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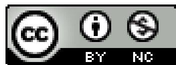

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Beyond Extinction

Climate Activisms and the (Re)making of Futures

Amy Claire Robson

Thesis submitted for the degree of Doctor of Philosophy

Department of Geography

Durham University

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Abstract

This thesis tells a story about the multiple temporalities that compose climate change. It does so through research with one of the UK's most notable climate movements in recent years – Extinction Rebellion. How do climate activists imagine the future? Is the future met with optimism or anxiety? Is tomorrow imagined as an apocalypse or through the earth's salvation? Is the future even imagined at all? By answering such questions, this thesis illustrates that imaginations and the temporalities which inform them come to matter in how we know and ultimately govern climate change.

It is by drawing on and developing from queer theories that this thesis considers how sexual politics animates the temporalities, affects and relations that circulate within imaginations of climate crisis. I use queer theories to do two key things in this thesis. Firstly, I use queer theories locate and challenge the presence of heteronormativity in imaginations of climate crisis. Here, I show that western articulations of climate crisis often draw on forms of (post)apocalyptic straight time, which privilege heterosexual values, ideals and lifestyles. Secondly, I employ queer theories' ability to broaden the imagination, tracing alternative relations that resist accelerating climate change. In these relations there exist alternative ethical regimes which are nonteleological and nonfamilial but which proceed nevertheless through care for the environment.

To make such arguments, I experiment with research methodologies for the Anthropocene. Blending together interviews and ethnography with painting, drawing and collaging, I have created a speculative methodology attuned to the many meanings, imaginations temporalities, affects, and relations which assemble climate change. Reflecting on these methods, I am able to consider how environmentalism can function without its usual existential anxieties, end-thinking and extinction scripts.

Table of Contents

Abstract 3

Declaration 7

Statement of Copyright 8

Acknowledgments 9

Preface 11

One Introduction 14

1.1 The many geographies of climate futures 16

1.2 Research aims and objectives 22

1.3 Methodology 25

1.4 Thesis structure 34

1.5 Summary of thesis conclusions 40

Two Troubling times: Climate Crisis, Future Geographies and Queer Theory 43

2.1 Intro 44

2.2 Climate Futures & Governance 46

2.3 Troubling times: Queer Theory's 'Temporal Turn' 53

2.4 Queer ecologies & the straight times of climate crisis 61

2.5 Conclusion 68

2.6 References 71

Three How do you critique climate activists? Some reflections on doing environment-alism badly 83

3.1 Intro 84

3.2 The Place of Critique in Scholar-Activism 86

3.3 But can an environmentalist afford to be ambivalent? 91

3.4 Bad Environmentalism in the Field 94

3.5 Designing a Method for Multiple Futures or What Exactly is Climate Change? ... 98

3.6 How do you critique activists? 103

3.7 Conclusion 107

3.8 References 109

Four Before it's too late: The Extinction Script, Multi-Species Reproductive Futurism and Extinction Rebellion 115

4.1 Introduction 116

4.2 Climate futures and geography 118

4.3 Scripting futures 121

4.4 Researching the Extinction Script 124

4.5 'THIS IS AN EMERGENCY': A Late Liberalism in Crisis 125

4.6 Forestalling extinction 129

4.7 Threatened Futures 129

4.8 Extinct Futures 134

4.9 Multi-species extinction 137

4.10 To Conclude 143

4. 11 References 146

Five Straight time in the (Post)Apocalypse: Imagining Climate Futures with Speculative Methods 153

5.1 Intro 154

5.2 Straight time in the apocalypse: is there no alternative? 157

5.3 Making way for multiple temporalities 163

5.4 The limits of (post)apocalyptic straight time 166

5.5 'a better world is possible', or a surplus of futurity 172

5.6 Making futures present 178

5.7 Conclusion.. 184

5.8 References 187

Six Conclusion 193

6.1 No future? 195

6.2 Final thoughts? Environmentalism without end-thinking 207

Seven Bibliography 209

Eight Appendix one 220

Nine Appendix two 221

Declaration

I declare the material contained in this thesis is solely my work.

Statement of Copyright

The copyright of this thesis rests with the author. No quotation from it should be published without the author's prior written consent and information derived from it should be acknowledged.

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***

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Preface

There's around thirty to forty people inside the community centre, including several familiar faces I know from the social movement Extinction Rebellion UK. The event held here this evening has been organised as part of Project 3.5 – Extinction Rebellion's strategy to mobilise 3.5% of the UK population to back their movement. Project 3.5 largely revolves around knocking on doors in the local community, to reach people who haven't been involved in the movement before and asking if they'd like to join an Extinction Rebellion event (Extinction Rebellion UK, 2022). Underlying these mobilisation efforts is the '3.5% rule' – the belief that once 3.5% of a population support nonviolent civil resistance, the movement will be too big to fail (see also Matthews, 2020). Today, the community centre is filled with potential new 'rebels' who have had their door knocked on recently. They've come to hear a talk which is intended to convince newcomers of the severity of climate crisis – that it is an existential crisis for all of us on planet earth - and that joining Extinction Rebellion is the best way to get those in power to act now to save us all.

I greet the different activists I know and make my way over to Sam who is sat alone at the front of the hall. Whilst he is clearly driven by a passion to campaign for a better world, Sam doesn't take himself too seriously, making him an ideal ally. Before the talk starts, Sam tells me he's having his own 'existential crisis'. I start to laugh but he's serious. He asks me what the point is in it all if we can't win. He thought we could win. I explain that activism doesn't have to be winning big. It is also about small local wins too. Sam has heard my version of activism many times. He remains unconvinced. Like the other activists who've organised this the talk today, Sam wants to win and win big. Extinction Rebellion wants to avert fossil fuelled climate catastrophe.

The room falls silent as the talk begins. We're running out of time, the speaker explains, and those in power have hardly made a difference. Sam looks exasperated and I can't help but laugh. This talk seems like the last thing he needs. The speaker describes "the ecological emergency *we all face"*. From the outset of the talk the

climate crisis is described as a shared crisis that will affect every single last one of us. We need to act now, we're told, for everyone's sake. I scramble to take notes, barely keeping up with the speaker, who's animated by the immense threat climate change poses and how little time we have to fix it. The speaker tells the room that he feels increasingly terrified by future climate scenarios. In my phone's notes app, I catch snippets of the speech:

"… Our demands and actions must be about disruption, so people take notice … three more years trickle by and still no action has happened … do you think writing to your councillor is going to do anything? Do you think a petition will get a politician's attention? … the court system is in chaos … people take notice when people like us step up and break the law … our fight is with the state and the tool is disruption … friends in prison because of actions they've taken … people not ready for change … it isn't going to happen … then bang that moment happened … the Berlin wall is torn down … people waiting for the right thing to come along … that thing is us … time is not running out. Time has run out. We need to make change now. Right now. This is our chance to change the world … the scale of the issue we're facing … this is about preventing an existential crisis … we are trying to prevent the extinction of the human race … this is fundamentally about saving the lives of you and me and our children … make a safer and better world for our children and our children's children …"

The talk we are hearing today is one rendition of Extinction Rebellion's flagship talk, aptly named *"Heading for Extinction (and what to do about it)."* Drawing on the authority of scientific warnings about climate crisis, the talk is intended to 'tell the truth' about the urgency of climate change. Just as future nightmare scenarios are imagined, direction action is portrayed the answer, and audiences are encouraged to take to the streets with Extinction Rebellion. The world as we know it might be ending, but there's still something you can do about it.

After the speaker has finished, he invites another activist I know well to speak. If the talk made apparent the scale of the problem we face, Chloe makes clear as westerners we have a responsibility to act. She tells the room that she is motivated to use the

privilege she holds. In some countries death is a real possibility for those defending the environment, she tells us. Chloe knows that in the UK she won't be killed for her climate activism. It is a sense of both privilege and responsibility which drives Chloe to take part in arrestable forms of activism. And she's been arrested twice now, she tells the room.

