfacing this problem leads us to foreground structural challenges concerning the shape of the UK political economy. As I argued in section 2, there are structural barriers which constrain the state's capacity to proactively steer an industrial transition (Ainscough et al., 2024). As many have argued, overcoming these barriers likely requires enacting a set of transformative changes (Christophers, 2024; Fearn, 2024; Lockwood, 2015; Phillips, 2022). Potential solutions include but are not limited to: the potential nationalisation of green industries (Christophers, 2024); the formation of new economic constituencies which benefit from green industries to generate positive feedback loops, whereby state bodies are lobbied to continue to provide financial support for sustainable industries (Lockwood, 2015); and the rebuilding of internal state capacities to enable a rollout of green industries (Fearn, 2024), among others (Phillips, 2022).

It remains unclear whether these structural changes can be achieved. But what does seem more certain is that, until they are, political actors who advocate for the promissory nature of green jobs are likely to continue to encounter incredulous responses from some industrial communities. Rendering green jobs promissory might thus depend on our ability to deliver political economic transformations.

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Appendix

Table 1: Sample of interviewees

Factor	Group	Percentage of area (Copeland) – to the nearest percentage point	Target	Number interviewed
Age	18-35	20%	5	7
	35-65	51%	12	10
	65+	29%	7	7
Gender	Male	50%	12	12
	Female	50%	12	12
TOTAL			24	24

- I used Office for National Statistics (ONS) census data to find out about gender and age demographics in the area (ONS, 2021).
- About fifty percent of those I interviewed worked for or had worked for Sellafield (Oxford Economics, 2017).
- The area is 98% white. I did not recruit BAME individuals as a result (ONS, 2021).

Section 5: Concluding remarks and personal reflections

This section proceeds in three stages. First, I begin providing a brief summary of my papers and three key themes that emerged from them (5.i). Second, I reflect on what implications these themes hold for further exploring attachments in a climate crisis, including opportunities for further research. Third, I offer some personal reflections on the current state and potential futures of climate politics, drawing on my learnings as an academic researcher and my prior experiences as a politics practitioner (5.iii).

5.i. Summary of papers and key themes

Summary of papers

My papers contributed new empirical evidence, showing that people's affects in West Cumbria are organised by the gravitational pull of promissory futures. They helped to advance nascent research about attachments in a climate crisis (Anderson, 2023a; Hentschel & Krasmann, 2024) by evidencing that the promises that people were moved by held contradictory implications for the imperative of a rapid net zero transition.

My paper on 'Fluid hope in a climate emergency' (paper 2) showed that people who took part in the Copeland Panel were inspired by the promise of low-carbon futures. Amid the intensities of their deliberations, residents came to believe that local politicians would enact the Panel's recommendations. But they subsequently felt disillusioned because the Council demonstrated little interest in taking forward their suggestions. Paper 2 thereby confirmed a point of speculation made in 'The messy politics of local climate assemblies' (paper 1), where my co-authors and I suggested that people are likely to feel disenchanted in the aftermath of climate assemblies (CAs).

'Re-attaching to coal in a climate emergency' (paper 3) and 'Why the promise of green jobs has limited resonance' (paper 4) showed that other people felt drawn by the allure of the return of coal industries or desired the maintenance of the status quo. In both cases, these promises gestured toward the reproduction of high carbon futures. Paper 4 also examined how green jobs were encountered as non-promises in West Cumbria.

My papers surfaced a variety of themes. First, I drew attention to how people can experience ambivalent feelings in relation to climate issues. Paper 3 detailed an interview with two young people. They expressed fears about the spectre of climate change, communicating their anxieties about a climate-ravaged future, even whilst they felt the allure of new coal jobs. Similarly, in paper 4, I examined the experiences of a young mother who expressed concerns about climate futures. She simultaneously signalled suspicion at proposals for the delivery of green jobs in West Cumbria (WC). In both these instances, my research participants felt the need to move away from high-carbon futures, even whilst they became bound to them.

Second, I explored the fluid and non-linear nature of people's affects. In paper 2, the 'urgent' promissory futures that formed during the Panel's deliberations later morphed into forms of hope with 'slower' and more 'radical' forms. Paper 3 conversely explored how a promise which seemed to have been put to bed was resurrected, bringing the past into the future.

Third, I showed that the promises that people became tethered to did not form in a vacuum. Rather, papers 3 and 4 explored how these were formed within material-cultural contexts where high-carbon industries have the upper hand. At the heart of this realisation is an acknowledgement that transcends West Cumbria and is applicable to the lives of all those who live in high-carbon societies – we live in worlds which have been historically constituted, and continue to be shaped, by fossil fuels (Szeman & Boyer, 2017). Thus, the promises citizens become bound to will inevitably be entangled with the workings of high-carbon energy. We might thus say that we inhabit *fossil-fuelled promises.*

What are we to make of these themes? In the sub-section that follows, I reflect on this question. I begin by examining the implications of people's ambivalent states of feeling amid a climate crisis. I then turn to put the second and third theme I highlighted above in conversation – the fluid state of people's attachments; and the way we inhabit fossil-fuelled promises.

5.ii. Implications for exploring attachments in a climate crisis

Ambivalent states of feeling

As outlined in section 2, there is a rich area of literature which examines climate emotion and affects. Within this line of research, there is a tendency for researchers to focus on one of two issues. First, some researchers have explored how emotions and affects bind people to high-carbon futures (Daggett, 2018; Larrington-Spencer, 2024; Norgaard, 2011). This includes research which examines attachments to high-carbon diets (Sievert et al., 2022) and fossil-fuelled forms of mobility (Larrington-Spencer, 2024).

A second line of inquiry examines how emotions and affects move people in the opposite direction – to desire low-carbon futures (Cassegård, 2024; Head & Harada, 2017; Lysack, 2012; Robson, 2025; Stuart, 2020). Researchers have analysed the experiences of environmental activists (Robson, 2025; Stuart, 2020; Thaler, 2024), scientists (Head & Harada, 2017), and public sector workers (Lysack, 2012).

But given the illustrations I just gave about the ambivalent experiences of some of my research participants, I suggest that researchers should be wary of falling into a habit of researching emotions which either are *for* or *against* change. Doing so risks inadvertently reproducing dualisms which may desensitise us to exploring states of feeling which defy obvious categorisation. At times, I have found myself gravitating towards this way of thinking whilst carrying out my research. I have tried to resist falling into this instinct, but I suggest it is debatable how successfully I have steered clear of this.

The warning I issue is not that scholars who work within these strands are unaware of ambivalences or do not report on them; see, for instance, Kari Norgard's acknowledgement of the ambivalences of denial in Norway (Norgaard, 2011). Rather, it is the habitual routines that we might fall into if we regularly choose to focus on one topic over another – for instance, to *either* examine the experience of radical activists who seek transformative action *or* the pro-fossil fuel groups who threaten to bind us to deleterious futures.

There are two reasons to be wary of this risk. First, unconsciously falling into a practice of exploring either/or dynamics might desensitise our empirical research. Second, it carries potential political and ethical implications. By subtly replicating dualisms of 'for' or 'against', there is a risk that we might inadvertently perpetuate narratives which seek to divide social groups into opposing camps, a tactic that has been employed by culture war actors.

Narratives which seek to dichotomise people's positions seem to be designed to attempt to derail net zero policy. Actors who promote fossil fuel interests have pursued this narrative (Paterson et al., 2024b), seeking to inject conspiracy theory narratives that portray some social groups as benefiting from policies designed to undermine 'the common man'. There is no credible basis to these discourses. But I suggest that as critical researchers we should remain alert to the risks of providing them with additional fuel and seek to work against them in how we conduct research.

What can be done to fend off this risk? An obvious place to start is pursuing research which seeks to explicitly research ambivalent states of experience. This might involve examining feelings like boredom in the face of climate change, a state of experience which suggests a temporary suspension of feeling which refuses being drawn into 'for' or 'against' narratives (Anderson, 2023a).

Another approach would be to embark on doing autoethnographic research to explore how our *own* experiences are bound up in ambivalent, contradictory feelings. We might document the excitement we feel at getting on a plane to go to our next conference, even whilst we jostle with feelings of guilt, conscious of the emissions it will add to a warming planet. Or we might examine the pleasures of a meal which we know is not in keeping with sustainable diets.

I further suggest that the advantage of this approach is that it is non-moralising. It gestures towards how citizens of high-carbon societies are necessarily always bound up in fossil fuelled pasts, presents, and potential futures. This might open opportunities for wider forms of public engagement, where citizens engage openly about the allure of high carbon attachments to collectively deliberate about what it might mean to disentangle ourselves from unsustainable lives.

Fluid attachments, fossil-fuelled promises

What do we achieve by saying that the promises we attach to are fluid and, at the same time, fossil-fuelled? What this does is surface a tension. On the one hand, fluidity signals a certain capacity for agency. In the context of the Copeland People's Panel, it demonstrated that people were able to improvise to imagine new promissory futures, even in the face of disappointment.

On the other hand, to recognise that we inhabit fossil-fuelled promises is to acknowledge the power of our fossil-fuelled pasts and presents in shaping our desires (Szeman & Boyer, 2017), as well as the continued influence that fossil fuel interests possess in (re)constituting the objects of promise made available to us (Newell & Mulvaney, 2013). Articulated as such, we see that we face a certain constraint in our capacity to build sustainable futures. The choices available to us are limited, and the choices we make are not ones which we have independent power or control over.

I suggest that an area for further research is to explore how individual and collective subjects live through and navigate the tensions of fluid and structurally constrained climate attachments. Embarking on this kind of research would seek to understand in greater detail how subjects both feel constricted by the structuring influences that limit their capacities of action, even whilst they seek to disentangle themselves from them by exerting agency. This would build on nascent research about the politics of climate attachments which has signalled a sensitivity to these issues, but not explicitly explored them (Anderson, 2023a; Hentschel & Krasmann, 2024).

This might be examined in a range of ways. This could include how the structure-fluidity tension surfaces in and out of people's threshold of conscious awareness; how people push back with force against fossil-fuelled attachments, seeking to carve out alternative futures; conversely, looking at cases when fossil-fuelled promises gain the upper hand, like my analysis of the Whitehaven coal mine. These studies could also enter into conversation with more Gramscian-inspired analysis which examines how hegemonic and counter-hegemonic projects are formed (Gilbert & Williams, 2022). It might explore what it means to enable large-scale systemic transformations in the promises which circulate through spaces and how incumbent interests attempt to push back.

A second avenue to explore in greater the depth are 'non-promises' and their relations with promises. We might investigate what it means to hollow out currently dominant promissory objects, such that they no longer resonate with people. I signalled how this occurred when people in West Cumbria detached from coal (paper 3), but this could be documented in relation to a range of issues, including other fossil fuel attachments and people-land relations (Sievert et al., 2022).

Finally, there is a question that my thesis surfaced about the tension between events and climate attachments. Paper 2 ('Fluid hope in a climate emergency') showed that the Panel event had a lasting impact on its participants. It propelled them to desire a transition. But I could have taken my analysis further, examining the relations between the Panel as an event and how West Cumbria's material-cultural context shapes participants' orientations. Applied more widely, the same issue might be analysed in other contexts to understand how events and structuring material-cultural realities come into contact with one another, constituting people's climate affects and attachments.

I now turn to the third and final sub-section of this conclusion. I draw on my learnings as an academic researcher and a politics practitioner to offer some personal reflections on the current state and potential futures of climate politics.

5.iii. Personal reflections on climate politics and its possibilities

I began this thesis by recounting my experiences in 2018 and 2019. I recalled scenes of heated climate politics where campaigners took to the streets, calling on the government to take transformative climate action (Taylor, 2019).