After Chloe finishes the speaker nods to signal it's my turn to speak. I walk to the front of the room. Earlier, I was asked if I could speak about my experiences in Extinction Rebellion as someone who cannot be arrested. So, I tell the room that I cannot be arrested because of my working class roots. I do not have the financial security that other rebels risking arrest do. I remind everyone that we are all positioned differently and that we all have different capacities to act. I tell the room that Extinction Rebellion has roles beyond those risking arrest. After speaking for a few minutes, I return to my seat.

Before the evening draws to an end, I listen to a handful of questions from curious attendees, all the while giggling quietly at jokes whispered by Sam. That evening, I had been happy to be of practical use to the activists I know. After all, they have been kind enough to take part in my research. Later, when reflecting on these ethnographic encounters, I always wonder if I had been too involved in what I had set out to study. It's a feeling that strikes me when I listen back to interviews too, cringing at moments where I've talked far too much. How have I become too entangled in this research? Especially, as I felt I was never doing enough to assist these activists.

One

Introduction

In this thesis, I reflect upon the many temporalities that animate climate crisis. I do so through research with one of the UK's most notable and active climate movements in recent years – Extinction Rebellion. I began this research with the intention of exploring the ways in which climate activists imagine the future. Is the future met with hope or despair? Is our coming world imagined through the lens of apocalypse or salvation? *Is it even imagined at all?* While trying to answer these questions, I quickly became caught up in that which I had set out to study. Activists turned into friends. Ethnography turned into activism. Gathering research turned into joining a social movement. With every meeting I attended, protest I marched in, or leaflet I handed out, my research became ever messier and complicated. Was I an activist or an academic? Where did research end and activism begin? How had I become ensnared in the futures I wanted to study? My thesis stays with these difficult and tricky questions as I examine the content, tone and form that futures take in western climate activisms.

While this thesis focuses specifically upon how futures are produced and circulated in Extinction Rebellion activism, I also consider what these futures can tell us about western conceptualisations of climate change. Shaping this thesis then is a recognition that imaginations and the temporalities which sustain them have real implications for how we know, respond to and ultimately govern climate crisis. This thesis shows that there is no mode of time through which climate change exclusively works. Instead, I demonstrate that there are various normative affects, assumptions and timelines which together compose imaginations of climate crisis.

Drawing heavily from queer theories, I work to disturb the presence of heteronormativity within the temporal orders of climate crisis. To do so, I extend queer theories' ability to trouble norms into areas of life which are unlikely to be understood as queer. This thesis then takes a risk. It risks severing queer theories bond with those

deemed queer. However, it also grasps at a possibility – the possibility to understand how heteronormative timelines work to restrict such subjects and spaces to the margins, including in discourses of climate crisis. By questioning taken for granted assumptions, the queer theories I use here offer novel ways to broaden our imaginations of climate change.

In this thesis, I also experiment with research methodologies for the Anthropocene. I have carefully designed the research methods used across the 18 months I spent working with Extinction Rebellion. I devised both my ethnography and creative interviews in such a way that they would be attuned to the many meanings, multiple relations, various temporalities and countless affects that make the phenomenon of climate change. Underpinning my speculative methodology is an ethical commitment to carefully consider how research is imbricated in the creation of uneven power relations. Each method has been devised so that it may locate, *and importantly unsettle*, the dominant power relations which circulate within imaginaries of climate crisis. This thesis illustrates what we already know – that the neutral and detached researcher is a fiction. That observation is impossible without intervention. This research, then, shows that methodologies are speculative and creative tools for the imagination of worlds otherwise.

This thesis by publication is comprised of four journal articles, each written for various human geography journals. While these articles can be read independently, the arguments found within them were written to form a cohesive whole. In this first chapter, I aim to demonstrate how these papers come together to compose this thesis. Firstly, I summarise the four areas of research which this research develops from and draws on; showing that it is by drawing from these strands of research I arrive at an understanding of climate change as a multiplicity of meanings, affects, relations and temporalities. Secondly, I outline the aims and objectives which guided my exploration of the imaginations and temporalities of climate crisis across this thesis. Thirdly, I describe and explain my speculative methodology, which above all attempted to stay with the multiplicity of climate change. Fourthly, I give an account of my thesis structure by means of a summary of each of the four articles. Fifthly, and finally, I give

an overview of the conclusion to this thesis, by making the case for climate activism without existential anxieties.

1.1 The many geographies of climate futures

As the planet seemingly slides further into environmental (post)apocalypse, many authors across the social sciences have sought to understand how climate futures are imagined. This work is varied and far ranging, making an exhaustive review in this thesis impossible. Nevertheless, there are four strands of research which have been of particular importance to the arguments I develop in this document: critical climate studies, geographies of the future, climate affects, and lastly research on climate activism. Here, I aim to give a whistle-stop tour of how the thesis is shaped by these four overlapping areas of research. Each of which is picked up and developed in the four papers which constitute this thesis by publication.

Critical Climate Studies

Within this thesis, my theorisation of climate change and its associated futures owes much to what others have termed 'critical climate studies.' This area of research has been instrumental in problematising the overly scientific notions of climate change that are often found throughout environmental politics in the West (Bulkeley, 2019; Castree, 2015). In popular debates, climate change is largely articulated through a scientific language of "tipping-points", "planetary boundaries" and "the Anthropocene" (Castree, 2015). Through this planetary vocabulary, climate change emerges as biophysical problem that is pre-existing, external, and universally threatening; as O'Brien (2010) explains,

> "much of global change research is based on the idea that there is an objective reality that can be observed, described, measured, understood, and managed" (p.544).

What is more, there is an unmistakable temporal element to such imaginaries; as climate models simulate and thus imagine futures in which tipping points are reached and planetary boundaries are breached (Hulme, 2011). The future of the climate then becomes something that can be predicted with the right kind of scientific expertise - and, importantly, averted with the right kind of action.

Those working across critical climate studies have painstakingly illustrated that climate change is much more complex than scientific explanations of the phenomenon can account for. And, subsequently, that the future is far more complicated than those predicated by climate models (Castree et al., 2022; Rickards et al., 2014). Bulkeley (2015) notion of "climate-as-condition", for example, has been incredibly influential to relational understandings of climate change. Sceptical of overly scientific accounts of climate change, Bulkeley (2019) argues that climate is a

> "condition that is constituted through specific forms of socio-spatial relation and in turn constitutes the politics, ethics and meaning of particular socio-spatial orderings, from the citizen to the city, the community to the corporation" (p.3).

Relational accounts of climate change, like Bulkeley's 'climate-as-condition', blur any easy divide between the natural and the social. And instead, climate change appears as "physical transformation and cultural object, as a mutating hybrid entity in which the strained lines between the natural and the cultural are dissolving" (Hulme, 2008, p.5). Like others working in critical climate studies, I recognise climate change as a multiplicity of relations that undoes any sort of a nature-society boundary (Stripple and Bulkeley, 2015; Parsons, 2024). Rethinking climate change through relationality has implications for how we might understand climate futures too. By moving towards an understanding of climate change as a multiplicity of meanings, processes, relations and dynamics, such an account opens up the possibility that climate change may work through many temporalities also. No longer is the linear, predictable and measurable timeline of the geosciences the only temporality through which climate change operates. Instead, and as this thesis will show, climate change is made and remade through various imaginaries operating through numerous timelines.