These scenes were affecting – for campaigners most immediately bound up in their intensities; for observers watching from the sidelines, who perhaps felt moved by them; and for politicians who felt compelled to announce Climate Emergency declarations. I was also affected. In the years to follow I would find myself drawn into climate politics issues, spending much and later all of my working hours exploring them: first, as an elected government representative; subsequently, carrying out this doctorate.

I might now pause to ask how I can I reflect on our moment of continuing climate crisis from my current vantage point. What insights are thrown up when I bring what I have learnt over the past few years into conversation with the current state and possible futures of climate politics?

My answers are speculative, given that I am using past and present learnings to explore what might come next. Further, they are tentative and personal, and thus not intended to withstand full academic scrutiny.

I explore this question in two parts. First, I pause to reflect on the future of democratic innovations by asking what opportunities might surface after the promise of climate assemblies (CAs) has frayed. Second, I ask what it might mean to build a more affecting, galvanising climate politics that could help us begin to navigate the challenges of the years and decades ahead.

Politics after climate assemblies

My experiences of climate assemblies taught me that they are profoundly powerful tools. First, they are remarkable innovations that enable individuals with different political perspectives to find common ground over a contentious issue. In an era marked by political polarisation, that in itself is a noteworthy achievement.

Second, the outputs that CAs produce are inspiring. CA recommendations are consistently well ahead of climate policies drawn up by governments (Willis et al., 2022). Were they to be implemented in full, there would still be a gap between policy and carbon neutrality goals. But judged against the current political impasse on climate change, they are invariably transformative in the scope and depth of change that they envisage (Willis et al., 2022).

But, as this thesis has shown, CAs are also littered with perils. Many local governments and commissioning authorities have set them up in ways that seem destined to generate citizen disillusionment, not least because commissioning authorities often lack the means to implement the recommendations that they produce.

What opportunities lie ahead for democratic politics after the promise of CAs has frayed? Can the power of CAs be resurrected in a different guise, whilst its perils are mitigated? Do they have a promissory afterlife?

There are two groups we should consider when thinking about these questions. The first are the participants who took part in them. The second are the stakeholders who lobbied for or helped set them up.

Starting with the participants, it is possible that many will disengage in the short-term, given their experiences of disillusionment. In due course, however, ex-CA participants might re-connect with attempts to push forward larger scale changes. This might require a seismic event – such as a large natural disaster, or something that causes a radical jolt to the balances of forces in political institutions – leading to the formation of coalitions advocating for radical climate policy (Stripple et al., 2021). Individuals who took part in CAs might find themselves reminded of the knowledge and skills they developed having taken part in CAs and bring these capacities to newly forming coalitions.

For stakeholders directly involved in lobbying for CAs or helping set them up, there will also be opportunities. Academic and applied policy researchers are exploring new democratic innovations which seek to draw on the power of CAs whilst minimising its risks. One set of ideas revolve around creating democratic forums which cede more power to participants, giving them more space to deliberate outside of formal structures. This might involve giving communities the opportunity to have more scope in shaping how assemblies are run, rather than being closely managed by the commissioning authorities, as they are at the moment.

Upon completion, participants might be given small budgets to work with to implement initiatives to trial projects in their communities. The advantage here is not only that it provides people with greater levels of autonomy; they also rely less on commissioning authorities to implement them. At the same time, they do not foreclose opportunities for the formation of public-community partnerships (Heron et al., 2021), gesturing towards opportunities to scale up.

These new objects of democratic promise will face their own disappointments. But in the flow between promise and disillusionment they might help carve out alternative futures.

How to build an affecting and galvanising climate politics

Drawing on my experiences as an elected government representative and an academic researcher, I might ask myself: What might it mean to build an affecting climate politics fit for our times? What advice would I give political actors seeking to enact transformative change? In what follows I share five thoughts about what this might entail. I begin small – examining the building blocks for a galvanising politics – before moving to larger scale, structural questions.

1. Meet people where they are

Any project for a positive, affecting politics needs to start with a basic appreciation about the politics of recognition. In my experiences as a councillor and a researcher, I have found that people want to genuinely feel like they are heard and treated with respect.

If you approach people in this way, the vast majority of the time you will find that people are willing to engage and share their thoughts, feelings, and perspectives with you. But this has to be about really listening. It involves suspending your opinions to the take the time to engage and try to understand where the person you are speaking with is coming from, even if their perspective is very different to your own.

This is the foundation for any form of exchange or relationship based on trust and mutual recognition. It is also the starting point for coalition-building.

2. Recognise that the starting points for a positive climate politics exist

It is important to acknowledge that there is a near universal concern for climate change in many contexts. In the UK, this is backed up by ample survey research, where studies show that upwards of 80% of people either feel fairly or very worried about the future of the climate (Ainscough et al., 2024).

This is of course complicated when you look more closely. People are complex bundles of messy affects which can pull in different directions. But concern for the future is shared, providing a starting point upon which a positive, galvanising climate politics might be built.

3. Try and build broad coalitions – but understand that not everyone will be in it

Once these first two steps have been established, I suggest that the next step is to begin to build a coalition which is as far-reaching as possible, whilst understanding that not everyone is going to be in it.

Coalitions depend on building a project which people identify with in regard to material interests and cultural persuasions (Gilbert & Williams, 2022). The project needs to provide a sense of leadership and direction.

While some social groups will instinctively gravitate towards the coalition, others will need to be persuaded to join. That means drawing out affects from the complex assemblage of multi-faceted desires that constitute people's orientations, such that the project contains these intensities and desires. Some social groups will not be part of the coalition. Hegemonic projects rely on the creation of in/out groups, even whilst there are some that straddle that fault line.

4. Articulate credible but promissory futures

Galvanising political movements require promises that are credible even whilst they move people. As such, an affective climate politics requires a significant break with how politics is currently conducted – where for the vast majority of people it is encountered as a non-promise (just think about the current state of UK party politics).