Future geographies

Geographies of climate change spills into another geographical subfield which has been of equal importance to the ideas developed in this thesis – future geographies. It is here that geographers have examined the relationship between climate change and futurity, showing that often climate change is given meaning through its relation to the future. Drawing a neat boundary around geographical research on climate futures is an impossibility because the terms 'the climate' and 'the future' are so broad and ubiquitous that they can appear everywhere and nowhere at once. While climate futures may be present in the background of lots of geographical work (Yusoff, 2013; for examples see Collard et al., 2015), I propose that research on climate governance is a key site in which geographers have clearly chosen the climate's many futures as their object of study (Bulkeley, 2023; Caprotti and Cowley, 2017; Evans and Karvonen, 2014; Hodson et al., 2018). Together these authors show that governance decisions are often shaped by, and even made through, the performance and demonstration of climate futures in the present (Anderson, 2010; Edwards and Bulkeley, 2018). Similar to this existing research on climate governance, this thesis emphasises that the boundaries of climate and future are messy, incomplete, and brought into being through their lively entanglement with one another.

The research on climate governance has been instrumental to a concern found throughout this thesis – that the imagination of futures can project forward uneven power relations located within the present. Collectively, authors working on the geographies of climate governance show that the imagination of institutional futures can work to consolidate the power of liberal democracies and a status quo of colonial violence (Baldwin, 2017; Anderson, 2010; Anderson, 2017a; Erickson, 2020; Collard and Dempsey, 2022; Baldwin, 2022). This often happens through the imagination of two particular forms of the future – either a future that is threatened by climate change and in need of securitisation (see Anderson, 2010; Baldwin, 2022) or/and through the deferral to a green future in which the threats of climate change are solved by liberal democracies (Erickson, 2020; Collard and Dempsey, 2022). Either way, governance

techniques work to consolidate the structures of colonial violence in the present through the performance and demonstration of futures shaped by whiteness. Influenced by this particular genre of research on climate futurity, I remain wary of the ways in which futures may legitimise and consolidate dominance and harm. In this thesis, there is an impulse to unsettle and change the power relations which constitute hegemonic futures, and a desire to encourage the more marginal articulations of futurity. The performative element of my research is however always guided by an overarching aim to explore the ways in which the future is imagined by activists. This thesis then situates itself within the more marginal work which attempts to understand the many meanings of climate futures, and not simply the practices which elicit such futures (see Cox, 2024; Ginn, 2024; Rickards et al., 2014).

Climate Affects

The third body of research that this thesis seeks to contribute to is work on climate affects. There is a small but growing number of articles which have focused squarely upon the affective dimensions of life (and death) in a climate changed world. For example, Verlie (2024) and Bond et al. (2020) connect affective experiences to the issue of climate justice. Focused on climate distress and 'greenhouse gaslighting', Verlie (2024) shows that climate injustice "leads to feelings of rage, anger, indignation, abandonment and cynicism, not just worry or grief" (p. 1604). Turning their focus towards climate justice activists, Bond et al. (2020), explore how an 'ethic of care for others' – including other activists, communities, both local and distant – nurtures activism "in the face of constant uncertainty, delegitimisation, and censure" (Bond, Thomas and Diprose, 2020 p.751). Critical research by geographers on climate affects illustrates how the multiple meanings, many relations, and numerous temporalities of climate crisis are always already infused by affects. This work draws on and develops from a broader interest in affect and emotion that has existed within geography over the last twenty years (see Anderson, 2017b; Thien, 2005; Pile, 2010). This thesis situates itself within this research which makes clear that climate change and its

associated futures are made, undone, transformed and mediated through emotional, embodied and affective experiences.

The geographical work briefly outlined above largely tackles what could be understood as normative environmental affect (see Seymour, 2018). However, a handful of geographical articles now have explored nonnormative, inappropriate and improper affective relations to/within climate change. For instance, Anderson (2023) shows how climate boredom leads to the suspension of climate crisis "and involves an exit from climate change as an object of concern, interest or engagement, an exit that (re)enlivens the present" (p.138). Lewis (2024) illustrates how affect circulates in attachments to promissory objects – such as coal or coal mines – in the post-mining community of Whitehaven, UK. And Bosworth (2022) explores 'nature is healing' memes as a form of 'bad environmentalism', which destabilises both common sense notions of nature and their associated relations and affects (see also Seymour, 2018). Collectively, these authors illustrate that affect functions through (dis)attachments to the many experiences, meanings and objects which make climate change. From the intensity of feelings which infuse climate activism to the suspension of climate change through boredom, this research illustrates that climate crisis and climate futures are imbued and animated by affects, which range from the expected and normative to the downright inappropriate and offensive. Drawing from and further developing this research, across this thesis I consider how climate change comes to be affectively present and how such affects are formed and conditioned.

Climate Activisms

As well as drawing from and contributing to research in critical climate studies, future geographies and research on climate affects, my arguments are indebted to existing research on climate activism. This work highlights climate protests as a key site in which claims about our climate's future are publicly performed, often by examining the presence of apocalyptic and post-apocalyptic imaginaries in the West. For example, Cassegård and Thörn (2018) argue that traditionally the environmental movement has had a tendency for "future-oriented pessimism" – an apocalyptic

preoccupation with the idea that our future will be one of environmental catastrophe. However, they argue, recent climate activisms have moved towards a postapocalyptic politics founded "on a catastrophic loss experienced as already having occurred, as ongoing or as impossible to prevent, rather than as a future risk or threat." (p.563). Through their "temporal rhetoric", Friberg (2022) shows how activists from Friday's for Future and Extinction Rebellion create "temporal disruptions" which produce "an open future that can be acted upon" (p.2). For Hulme (2020), the claims made by activists about the future are often animated by a "climate of deadline-ism" – a sense that we must unite behind the science before time runs out. The rhetoric used by the environmental movement, for Hulme (2020), is a "language of urgency" that gives rise to "wider fears and anxieties about the future" (p.2). Together these authors show that through the "temporal rhetoric" of post-apocalyptic and apocalyptic imaginaries and a "language of urgency" which advocates for scientific consensus, western climate movements narrate the stretching of future catastrophe into our ever intensifying present. Climate activism becomes a key site which performance of various competing claims about the future and the climate are made public. Within these claims an escalating sense of urgency muddles any sense of climate, crisis, and future.

By staying close to activists from Extinction Rebellion, I follow and learn from work in geography about how academics should approach research with activists and social movements. Here, authors reflect upon their usefulness to the communities they study, offering insights into how they could foster resourcefulness (Derickson and Routledge, 2015), reciprocity (Sandover, 2020), accountability (Joseph-Salisbury and Connelly, 2021) or implement strategic interventions (The Autonomous Geographies Collective, 2010) for/with activists and communities. Across this research, the connection between research and action is never straightforward, with many showing "how theory and praxis are closely intertwined, not separated in binary logics of pure scholarship versus activism" (Sultana, 2023: 729). What arises across all these various approaches to academic-activism is an understanding that the separation between activism and research is a fiction.

The research I found most helpful when writing this thesis is the work of academics who embrace the complexity, uncertainty and ambiguity of scholar-activism (Stephens and Bagelman, 2023; Gillan and Pickerill, 2012; Suzuki and Mayorga, 2014). In this work, academic-activism is articulated as an 'in-between' space, where positionalities are uncertain, interests are competing, and researchers are pulled between theory and praxis (see Stephens and Bagelman, 2021). These accounts of scholar-activism do not offer a way out of uncertainty. They refuse to settle on answers. Their stories are never straightforward. And complexities are only ever dealt with through careful and tentative reflection. In this thesis, I have opted to stay with my struggle to do scholar-activism carefully, critically and ethically. I do not offer a strategy for doing away with uncertainty or ambiguity but rather consider my own ambivalent feelings one of many climate affects that circulate in the temporalities that animate climate crisis.

Overall, this thesis draws together four sometimes overlapping, sometimes disparate areas of research – critical climate studies, future geographies, climate affects, and research on activism – to understand climate change as a multiplicity of meanings, affects, relations and temporalities. As a multiplicity, climate futures are made and remade across various spaces and spaces – including now in the protests of newly emerging environmental movements, such as Extinction Rebellion. In the next section, I outline the aims and objects of this research project which sought to stay with the complexity of futures imagined in climate activism.