Part of this is about ensuring politics is rooted in people's lives, such that they can see themselves reflected in it. The disconnect between party political institutions and the majority of people has meant that those who do go into politics often lack affective engagement with people, creating a divide between most people and party politicians (Crouch, 2020). Re-rooting politics in communities can help ensure that the promises that political projects make are formed in relation to people's concrete aspirations, not outside of them.

5. Organise a politics that delivers

A galvanising, affecting climate politics has to be about delivery. As I argued in paper 4 ('Why the promise of green jobs has limited resonance'), until concrete changes are experienced by people in their lives, promises of net zero transformation will remain purely ideational.

Our current political economic arrangements are clearly entirely unsuited to achieving the changes that are needed. Change has to come in at least three forms. First, there is a need for a proactive state that can play a coordinating and more direct role in delivering new industries, wider societal decarbonisation, and climate adaptation.

Second, the state should be in dynamic relation with civil society, such that groups outside of the state can both hold it accountable and inform the direction it moves in. Third, democratic reforms which give citizens the opportunity to enter into dialogue with state and civil society institutions are required, locally and on a wider scale. This is so that people can continue to feel genuinely involved.

This leads to a core theme which lies at the heart of this thesis: Building a new hegemonic project requires continual motion. In a very material way, it thus resembles the motion of promises. A promise which stops moving is one that withers away, that recedes into the distance and, with that, loses its force. By contrast, a promise which is affecting moves and adapts, flaring up in its intensities, beckoning people to live daringly and in the face of adversity.

Our climate movement must thus be able to ebb and flow, continually rearticulating itself as it gestures towards and enacts the delivery of post-carbon worlds. A galvanising, affecting climate politics worthy of its name is thus always a politics of promise – a politics of assembling new imagined futures which pull us into powerful and reinforcing affective orbits.

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Appendix 1 – Multi-format thesis guidelines

The guidelines for a 'multi-part' format are provided by two Lancaster University sources. The first is Lancaster University's 'Manual of academic regulations and procedures (MARP) 2024-25'. I include the relevant MARP sections below. The second is department-specific Lancaster Environment Centre (LEC) guidelines, also included below. To avoid duplication, I have removed text from the LEC guidelines where they are already stipulated in the MARP document.

Lancaster University guidelines, 2024-25

PP.3-4:

"PR 2.1 CRITERIA FOR THE AWARD

PR 2.1.1

The degree shall be awarded on the examination of a thesis embodying the results of a candidate's research, and on an oral examination. The nature of the student's research programme should be on a scale which should be completed during three years, or at most four years, of full-time study or equivalent. In addition the candidate may be required to undertake such other tests as the examiners may decide.

PR 2.1.2 A successful candidate for the degree of PhD shall show convincing evidence of the capacity to pursue scholarly research or scholarship in their field of study on a scale which should be completed during three years of full-time research. The results of this research shall then be embodied in a thesis which makes an original contribution to knowledge and the completed thesis must contain material of a standard appropriate for scholarly publication. The thesis shall comply with the requirements for the form, submission and deposit of theses.

PR 2.1.3 A successful candidate for the degree of PhD should be able to demonstrate:

(a) an ability to conceptualise, design and implement a major project for the generation of significant new knowledge, applications and/or understanding, using appropriate concepts and methods, where necessary adapting these to meet unforeseen issues;

(b) a systematic acquisition of, and insight into, a substantial body of knowledge including the primary literature in their particular area of interest;

(c) an ability to relate theory and concepts to evidence in a systematic way and to draw appropriate conclusions based on the evidence;

(d) critical investigation of their research topic resulting in the creation and interpretation of knowledge which extends the forefront of their discipline through original research;

(e) a detailed understanding of, and ability to use, applicable techniques for research and advanced inquiry in their field;

(f) that they can make informed judgements on complex issues in their field, often in the absence of complete data;

(g) that the research is of publishable quality and is of a standard which satisfies peer review;

(h) that they are competent as an independent researcher in their discipline and capable of continuing to undertake research at an advanced level, contributing substantially to the development of new techniques, ideas or approaches;

(i) an understanding of the place of the research in the wider context;

(j) an ability to recognise the limitations of the research undertaken and to be able to suggest ways of overcoming these in future research;

(k) an ability to write clearly and effectively and to meet approved criteria for formal presentation of a written thesis;

(l) the qualities and transferable skills necessary for employment requiring personal responsibility and autonomous initiative in complex and often unpredictable situations;

(m) the ability to communicate their ideas and conclusions clearly and effectively to specialist and non-specialist audiences."

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P.9:

"PR 2.7 FORMAT OF THESIS

PR 2.7.1 A thesis for the degree of PhD shall not normally exceed 80,000 words (see Appendix 2 for full details of specific material to be included and excluded within the word count). A candidate, with the support of their supervisor, may apply for exceptional permission to exceed the word limit, which approval may be granted by the body or officer with delegated authority from Senate.

PR 2.7.2 The thesis shall be written in English. A candidate, with the support of their supervisor and Head of Department, may apply for exceptional permission to present the thesis in whole or in part in another language, and approval may be granted by the body or officer with delegated authority from Senate.

PR 2.7.3 Where agreed, a candidate for the degree of PhD may submit the thesis in any of the following formats:

(a) single volume written thesis;

(b) multi-part thesis comprised of articles or papers; and

(c) multimodal thesis comprised of written, and practical and/or creative elements.

See Appendices 2 and 3 for further details and regulations relating to these formats.

Note: having received agreement to submit with a specific format, a student cannot opt to subsequently switch between formats without having first secured further agreement from their academic department. PR 2.7.4 A copy of any thesis relating to the award of a research degree made by Lancaster University must be deposited with the University at the prescribed time. For details on the format of submission, see Appendix 2."