1.2 Research aims and objectives

In this thesis, I examine how futures are imagined by climate activists in the social movement, Extinction Rebellion UK. I ask, which futures circulate in the spaces of climate activism? What tone do such futures take? Is the future encountered with hope, fear, uncertainty or maybe even resignation? And whose future is made to matter? By answering these questions, this thesis shows that imaginations, *especially of the future,* are significant to how climate change comes to be known and governed. That the

imagination of the climate's future shapes the conditions for climate action in the present. And, that the stories told about the planet's future have real implications for the shape our present world takes. Imaginations of climate change and the temporalities which inform them have consequences for how we know, engage with, and respond to climate crisis.

Scientific imaginaries of climate change reconfigure the future as a universal threat that we all face; a threat that is calculable and measurable; which unfurls linearly and predictably; that can harbour no bad surprises; and as an issue that we already have the resources to fix - *if only* we all would take appropriate action. This thesis shows that scientific imaginaries of (post)apocalypse are not the only form climate futures take. That alternative temporalities exist beyond and through the ones which dominate the discourses of climate change. It is by looking toward these multiple timelines that I examine climate crisis as a phenomenon that is always bound up in the cultural, political and social aspects of the world. With this in mind, the thesis' aims and objectives are as follows:

Aim

To document how futures are imagined and performed by climate activists, in order to examine how and which temporalities compose climate crisis.

Objectives:

- To document the content, tone and form futures take in climate activisms.
- To examine the mechanisms, practices and relations through which climate activists imagine the future.

- To design a speculative methodology that can grapple with the ontological complexity of climate crisis, including its many meanings, affects, and relations, both known and unknown, dominant and marginal.

In my first objective, I am interested in recording the multiple ways in which the futures are made present in the spaces of climate activism. I explore how the future materialises in Extinction Rebellion UK's campaigning and organising practices – at marches, events, talks and meetings as well as in the more personal claims made by activists. It is in these spaces that I aim to examine the felt presence of futures for climate activists. This objective therefore relies on an understanding of the future, not as simply a moment in time, but instead as an affective experience that can be felt in the present. I am interested in how futures are given meaning through their contents, form and tone. By which I mean I am interested not only in what is imagined to be in the future but the associated affects that incur when the future is imagined in such a way. If the future is imagined as a catastrophe do activists feel despair? If the future remains to be decided do activists remain hopeful? These are the types of questions I seek to address in this objective.

In my second objective, I examine the relations which work to hold the future in place. These relations can take different forms – such as (dis)attachments, pulls, appeals, etc – but they all work to pin the future to something else – whether that be the activists, the climate itself, or even other moments in time. Through this objective, I focus on the relations between the past, present and future – or what could be called the temporal orders of climate activism. Temporal orders do exactly that – they order time in different ways, such as linearly, sequentially, cyclically, continuously, forwards, backwards, or sideways. So, in this sense, I am concerned with how the movement of time works in climate activist imaginaries. But I am interested too in how the future and its many relations disrupt the present in real, tangible, material ways. This thesis examines how temporal orders underpin the practices and mechanisms used by activists to intervene in the present. Whether that is by examining how the presence of the future is cultivated in attempts to mobilise others to activism. Or by analysing how futures are performed in the actions activists take in their day-to-day lives too. In this

thesis, I explore then how temporal orders found in climate activism work to order the relations between bodies as well as between times.

In my third objective, I experiment with methodologies for researching climate futures and climate activism. I explore how the contours of research design can make space for multiplicity and difference. In particular, I aim to create a methodology that is attuned to the many affects, temporalities, meanings, sensibilities and relations which make climate change and its associated futures. In doing so, I reflect upon how power circulates not only in imaginations of climate futures, but also in the practices of my knowledge production. In particular, I address how research methods may foreclose particular futures and particular relations to the future by exploring the speculative tendencies of my methodology. Alongside designing my research methodology with multiplicity, difference and pluralism in mind, I explore how research practices can locate, and importantly disturb, the presence of dominant power relations. Overall, my motivate was to create a methodology that was particularly suited to exploring my research topic, rather than borrowing generic methods tried and tested by other social scientists.

1.3 Methodology

In the next section, I aim to outline the research methodology used in this thesis. In article two, *'How do you critique climate activists? Some reflections on doing environmentalism badly'* I reflect upon various challenges of my research methodology, so for now, I briefly outline which methods were used, with who, when and why.

Firstly, why Extinction Rebellion?

This research project focuses on the imagination and performance of climate futures by the social movement Extinction Rebellion UK. Extinction Rebellion first entered British politics back in 2018 (see Extinction Rebellion UK, 2018). They however emerge from a much longer history of environmentalism in the UK which stretches back at least fifty

years. It is hard to pinpoint the beginning of environmentalist politics in the UK. However, it is true that a number of environmental organisations, political parties and social movements formed in the 1970s, including Friends of the Earth (1971), Greenpeace (1977) and the Green Party (1973) (Prendiville, 2014). And that in 1971, the UK saw what could be plausibly claimed as its first instance of direct action by environmental activists. Back then, Friends of the Earth dumped thousands of bottles at the London headquarters of Schweppes, in protest of their decision not to use returnable bottles (Seel et al., 2000). Since the early 70s, many environmental groups in the UK have pursued various forms of direct action in the name of protecting the earth – forms of disruptive protest, that are often but not always illegal (see Seel and Plows, 2000; Mompo, 2014). The tactics, organising strategies and philosophies found within Extinction Rebellion UK can then be traced back to the influence of many of these former movements.

There are then, and have been, many social movements who campaign on climate change and other environmental issues - of which Extinction Rebellion is only one. Extinction Rebellion are however one of the most renown and active climate movements in western politics in recent years. Extinction Rebellion first gained public recognition in 2019, when a series of high-profile demonstrations took place across London. Activists drenched the Treasury with fake blood (Busby, 2019), occupied Waterloo Bridge with their own skatepark (Taylor and Gayle, 2019), and moored a bright pink boat in Oxford Circus (Watts and Gayle, 2019). Aptly named 'rebellions', these bi-annual protests were intended to be highly disruptive to the city, with many activists taking part in such acts of civil disobedience. 10,000 activists took to the streets, roads were blocked, motorists were furious, and hundreds were hauled away by the police (Perraudin, 2019).[1] Arrest was the point for many activists (see Monbiot, 2019). Extinction Rebellion were hoping that enough activists would be arrested to overwhelm the justice system and subsequently draw even further attention to their demand for "fair and transparent change, to ensure the future of all life on Earth."[2]

[1] See also https://extinctionrebellion.uk/about/
[2] See https://extinctionrebellion.uk/

While Extinction Rebellion is renowned for its disruptive stunts, it's use of mass arrest has ebbed and flowed over the past six years (Extinction Rebellion, 2022). In recent years, other climate groups – such as Just Stop Oil, Insulate Britain and Greenpeace - have also used arrestable forms of direct action in their campaigning strategies (Gayle, 2024; Harwood-Baynes, 2021; Symonds, 2024). Just Stop Oil has been particularly effective at peeling away some of the more radical activists in Extinction Rebellion, for who arrest is an essential part of their activism. This migration of activists has been accelerated in part by Extinction Rebellion's decision to temporarily pause disruptive protest in 2023 (Extinction Rebellion, 2022). This unexpected move was intended to "prioritise attendance over arrest and relationships over roadblocks" (Extinction Rebellion, 2022). Following this decision, Extinction Rebellion has mainly mobilised activists to take part in non-arrestable direct action. For example, Extinction Rebellion worked with other activist organisations to bring 100,000 people to the streets of London in April 2023 (Extinction Rebellion UK, 2024a). Since then, Extinction Rebellion has used very low levels of arrestable action in the UK (see Extinction Rebellion UK, 2024b). It still remains however an active and international social movement, with groups now in 89 countries.[3]

When I began this research, no other social movement had galvanised quite as many activists to pursue arrest in the UK as Extinction Rebellion had in recent years. It is this willingness to utilise mass arrest which has made Extinction Rebellion so infamous across western environmental politics. Whether you are one of the thousands attending their protests, the passerby in the street, a motorist stuck in traffic, or watching the chaos unfold through social media, Extinction Rebellion protests are a key site in which claims about the planet's future have been made in recent years. They therefore present an ideal case study for this research project which seeks to explore how climate futures are performed in Western environmental politics.

Futurity however presents a methodological challenge: how can you research the not-quite-yet? The future and our relations to it are often intangible and elusive, even as the

[3] See https://rebellion.global/

future is felt in the present (Coleman, 2017; Lyon and Carabelli, 2016). To navigate this methodological dilemma, I have used two qualitative research methods – ethnography and speculative arts interviews. Together these methods tracked the futures enacted through different activist practices and explored the complexities of people's attachment to, and detachments from, specific futures. My methodology is detailed below and develops from my previous work developing methods for researching affect (see Robson, 2024).

In, out, shake it all about: Ethnography with climate activists

> "We are always already in the field – multiply positioned actors, aware of the partiality of all our stories and the artifice of the boundaries drawn in order to tell them" (Katz, 1994 p.67).

Across various sites in the UK, I carried out an extended ethnography of Extinction Rebellion activism for 18 months. For this ethnography, I attended protests, meetings, art workshops and talks, where the aim was twofold. Firstly, inspired by a participatory ethos I sought to build trust and develop connections for the painting based interviews (after Bagelman, 2016). Second, I aimed to trace the ways in which futures are 'made present' in the spaces of protest. Here, I focused on the content and tone of imagined futures (extinction, (post)apocalypse, injustice etc), and they ways in which such claims put forth (through the likes of speeches, chants, 'die-ins'). I also analysed how climate futures, and claims about the future, surface within leaflets, documents, placards, banners and artworks used at protests. I did not perform an only observational role at these protests. As I have already mentioned, I was actively and enthusiastically involved in these events. As the papers will show, from this active ethnography I was able to consider the ways in which knowledges about climate, including the imagination of climate futures, are underpinned by normative assumptions, timelines and scripts. I was also able to reflect on the difficulties of conducting academic-activism too.

In this thesis, I name the locations of national protests, such as those held in Glasgow

or London, where many thousands of activists attended. The location of the groups with which I worked most closely remains anonymous to protect the identities of those involved in this research. Just as I chose to leave these locations unnamed, I find it also difficult to name exactly how many events I attended for this research because of the ambiguous nature of academic-activism. What in fact developed here was an 18 month long ethnography of Extinction Rebellion activism.

Feminist geographers have long argued that the boundaries of the research field are largely artificial (see Katz, 1994). This is particularly true for academic-activism, where researchers are entangled within the social movements they study (Suzuki and Mayorga, 2014; Stephens and Bagelman, 2023). As someone who has been involved in political activism for many years, I had attended Extinction Rebellion protests and met activists from the social movement prior to this research beginning. While I wasn't a seasoned climate activist or even a regular face at Extinction Rebellion events like many of the people I met, my pre-existing connection with the social movement and some of those in it muddied any distinction between "inside" or "outside" the field (Katz, 1994). Besides, it wasn't always exactly clear to me when I was collecting research and when I was not. I wouldn't take ethnographic notes, for instance, if I met another activist for a coffee or I bumped into a participant at a protest for another cause. However, all of these interactions will have shaped, in some way, big or small, both the research I collected, my analysis and the final write up. Drawing a boundary between when I was "in" or "out" of the research field feels particularly arbitrary.

Constituting a research field was further complicated by the ethical issues that arise when researching climate activism - especially activism which utilises civil disobedience and mass arrest. As I am writing this, the recent revelations from the spycops scandal remind me of exactly what is at stake for those involved in environmental activism. For decades, police have spied upon climate activists, sometimes even coercing women into serious, long-term relationships, before vanishing without a trace (Griffin, 2021). The vulnerability of environmental activists to spying meant I tried especially hard to be explicit about when I was collecting research to those around me. The last thing I wanted was to conduct convert research,

which felt akin to what many undercover cops had done. However, loudly announcing that I am here as a researcher to a room who just wants to get on with organising the fight against the fossil fuel industry doesn't always make you popular with those around you. And sometimes it was impossible to let all those involved know who exactly I was without completely derailing events and meetings. There were then many times I would discount interactions that could have been used as research – for example, if I felt it hadn't been clear that I was a researcher, or when an activist had told me something that might increase their risk to police violence. Alongside the usual uncertainty that arises from researching activists, these ethical issues make it particularly difficult to say exactly when I was or wasn't in the field, or what was or wasn't research.

There is more to say about the various challenges faced when navigating academic-research, which will be returned to in article two, '*How do you critique climate activists? Some reflections on doing environmentalism badly.'* For now, rather than say I attended 'X' number of protests, it feels more honest to say that I collected ethnographic research for a period of 18 months at Extinction Rebellion events held at various sites across the UK. Articulating the limits of my research collection in this way reflects the messy, complicated and uncertain nature of scholar-activist 'fieldwork.'

Speculative Arts Interview

The ethnography detailed above tracked futures articulated at protests, meetings and talks. This research method was particularly attuned to those futures which were articulated with unshakeable certainty; the loudest assertions in the room, made to mobilise others; or the invocation of an undeniably threaten future, outlined and evidenced by a wealth of climate science. These types of futures surfaced regularly in my ethnographic diary, often with little room left for the marginal and nascent. Quieter or uncertain futures were often smothered by the public performance of those more dominant fears and hopes. "Regardless of subdiscipline" Nelson (2024) writes "musing about possible futures is a creative act that brings them into imaginative existence" (p. 249). I felt it was important then to think about how my methodology could locate, and

importantly challenge, the uneven presence of power.

Other geographers have outlined the importance of considering how our research practices perform certain worlds (Gibson-Graham, 2008; Gibson-Graham, 2014). Influenced by this work which shows that research is always performative and world-building (see also Ruez and Cockayne, 2021; Woodyer and Geoghegan, 2012), I intentionally tried to make space for other relations to the future, where activists may have wobbled with their beliefs or struggled to articulate their concerns. To explore futures which may not be so dominant in the discourses of western environmentalism, I used arts interviews which were designed to stay with the future's multiplicity. I chose to create an arts-based method because many geographers have shown that creative methodologies are particularly suited for exploring qualities, relations and meanings which exceed their representation (Hawkins, 2015a; Brice, 2018). An arts interview would then be able to grapple with the complexity of the future, including its competing sensory and affective qualities (Coleman, 2017; Lyon and Carabelli, 2016).

So, after a few months of the ethnography had passed, and when I had gained the trust of the activists, I began to recruit twenty participants for an arts-based interview. Through an in-depth interview each activist created an artwork which explored their feelings about climate change, motivation for and involvement in activisms, and their multiple relations with the future (see appendix two). The research method used below is adapted from previous research, in which I designed an arts method accessible for those without artistic experience (see Robson, 2024). Importantly, the interview was designed so that anybody, regardless of their level of artistic expertise, could take part. Each arts interview included the four stages, all of which sought to prompt activists to think creatively about the climate's futures. Every step sought to bring the participant to the completion of an artwork:

Step one

- Participants were encouraged to bring along materials that are symbolic of the issues that compel their climate activism (after Degan & Rose's (2012) elicitation

method). At the start of the interview, these materials became the focus of their painting, as activists were encouraged to paint or college their chosen object.

Step two

- Prior to creating the artwork, I showed every activist three exhibitions, each of which deal differently with the relation between the environment and futures. The exhibitions were as follows: "Highway Gothic" (2017) – Ellen Gallagher and Edgar Cleijne, "Everywhen: The Eternal Present in Indigenous Art from Australia" (2016) – Havard Art Museum, and "It Is Not the End Of The World" (2019) – Superflex.

Step three

- With both the examples of artworks and their own materials as creative prompts, the participants were then asked questions which they creatively responded to using a range of accessible materials (such as paints, crayons, pencils, etc).