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PP.33-34:

"REQUIREMENTS

20. Multi-part thesis comprised of papers and articles:

A thesis for which approval has been granted for submission in a multi-part format comprising a series of related articles suitable for journal publication shall include:

(a) an introductory chapter covering the whole of the background and context of the research and demonstrating the overall unity of approach(es) and theme(s);

(b) a final chapter summarising the achievements and conclusions of the whole of the research;

(c) a full statement of authorship for each multi-authored publication, accompanied by written certification by the other authors of each publication of the proportion for which credit is due the candidate for carrying out the research and preparing the publication; and

(d) where appropriate a consolidated bibliography, in addition to these elements as they appear in individual chapters.

Note: a candidate may be advised to include a comprehensive methodology chapter, in addition to these elements as they appear in individual chapters. Further advice may be found in the guidelines published by the department of registration."

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P.49:

*"**MULTI-PART THESES COMPRISED OF PAPERS AND ARTICLES***

The thesis shall include original, researched materials, of which a significant proportion shall be derived from original research undertaken after the date of first registration.

Notes: it is anticipated that at the point of thesis submission materials be:

(a) already published; and/or

(b) accepted for publication; and/or

(c) submitted for publication in externally refereed contexts such as journals, conference proceedings and on-line sites, and may include materials which are solely and/or partly authored by the candidate.

It is not a requirement that all materials be published or accepted or submitted for publication, prior to the submission of the thesis for examination.

Examiners shall satisfy themselves that the thesis as a whole meets the criteria for award of the degree, as outlined above. Notes: examiners:

(a) may wish to pay particular attention to satisfying themselves that of any multi-authored materials included, a significant proportion is the work principally of the candidate; and

(b) are reminded of the freedom to specify additional tests as part of the examination"

"The "traditional" format for thesis submissions for MSc by Research (MScR), MPhil and PhD degrees consists of a single volume of work, usually containing chapters for the introduction, literature review, methods, results, discussion, and conclusion. An arguably more common thesis format (certainly in the natural sciences) is the "alternative format" [20]*, which consists of a number of separate and self-contained "results" chapters, each containing their own introduction, methods, results, discussion and conclusion sections as if they were published articles. These chapters are then bookended by an overall introduction and (potentially) literature review as well as an overall conclusion.*

*The number of these results chapters will vary markedly between individual cases and disciplines, including consideration and appropriate weighting where the papers have co authors. As such, guidance should be sought from supervisors as to the expectations for a given discipline or field. **As a rule of thumb**, the number of results chapters might be 1 for MScR, 2 for MPhil and 3 for PhD, assuming these represent individual studies to which the student has made the overwhelming contribution. Where the chapters are multi-authored, a statement as to the student's contribution must be made (such as using the CRediT formalism: https://credit.niso.org/).*

*Disciplines will also differ as to whether the chapters of an alternative thesis are published/submitted for publication versus whether they are just a more convenient way to present the results and may not ultimately be submitted for publication. **As a rule of thumb,** while the latter is common in natural science dissertations, the alternative format thesis is less common in social sciences and there may be an expectation that the chapters are published/to be published to justify the use of the format. Again, guidance should be sought from supervisors.*

This document sets out the alternative format thesis in more detail, although supervisors – as they are familiar with their field/examiners' standards and

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[20] Note that the descriptor 'multi-part' approach is new. Prior to this academic year, the 'multi-part' approach was referred to as an 'alternative format' approach.

expectations – should assist students in interpreting the guidance for their given situation…

The alternative format (AF) thesis is similar to a "thesis by publication", where results chapters are presented as if they were articles in the relevant peer-reviewed literature for a field…The AF allows students to build their publication record prior to graduation, which is an important consideration for research-orientated career paths…

1. *A typical AF thesis might consist of an introduction, n papers, a closing chapter (overall integrating discussion, conclusions and suggestions for further work), and any appendices.*

   a. *The number of "papers" will depend on the requirements of the degree (see MARP) but are typically one for MScR, two for MPhil and three for PhD. However, consideration should be given to disciplinary norms, the comprehensiveness of the paper, and, if the papers are multi-authored, what the student's total contribution is.*

   b. *If one of the papers is not a literature review, an additional chapter may be appropriate after the introduction. This should not repeat information already contained within the introduction/mini literature review sections of each results chapter.*

   c. *A more detailed methodology chapter may also be required, particularly if more detail beyond that which can be covered in the papers is required. This could be when there has been method development which does not feature in the papers or a detailed description of a field area.*

   d. *Where an AF thesis consists of distinct and stand-alone pieces of research, it is particularly important to include a synthesis section that links them to ensure that the thesis is presented as a single coherent body of work.*

2. *There is no overarching requirement for papers to have been submitted, in press or already published. However, guidance will vary by field and discipline, and it may be that an AF thesis is only justified in field X if the chapters are published/submitted/to be submitted. In any case, examiners will be more likely*

to be impressed if the papers have already had the advantage of peer review and subsequent revision.

3. *Regardless of whether papers have been refereed or are already published they still must satisfy the examiners that the thesis is MScR, MPhil or PhD standard work.*

4. *Where a chapter is published, submitted or intended for publication, the author(s) and appropriate reference details (journal, volume, etc) needs to be identified at the start of the chapter. Where the work is co-authored, the contribution of each author – and especially the student – should be indicated clearly. Supervisors can help here but you may find the CRediT guidelines useful (https://credit.niso.org/). Published papers should be reformatted such that the finished thesis has a single coherent style throughout"*

Appendix 2 – Topic guides and photo-elicitation material

Topic guide: Fieldwork research (October and November 2022)

Topic guide to be used to lightly structure conversations without overly determining them. Overall structure to be memorised – allows for more natural conversation than checking topic guide in interviews / necessary for walking interviews. Prompts are in parentheses.

(1) Beginning of interview / connection to place: *Aim here is to ease the interviewee into the interview by asking about their personal life stories and connection to place.*

- Tell me about your connection to West Cumbria. How long have you lived here? What do you do for work?
- What about your parents – did they live here? What was their life story?