Step four

- Lastly, to further situate their paintings in relation to contemporary climate politics I offered a range of contemporary materials that related to climate crisis discourses e.g. headlines, tweets, Facebook comments.

It was necessary to have a structured process, not only to help those with less creative experience, but also to add parameters to the research process and thus regularity to the research materials (Bagelman and Bagelman, 2016; Robson, 2024). No matter how this method was designed, it would never be able to capture every possible relation to the future. In placing limits on the method, each stage would always foreclose some relations to the future while encouraging others. Nevertheless, I left my questions

purposely broad, my arts materials wide-ranging and showed a diverse collection of exhibitions. In hopes that this method would remain open to many different climate futures, including those more marginal futures.

Despite the careful design of each of these stages, sometimes activists really struggled with the creative process. The main difficulty I found when carrying out these interviews is that activists found it really hard to talk and paint. Often, when I asked questions, the participants would set down their paintbrush and respond verbally. Where I had trialled similar methods in previous projects, I had one of two individuals would struggle with the creative element, but not in the way activists did here. As I will explore in more detail in article three, I felt that the research questions flummoxed some in the interview. Some activists did explain that they actually tried hard not to think about the future. However, what complicated this matter further is how purposely broad I had left the questions. This combination of factors meant some activists really did stumble their way through the interview.

I dealt with this issue in two ways. Firstly, I realised quickly that if I spoke in the interviews, the participants would concentrate on painting while listening. So, I chatted to the activists as they painted, I told them how I felt at meetings, what I thought about climate politics, and my experiences of the protests. Secondly, by the end at least, I accepted that some activists wouldn't be able to fully embrace the creative element. That some pages were meant to be blank. And, that a blank page in and of itself actually told me something about the complexity of climate futures.

All of this definitely made the interviews more conversional in tone, and I worry now about the ways in which I may have unduly influenced activists' opinions in the interviews. The interview does largely mirror the ethos I inhabited throughout the research – one of active involvement in a social movement, as someone who engaged closely with the activists involved in the movement, as the engaged academic-activist (Chatterton et al., 2008; MacKinnon and Derickson, 2012; Pickerill and Chatterton, 2006). It also allowed me to raise concerns to the activists about my own beliefs and politics and allowed them the opportunity to respond. A luxury which is not afforded

when reading the papers which have resulted from this research project. More is said about the successes and challenges of this methodology in articles two and four, where I examine if this methodology really remained open to multiplicity, difference and pluralism. For now, however it is worth once again underlying the messy, involved nature of scholar-activism, and the uniqueness of the challenges which it represents.

1.4 Thesis structure

This thesis is composed of four research articles, which together respond to the aims and objectives outlined previously. Each paper aims to move this thesis closer to an understanding of how futures are imagined and performed by climate activists in the West. Intended to be read as a collection, these articles mirror the traditional structure of a thesis: article one acts as a literature review of existing research relevant to my overall arguments; article two is a methodological paper which reflects upon the challenges of scholar-activism; while papers three and four are empirical papers which together outline the various futures imagined and performed by Extinction Rebellion activists. Together they grapple with the various relations, temporalities, and affects which constitute climate crisis, with a specific focus on the sexual politics.[4]

Article 1: Troubling times: Climate Crisis, Future Geographies and Queer Theory
Submitted to Progress in Human Geography

This paper is intended to take the place of what would typically be a literature review chapter. The first paper situates this thesis within existing geographical research, before outlining the theoretical framework used across the following three articles. Rather than directly tackling any of the three objectives, it is by drawing from the theories outlined in this paper that I am able to address my objectives across the later papers.

[4] Each of these papers is formatted according to the requirements of the journal which they are submitted to. Therefore, in this document their respective references follow the end of each article. While the references for this introduction and the thesis conclusion can be found together at the end of this document.

To begin, I review work in human geography which already examines the relation between climate change and the future. While our discipline's longstanding commitment to examining the nature-society dynamic means that climate futures do emerge in diverse ways across a wide-range of geographical research. I propose that nowhere else in geography has research so thoroughly coalesced around an exploration of the relation between climate change and the future than as in the work on climate governance. Within this area of research, geographers have shown that the climate's future is related to through the logics of anticipation action and climate experimentation. Through these two forms of climate governance unfavourable futures are imagined and then foreclosed to different degrees.

After reviewing existing geographical research on climate futurity, I justify why the climate's future should be studied now through the lens of queer theory. More specifically, I argue that other relations to climate futures exist beyond capture and closure. So, the existing governance research should be supplemented by further work which grapples with these alternative relations. Throughout the rest of the article, I review literature from queer theories, queer ecologies and ecocriticism to make the case for (re)thinking climate futurity through queerness. It is work from these fields which goes on to inform the arguments I make in each of the following three papers. Unlike in climate governance, where the future is realised so that it may be contained, queer temporalities are unpredictable and antagonistic, and so they escape attempts at capture. Queer theories reorient us then to futures full of risk, chance and uncertainty. They orientate us to relations not studied in the existing geographical research on climate futures.

As well as reviewing research which explores alternative temporalities, relations, intimacies and affects, in this literature review I aim to locate research which also problematises the temporalities of climate crisis. By reviewing these articles, I show that western efforts to govern climate crisis are underpinned by heteronormative timelines, or what has been called 'straight time.' More specifically, I argue that planetary visions of (post)apocalyptic are sustained by a form of time which moves linearly, from past to present to future, and which seeks also to project heterosexual

values and lifestyles into the future. In setting out the theoretical framework to be used across the rest of this thesis, this article shows that there are many temporalities which animate climate crisis, some marginal and some dominant, but all of which have implications for the policing of sexual intimacies.

Article 2: How do you critique climate activists? Some reflections on doing environmentalism badly. ***Work in Progress for Social and Cultural Geographies***

If the previous paper acts as a literature review for the whole thesis, the second paper included here takes the place of a methodology chapter. In this paper, I address my third objective as I reflect upon the challenges of devising a research methodology which can sit with the complexity of climate crisis and grapple with the intangible nature of the future. It is a methodological challenge which is further complicated by the practicalities of scholar-activism. Focused on various sites and scenes of my academic-activism, I try to make sense of the mix of emotions I felt as I researched a social movement which I was a participant in. In these research encounters, I juggle my critical suspicions about western articulations of climate change alongside my affinity with the activists' fight against the fossil fuel industry.

A cool, distanced form of critique is the go-to for many researchers in the social sciences. But how could I adopt such a disposition towards activists who, after many months of research, felt like friends? From start to finish, this dilemma animated my research, and it became particularly troublesome when writing. In this paper, I work through the discomfort of critiquing individuals who, for all intents and purposes, were the 'good guys.' By drawing together debates on critique and research of scholar-activists, I propose that critique is not incompatible with closeness. And that the uncertain ground of academic-activism actually provides rare opportunities for developing careful, thoughtful and ultimately ambivalent practices of critique.

This paper draws on encounters from my ethnography, method design, interviews and writing processes to consider what place – *if any* – ambivalence has in environmentalism. Environmental activism in the West is animated by a widespread

and resolute belief that climate change poses a significant threat to the future life on earth unless we act now. Environmental activists are not known then for feelings of hesitation or uncertainty - but that is exactly how I felt as I researched the social movement Extinction Rebellion UK. It is by drawing on Nicole Seymour's notion of "bad environmentalism", I reflect upon my many shortcomings as an ambivalent environmental activist. By following feelings not typical to environmental politics – like hesitancy, ambiguity and uncertainty – I consider both my own and the other climate activists' improper relations to climate crisis.

As a methodological paper, this article does mainly address my third objective surrounding developing a speculative methodology for researching climate complexity. I am particularly focused in this paper on the circulation of uneven power relations within my methodological practices. As I draw on various scenes across my research to make these arguments, it is impossible to not address objective one and two also. By analysing particular futures and relations to the future, then this paper also considers how environmental politics is governed through/by normative feelings and affect.