(2) People's relations to industries in the present: *Focus here is to understand interviewees' feelings towards coal, nuclear, and wind/green industries.*

- In regard to the nuclear industry:
    - How do you / other residents feel about Sellafield [SF] / nuclear industry?
    - Do you know what people's experiences of working in SF is like?
    - Has SF/nuclear been good for the area? In what ways? (Has it economically helped the area? In what ways? Do people feel pride in area's nuclear history?)
    - What's not so good? (Nuclear accidents? Secrecy? Anything else?)
- In regard to the area's history of coal mining and other older industries:
    - When you think about the area's history of coal mining what feelings come to mind?
    - What was bad about the closure of the coal mines and other industries (loss of employment, mining camaraderie, place-based pride)?
    - Anything good about them closing (danger, poor working conditions)?
- In regard to wind and green industries in the area:

- There's talk about delivering 'green jobs' to make our economy sustainable. How do you feel about that? What are the opportunities and disadvantages?
- There are lots of wind farms in the area, and we need more renewable energy to prevent climate change. Could the area economically benefit from more wind farm jobs?
- Anything else come to mind when thinking about green/wind jobs?

(3) Imagined industrial futures: *Focus here is to understand how interviewees imagine the future of industry.*

- What future job opportunities in industry do you expect to see? What would you like to see?
- How do you feel about the future of the nuclear industry and their job opportunities?
- How do you feel about proposals for a new coal mine? Why do you say that? Can you tell me more. (Prompts: What about climate change?)
- How about more green jobs, including wind?

(4) Use of photos: *Show interviewees photos of coal, nuclear, and wind industries. Also show green jobs quote. Ask:*

- What's the first thing that comes to mind when you see/read this? Anything else? (Respond to issues that come up and explore further.)

Photo-elicitation materials and green jobs quotation (October & November 2022)

Photo-elicitation material

2: Photograph of Sellafield landscape

1: Photograph of Sellafield landscape

4: Contemporary photograph of Haig Pit, one of Whitehaven's biggest former mines

[Image redacted – permission not given for publication]

3: Old photograph of pit workers

5: Photograph of wind farms

6: Wind farms when viewed from Whitehaven harbour

Formerly industrial areas, like towns in west Cumbria, suffer from deprivation. They could be revitalised by shifting to green jobs.

Green jobs exist in familiar sectors like manufacturing and construction, and in newer sectors like renewable energy.

This includes offshore and onshore wind, hydroelectricity, solar panels, and tidal power.

Topic guide: Fieldwork research (January 2024)

Goal is to use the topic guide for a loosely structured conversation, to allow opportunity to explore unexpected issues that emerge. Structure to be memorised. Prompts are in parentheses.

1) **Beginning of interview / connection to place:** *Aim here is to ease the interviewee into the interview by asking about their personal life stories and connection to place.*

   - Tell me about your connection to West Cumbria. How long have you lived here? What do you do for work?

2) **Experiences of the Copeland People's Panel:** *Aim here is to understand their feelings when they first heard about the Panel and their experiences during it*.

   - "Let's start at the beginning"
       - Initial feelings when you were invited to take part in the Panel? (Prompt: Do you remember how you first heard about the Copeland People's Panel? What did you feel?)
       - What expectations did you have going in?
   - "Tell me about your experiences taking part in the Panel" (Prompt: was there a particular session, or a particular discussion, that you most remember?) How did you feel? (Prompt: Was it daunting, exciting, something else?)

3) **Experiences and feelings after the Copeland People's Panel:** *Aim here is to understand their experiences after the Panel was completed*.

   - "What has happened since the Panel completed? How have you felt about what has / hasn't happened?" (Explore positive developments and negative developments. How does this make them feel?)

4) **Feelings about climate assemblies and climate change more generally:** *Aim here is to give them the opportunity to reflect on how they feel about climate assemblies more widely, and their potential to prevent extreme climate change*.

   - Talking about climate change, how do you feel about the future? Do you think we will do what's needed to prevent climate change? (Explore their answers in depth where possible)

- Do you think ordinary people can drive positive change, through citizen assemblies or other ways, for example protests or engaging with politicians?
- What about your own role?
- Question to be asked where appropriate / makes sense to: What keeps you going when you feel worried about the future and climate change?

5) **Bring interview to a close with a film viewing.** Show them the film. Afterwards ask them how watching the film makes them feel.

Appendix 3 – Forms used for interviews

Industries and deindustrialisation (Oct-Nov 2022)

<u>**Participant information sheet**</u>

Lancaster University

Lancaster Environment Centre

Library Avenue

Lancaster University

Lancaster LA1 4YQ

> For further information about how Lancaster University processes personal data for research purposes and your data rights please visit our webpage: www.lancaster.ac.uk/research/data-protection

I am a PhD researcher at Lancaster University. I am researching residents' outlooks towards the nuclear industry and the area's industrial heritage. Please read the following information carefully before you decide whether you wish to take part.

What is the study about?

This study aims to understand how residents perceive the nuclear industry and the area's industrial heritage. In addition, I want to understand how people envisage the kinds of job opportunities that might exist in the future. This study is funded by ESRC (Economic and social research council).

Why have I been invited?

I am keen to understand your thoughts about these questions.

What will I be asked to do if I take part?

The interview will last about an hour and a half. I will ask you questions about your experience living in Copeland and your view on job opportunities in the area. I may

follow up with a phone call to ask points of clarification about the things we speak about.

What are the benefits from taking part?

You will have the opportunity to share your views about what's important to you about the local area and job opportunities in the energy sector. I will share my research findings with organisations like Copeland Council and Zero Carbon Cumbria Partnership; these organisations are devising plans for the future of Copeland's economy. As a way of thanking you for spending time speaking to me, I will provide you with a £20 voucher, or donate that money to a local charity.

Do I have to take part?

No. It's completely up to you to decide whether or not you take part. Your participation is voluntary. You can withdraw without giving any reason.

What if I change my mind?

As explained above, you are free to withdraw and we can end the conversation then. If you choose to withdraw, I will extract any data you contributed to the study and destroy it (data means information, views, ideas, etc.) that you have shared with me. You can only withdraw up to 6 weeks after taking part in the study. This is because I will have begun my research will have progressed to a stage whereby removing data after six weeks would be very challenging.

Will my data be identifiable?

I will keep all personal information about you (e.g., your name and other information about you that can identify you) confidential. I will anonymise any hard copies of any data. This means that I remove any personal information. All reasonable steps will be taken to protect the anonymity of the participants involved in this project.

How will my data be stored?

Your data will be stored in encrypted files (no-one other than my supervisor, Professor Rebecca Willis, and I will be able to access them) and on password-protected computers. I will store hard copies of data securely in locked cabinets in my office. I will keep data that can identify you separately from non-personal information (e.g. your views on a specific topic). In accordance with University guidelines, my supervisor or I will keep the data securely for a minimum of ten years.

How will I use the information you have shared with me and what will happen to the results of the research study?

I will use the data you have shared with me for academic purposes. This will include my PhD thesis and journal articles. I will also likely present the results of my study at academic conferences and conferences for people working in policy – e.g., politicians, council officers, civil servants, and others. When writing up the findings from this study, I would like to use some of the views and ideas you shared with me. When doing so, I will only use pseudonymised quotes. Although I will use your exact words, you cannot be identified in publications.

If anything you tell me in our conversation or in the event today suggests that you or somebody else might be at risk of harm, I will be obliged to share this information with my supervisor at Lancaster Environment Centre. If possible I will inform you of this breach of confidentiality.

Are there any risks to participants?

I will keep all personal information about you confidential and will not share it with others. I will anonymise any hard copies of any data. This means that I remove any personal information. However, should you provide information that suggests you or somebody else might be at risk of harm, I will be obliged to share this with my supervisor at Lancaster Environment Centre. This means that all reasonable steps are taken to protect participants and minimise risks, however in extreme circumstances confidentiality cannot be guaranteed.

Who has reviewed the project?

This study has been reviewed and approved by the Lancaster University Faculty of Science and Technology Research Ethics Committee.

What if I have a question or concern?

If you have any queries or if you are unhappy with anything that happens concerning your participation in the study, please contact me on f.lewis@lancaster.ac.uk or my supervisor, Professor Rebecca Willis, r.willis@lancaster.ac.uk, Lancaster Environment Centre, Library Avenue, Lancaster University, Lancaster LA1 4YQ, 01524 510082. If you have any concerns or complaints that you wish to discuss with a person who is not directly involved in the research, you can also contact: Professor Philip Barker, p.barker@lancaster.ac.uk, 01524 510262, Lancaster Environment Centre, Library Avenue, Lancaster University, Lancaster LA1 4YQ.

Thank you for considering your participation in this project.

Demographic questionnaire

Name of Study: Outlooks and feelings towards energy economies in West Cumbria

Study PI: Francisco Lewis

Information about you

How long have you lived in West Cumbria?

Gender

| Male | Female | Other | Prefer not to say |

Age

18-19	20-24	25-29	30-34
35-39	40-44	45-49	50-54
55-59	60-64	65+	Prefer not to say

Are you of working age or retired?

Working age   Retired   Above working age but in employment

Prefer not to say

Consent form

Project Title: Outlooks and feelings towards energy economies in West Cumbria

Name of Researcher: Francisco Lewis   Email: f.lewis@lancaster.ac.uk

Please read the following carefully:

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. If I withdraw within six weeks of commencement of the study my data will be removed. Please contact Francisco on his email address (above) or contact Lancaster Environment Centre on 01524 510082. ☐

3. I understand that any information given by me may be used in future reports, academic articles, publications or presentations by the researcher, but my personal information will not be included and I will not be identifiable. ☐

4. I understand that my name and my organisation's name will not appear in any reports, articles or presentation without my consent. ☐

5. I understand that any data collected during the fieldwork process will be protected on encrypted devices and kept secure. ☐

6. I understand that data will be kept according to University guidelines for a minimum of 10 years after the end of the study. ☐

7. I understand that the researcher is using a method of recording conversations with a Dictaphone and note-taking during and immediately after our conversation. ☐

8. I agree to take part in the above study. ☐

Name of participant:	Date:	Signature:

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Signature of Researcher   _____

Date   _____   DD/MM/YYYY

One copy of this form will be given to the participant and the original kept in the files of the researcher at Lancaster University

Affective experiences of Copeland People's Panel (January 2024)

<u>Participant information sheet</u>

Lancaster University

Lancaster Environment Centre

Library Avenue

Lancaster University

Lancaster LA1 4YQ

> For further information about how Lancaster University processes personal data for research purposes and your data rights please visit our webpage: www.lancaster.ac.uk/research/data-protection

I am a PhD researcher at Lancaster University. I am researching people's experiences and feelings of being involved in a local climate assembly, specifically the Copeland People's Panel.

Please read the following information carefully before you decide whether you wish to take part.

What is the study about?

This study aims to understand how people experience and feel about having been involved in a local climate assembly, specifically the Copeland People's Panel. This study is funded by ESRC (Economic and social research council).

Why have I been invited?

I am keen to understand your thoughts about these questions.

What will I be asked to do if I take part?

The interview will last between an hour and an hour and a half. I will ask you questions about your experience in the Panel. I may follow up with a phone call to ask points of clarification about the things we speak about. There will also be an opportunity to take part in a group film viewing followed by a discussion.

What are the benefits from taking part?

You will have the opportunity to share your views about what you felt went well, and what didn't go so well with the Panel, and also the future of citizen action to tackle climate change. I will share my research findings with relevant organisations who are working on how to enable best practice citizen engagement around climate issues. As a way of thanking you for spending time speaking to me, I will provide you with a £20 voucher, or donate that money to a local charity (a voucher will also be provided for the film viewing, with the option of donating it to charity).