Article 3: Before it's too late: The Extinction Script, Multi-Species Reproductive Futurism and Extinction Rebellion, *Revised for Transactions of the Institute of British Geographers*

As one of two articles which stand in for this thesis' results chapters, this article directly addresses objectives one and two. In the first of these two 'results' articles, I explore which futures materialise within climate activism and examine also the particular relations through which they are pinned in place. I do so by outlining a dominant mechanism through which climate activists publicly imagine and perform futures. That mechanism is the extinction script. It is the belief that we have to act now to avoid a future lost to knowingly self-inflicted extinction. As a technology of power that regulates climate crisis futurity, the extinction script implores the already threatened subject to act now and to do so urgently. Used by activists in their attempts to mobilise others, the extinctions script works through affective registers of fear and urgency, but also, and importantly, hope that catastrophe can be averted.

Developing Edelman's (2004) concept of 'reproductive futurism', this paper argues that the extinction script enacts a dominant mode of relation to the future - that of 'multi-species reproductive futurism.' As well as articulating particular forms of the future, the extinction script also orders relations to the future. By drawing on the theories outlined in paper one, I argue that multi-species reproductive futurism straightens the temporalities of climate change. It orders the future (as out there ahead of us), our relation to it (as reaching towards that future), and our identities (as future making). Furthermore, as a mechanism through which time is straightened the extinction script works to secure the dominance of white, middle class and straight futures. It imagines a single planetary future as threatened by climate crisis, and every human as endangered. In reality however it is an articulation of one particular dominant imagination of the future. Drawing from those theories outlined in paper one, I show that the extinction script is a mechanism through which dominant imaginations of climate crisis are thus sustained.

To make these arguments, I trace and analyse the presence of the extinction script across my ethnographic materials, rather than the artworks created in the speculative interviews. I chose not to include the artworks here because I wanted to focus on how dominant futures are performed publicly to mobilise and motivate others. It is by exploring how collective climate futures are scripted by activists, then that this paper offers a novel approach for understanding how individuals imagine and perform collective climate futures.

Article 4: Straight time in the (Post)Apocalypse: Imagining Climate Futures with Speculative Methods, *Submitted Environment and Planning E: Society and Nature*

By developing the arguments laid out in article three, the final of these four articles takes the place of a second results chapter. Similar to the first of my 'results' articles, this paper draws from the theories outlined in article one and uses the methodology examined in article two.

In the previous article, I argue that visions of planetary extinction rely on straight temporalities. Imaginations of planetary extinction are though just one of the many forms environmental (post)apocalyptic thought can take. Whether the future offers the looming arrival of catastrophe or the worsening of an already existing crisis, articulations of (post)apocalypse found within western environmental politics rely on temporalities which unfold linearly and work to universalise the future. Therefore, I propose in this paper that straight time animates all forms of (post)apocalyptic environmentalism, not only futures of extinction. Like the extinction script, other (post)apocalyptic imaginaries found throughout western environmentalisms project forward western, middle class and heteronormative futures. In making these arguments, this article is able to address both my first and second objectives, by exploring both the form the future takes and the relations which pin such futures in place.

Sticking with moments of uncertainty and frustration, this article examines how marginal futures disrupt and unsettle the dominance of (post)apocalyptic environmentalism. So, while the previous article focused on articulations of a (post)apocalyptic future, this article examines on how activists imagine – *or rather struggle to imagine* - worlds that could be otherwise. Activists anticipate a future otherwise, even as they cannot fully articulate what such a future would look like. The future arises here not as located out there ahead, but instead as a surplus of futurity which is affective and anticipatory. While uncertain and tentative, these futures shape the present, as they guide the lives of many activists.

Moving away from the public performance of climate futures analysed in article three, this article explores the personal futures articulated in the space of the arts interview. Then, this article also seeks to address my third objective. It further develops ideas from article two, by considering the challenges of researching imaginations through speculative art methods. I show that what had originally felt like a failure of the method in fact turned out to be tentative attempts to imagine more marginal futures. In the artworks exist narratives which could not be made to fit the neatness of (post)apocalyptic thinking. By drawing these marginal futures into existence, this paper

adopts a tone and style of critique which differs from that used in article three. Instead of suspiciously interrogating dominant articulations of the future, in article four I use a reparative approach to encourage and amplify uncertain and marginal futures.

1.5 Summary of thesis conclusions

Drawing these four papers together, in my conclusion I argue that climate crisis moves across multiple timelines and articulates many futures, showing that the end of *the* future gestures to the end of some, but not every, world. In making such an argument, I propose that western articulations of climate crisis that work through existential anxieties, end-thinking and extinction scripts are animated by (post)apocalyptic straight time. Despite the suffocating grasp of (post)apocalyptic straight time, I argue that it is only one of the multiple timelines which compose activists' imaginations of climate crisis. Activists reach for futures in ways that are difficult to articulate but disruptive, nevertheless. These futures illustrate an environmental ethics exists beyond frantic attempts to save *the* world.

Throughout the conclusion, I show that my papers when taken together contribute in novel ways to the four genres of research with which I begun this introduction. Firstly, I I offer an account of climate change's temporal complexity to critical climate studies, which is possible only through the lens of cultural geography. Secondly, I show that I respond to calls across geographies of the future for more research on how individuals imagine counter-futures. Thirdly, I demonstrate that I build upon emerging research in geography which explores how climate futures come to be felt affectively, through a focus on mechanisms and normalisation. Lastly, I illustrate that research on activism provides unique footing for scholar-activists to carefully weave together multiple modes of critical thinking. To each of these four areas of research, I also offer methodological innovation which is capable of grappling with the temporal complexity of climate crisis.

As I outline the different contributions which these papers make as a whole, I also map out ways in which others could build on my research. I end by asking, what could environmentalism without existential anxiety look like? Admitting that I do not have all

the answers to such a question, I encourage others in and beyond geography to challenge the epistemological authority of the natural sciences over the writing of the climate's future. A task, I argue, that is possible if we embrace the prefigurative and performative nature of knowledge production.

Two

Troubling times: Climate Crisis, Future Geographies and Queer Theory

Abstract

Drawing together queer theories and geographies of the future, this paper explores how sexual politics condition climate futures. Unlike in geographical research on climate futures, where the future is so often realised so that it may be contained, queer temporalities are unpredictable and antagonistic, often escaping attempts at capture. Queer theories reorient us then to futures full of risk, chance and uncertainty. They orientate us to relations not typically studied in the existing geographical research on climate futures. Focused on these alternative relations, I show that planetary imaginaries are tied up in the policing of intimacies and illustrate that queer. And, that environmental ethnics extend well beyond attempts to the save *the* future.

Submitted to Progress in Human Geography.

2.1 Intro

Telling secrets there on the mattress
Wearing nothing but glitter and lashes
At every party we're the party, shaking our asses
Making out while the world collapses

Not overdramatic, I know what I want
We're leaving the planet and you can't come
- Super Graphic Ultra Modern Girl, Chappell Roan

In *Super Graphic Ultra Modern Girl*, following a terrible date with a man Chappell Roan sings of growing girl-on-girl desire. These scenes of same sex desire are described against a backdrop of global apocalypse. In the music video, Chappell Roan struts around Hollywood dressed as an alien in knee high boots. Using a fisheye lens, the video frames her as if she struts across the earth itself. "We're leaving the planet" she sings, "and you can't come." Chappell Roan portrays queer desire as an exit not only from disappointment with heterosexuality but from the planet too. Queerness acts here as a "mode of desiring that allows us to see and feel beyond the quagmire of the present" (Muñoz, 2019:1) – specifically, beyond a present governed by straightness and engulfed in the world's demise. What is fascinating to me about *Super Graphic Ultra Modern Girl* is the association of planetary apocalypse with straightness and the suggestion that queer desire is an alien time/space persisting amidst such collapse.