Do I have to take part?

No. It's completely up to you to decide whether or not you take part. Your participation is voluntary. You can withdraw without giving any reason.

What if I change my mind?

As explained above, you are free to withdraw and we can end the conversation then. If you choose to withdraw, I will extract any data you contributed to the study and destroy it (data means information, views, ideas, etc.) that you have shared with me. You can only withdraw up to 6 weeks after taking part in the study. This is because I will have begun my research will have progressed to a stage whereby removing data after six weeks would be very challenging.

Will my data be identifiable?

I will keep all personal information about you (e.g., your name and other information about you that can identify you) confidential. I will anonymise any hard copies of any data. This means that I remove any personal information. All reasonable steps will be taken to protect the anonymity of the participants involved in this project.

How will my data be stored?

Your data will be stored in encrypted files (no-one other than my supervisor, Professor Rebecca Willis, and I will be able to access them) and on password-protected computers. I will store hard copies of data securely in locked cabinets in my office. I will keep data that can identify you separately from non-personal information (e.g. your views on a specific topic). In accordance with University guidelines, my supervisor or I will keep the data securely for a minimum of ten years, and after that it will be destroyed.

All of the above processes apply data that is transcribed (as well as the original audio copy of the file). On this point, please note that after the interview, the recording will be transcribed. This means it will be converted into text, either by myself or by a third party. Following Research Ethics Committee at Lancaster University, all participants

are anonymised. Therefore, any personal information or any of the data generated or secured through transcription will be secured, and if a third party is involved they will not be given this information. If used, the third party will be asked to sign a document agreeing:

- not to pass on, divulge or discuss the contents of the audio material provided for transcription to anyone else;
- ensure that material provided for transcription is held securely and can only be accessed via password on a PC;
- to return transcribed material in password protected files;
- to destroy any audio and electronic files immediately after transcripts have been provided, or to return said audio files; to assist the University where a research participant has invoked their rights under data protection legislation;
- to report any loss, unscheduled deletion, or unauthorised disclosure of the audio material to any third parties, to the University immediately;
- to, upon reasonable request, allow the researcher, or other University representative, to inspect the location and devices where the audio material is stored to ensure compliance with this agreement;
- among other security measures.

How will I use the information you have shared with me and what will happen to the results of the research study?

I will use the data you have shared with me for academic purposes. This will include my PhD thesis and journal articles. I will also likely present the results of my study at academic conferences and conferences for people working in policy – e.g., politicians, council officers, civil servants, and others. When writing up the findings from this study, I would like to use some of the views and ideas you shared with me. When doing so, I will only use pseudonymised quotes. Although I will use your exact words, you cannot be identified in publications.

If anything you tell me in our conversation or in the event today suggests that you or somebody else might be at risk of harm, I will be obliged to share this information with my supervisor at Lancaster Environment Centre. If possible I will inform you of this breach of confidentiality.

Are there any risks to participants?

I will keep all personal information about you confidential and will not share it with others. I will anonymise any hard copies of any data. This means that I remove any personal information. However, should you provide information that suggests you or somebody else might be at risk of harm, I will be obliged to share this with my supervisor at Lancaster Environment Centre. This means that all reasonable steps are taken to protect participants and minimise risks, however in extreme circumstances confidentiality cannot be guaranteed.

Who has reviewed the project?

This study has been reviewed and approved by the Lancaster University Faculty of Science and Technology Research Ethics Committee.

What if I have a question or concern?

If you have any queries or if you are unhappy with anything that happens concerning your participation in the study, please contact me on f.lewis@lancaster.ac.uk or my supervisor, Professor Rebecca Willis, r.willis@lancaster.ac.uk, Lancaster Environment Centre, Library Avenue, Lancaster University, Lancaster LA1 4YQ, 01524 510082. If you have any concerns or complaints that you wish to discuss with a person who is not directly involved in the research, you can also contact Professor Kirk Semple, Head of Department at Lancaster Environment Centre,

k.semple@lancaster.ac.uk, +44 (0)1524 510554, Lancaster Environment Centre (A13, A - Floor, LEC 3), Library Avenue, Lancaster University, Lancaster LA1 4YQ.

Thank you for considering your participation in this project.

Demographic questionnaire

Name of Study: Experiences and feelings of being involved in a local climate assembly (Copeland)

Study PI: Francisco ('Pancho') Lewis

Information about you

How long have you lived in West Cumbria?

Gender

| Male | Female | Other | Prefer not to say |

Age

18-19	20-24	25-29	30-34
35-39	40-44	45-49	50-54
55-59	60-64	65+	Prefer not to say

Are you of working age or retired?

Working age   Retired   Above working age but in employment

Prefer not to say

Consent form

Project Title: Experiences and feelings of being involved in a local climate assembly (Copeland)

Name of Researcher: Francisco ('Pancho') Lewis

Email: f.lewis@lancaster.ac.uk

Please read the following carefully:

9. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

10. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. If I withdraw within six weeks of commencement of the study my data will be removed. Please contact Pancho on his email address (above) or contact Lancaster Environment Centre on 01524 510082. ☐

11. I understand that any information given by me may be used in future reports, academic articles, publications or presentations by the researcher, but my personal information will not be included and I will not be identifiable. ☐

12. I understand that my name and my organisation's name will not appear in any reports, articles or presentation without my consent. ☐

13. I understand that any data collected during the fieldwork process will be protected on encrypted devices and kept secure. ☐

14. I understand that data will be kept according to University guidelines for a minimum of 10 years after the end of the study. ☐

15. I understand that the researcher is using a method of recording conversations with a Dictaphone and note-taking during and immediately after our conversation. ☐

16. I agree to take part in the above study. ☐

Name of participant:	Date:	Signature:

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving

consent, and the consent has been given freely and voluntarily.

Signature of Researcher   _____

Date   _____   DD/MM/YYYY

One copy of this form will be given to the participant and the original kept in the files of the researcher at Lancaster University