Queerness, as Chappell Roan shows us, can question how time is (re)made. Heteronormativity often seeps unchallenged into time and space (Halberstam, 2005, Edelman, 2004), including the temporal and spatial orders which animated conceptualisations of environmental apocalypse (Davis, 2015, Spice, 2024). Consider, for example, how a plea common to western climate politics – that we should save the planet for the next generation - relies on heteronormative conceptualisations of the family (see Sheldon, 2016, Ensor, 2012). Consider too how efforts to forestall extinction often involve captive breeding, implying heterosexual reproduction is our last defence

against mass extinction (see Parreñas, 2018, Szczygielska, 2022). Queerness can unsettle these normative conceptualisations of time and space (Eng et al., 2005, McCann and Monaghan, 2019), disrupting the assumptions held about the future of our planet. Maybe, even more importantly, queerness can contribute to a widening of the imagination, through which it is possible to glimpse alternative relations that resist climate crisis (Seymour, 2013, Mortimer-Sandilands, 2005).

Human geography has been at the forefront of critical work which explores the relation between climate crisis and the future, highlighting the complex nature of environmental imaginaries (for examples see Baldwin, 2012, Jackson, 2023, Edwards and Bulkeley, 2018, Rapoport, 2014, Saddington, 2023). Despite its many contributions to the study of the environment and time itself (for examples see Freeman, 2010, Mortimer-Sandilands and Erickson, 2010, Morton, 2010, Seymour, 2013, Seymour, 2020), queer theory has been largely missing from this geographical research. While the climate's future does emerge across numerous and varied research in human geography (Yusoff, 2013, Jokela-Pansini and Militz, 2020, Collard et al., 2015), the literature on climate governance is a key site in which the climate's future has become an object of study (Bulkeley, 2021, Erickson, 2020, Paprocki, 2020). In this article, first I review the literature on climate governance within human geography, showing that within this work the future of the climate is often related to through the logics of anticipation and experimentation, where undesirable futures are foreclosed to varying degrees. There are however other relations to the future at stake in climate change beyond capture and closure (Ahuja, 2015), meaning that while the research on climate governance is helpful, it is also narrow.

Next, I take a detour outside of geography and away from the climate into the interdisciplinary ground of queer theories. By focusing on the 'temporal turn' within queer theories, I argue that queer temporalities foster alternative orientations toward the future - relations which embrace futures full of chance, risk and possibility. Following the literature on governance, this research from outside of geography presents as an interruption to the linearity of the paper format. My detour through the

temporal turn acts as a queer style of writing – an interruption which gambles with risk and hopefully possibility.

Lastly, by returning to the climate's temporalities, I illustrate that queer temporal orders disrupt the heteronormative assumptions which lurk in imaginations of the climate's future by reworking the relations between past, present and future. By (re)thinking climate futurity with queer theories, specifically I argue that western environmental politics which imagine climate crisis as a planetary problem consolidate heterosexual norms, values and ideas. Here, I illustrate that global visions of environmental apocalypse work through straight temporalities which police intimacy between bodies. Queer temporalities, I argue, nurture strange more-than-human intimacies which give rise to new forms of environmental ethics. In conclusion, I call for geographers to centre sexual politics in their research on climate change, in the hopes of fostering novel ethical vocabularies for environmentalism.

2.2 Climate Futures & Governance

Across the social and environmental sciences, there has been growing interest in the governing of climate change. This work has examined how imagined futures influence governance within the present, including policy choices and legislative work (Machen and Nost, 2021, Cheung and Fuller, 2022). There is not a sole approach to climate governance, rather the research area has roots in many disciplines, from geography and sociology to law and economics (see Muiderman et al., 2019, Bäckstrand and Lövbrand, 2015). However, climate governance literature within geography finds harmony in their reliance on Foucault's writings on governmentality (Head and Gibson, 2012, Dowling, 2010, Anderson, 2010). Governmentality perspectives emphasise the multiple and diverse ways that a matter – here the climate's future – is made governable (see Foucault, 2000, Foucault, 2009). Technologies, techniques and practices of government anticipate risks to populations so that they may be managed effectively, allowing for the preservation of valued forms of life – what Foucault terms "the power to 'make' live and 'let' die" (Foucault, 2003). As a form of biopolitical power, governmentality is realised through what Foucault terms "the conduct of

conduct" – that is "modes of action, more or less considered and calculated, that were destined to act upon the possibilities of action of other people" (Foucault, 2000, 341 cited in Bulkeley, 2012). Issues which are to be governed aren't understood as pre-existing, rather they are given meaning through the act of governing (see Bulkeley, 2015, Bulkeley, 2012). Governance of a perceived problem then creates knowledge which in turn renders the issue as risky and in need of securitisation (Oels, 2011, Oels, 2013). Many working on climate governance "elaborate on the close relationship between knowledge and power, between ways of thinking and ways of acting" (Stripple and Bulkeley, 2015). To know the climate's future is to render it governable, as Bulkeley (2015: 11) explains:

> "Governing is then not a matter of implementing solutions to predefined problems, but rather of the constitution and configuration of what should be governed and what it means to govern in tandem."

Across literature on climate governance in human geography, where climate crisis and its governance are understood to be (re)produced in their messy interrelation, two prominent modes of relation to the future have arisen – anticipation and experimentation.

Anticipating Futures

Drawing together a governmentality approach with non-representational theories, Ben Anderson's (2010) demonstrates how unruly climate futures are governed by institutions through 'anticipatory action.' More specifically, hypothetical futures are anticipated in the present through what Anderson terms 'the presence of the future.' The future becomes made present through future-oriented affects (such as fears and desires), epistemic objects (such as climate models, and scenario planning) and materialities (such as images). Anderson argues that these possible futures – which may or may not come to be – have very real implications in/on the present, as they guide policy and planning decisions. Through their anticipation, futures are calculated and preformed, even if they may never come to pass, so that they may be pre-empted.

Borrowing Anderson's vocabulary, many geographers have examined how institutions prepare or pre-empt climate futures through anticipatory logics and practices (Paprocki, 2022, Telford, 2018, Rickards et al., 2014). Across this work on anticipatory climate governance, authors have shown how anticipating climate risks produces novel modes of securitisation, which seek to govern through the processes of adaption and mitigation. Whilst the former is concerned with security measures that make life more resilient to climate risks, the latter seeks to prevent potential climate risks (Oels, 2013). Both approaches rely upon a narrative which characterises the societies as vulnerable and in need of greater resilience from a host of climate risks ready to erupt from the present (Rickards et al., 2014).

In research on climate governance, anticipation takes place across different sites and scales of institutional power, from the frameworks of transnational governance which seek to cut emissions globally to state efforts to increase their region's resilience ever more unpredictable weather events. For example, Neale (2016) explores how simulation modelling in wildfire prone state of Victoria, Australia allows for wildfire mitigation by simulating possible fiery futures. Analysing these anticipatory processes, Neal (2016: 2028) argues that "figurations of the future are rebooted, reconstructed or recalibrated" through what he terms instances of 'calculative rearticulation'. Meanwhile, White (2016) interrogates how the global smart city imaginary legitimises solutions on a local level, showing how mitigation and adaption knowledges are not always exclusive. Anticipation calculates and performs futures so that risks can be averted, their effects reduced, or sometimes anticipation enables a mixture of both aversion and reduction reside together. As Methmann and Rothe (2012) illustrate the imagination of climate crisis as a universal planetary threat has entrenched a 'logic of apocalypse' in the discourses of global climate crisis which "results coherently in practices of risk management: mitigation as precautionary risk management, adaptation as investing in preparedness, and security not as pre-emption but as a combination of the former two." Together this work shows that adaption and mitigation share a reliance on anticipatory logics, because whether the future is governed through pre-emption or through forms of preparation (see Anderson, 2010), risks must be foreseen

to be effectively governed. Across the work on anticipatory adaption and mitigation, climate futures are shown to have an unescapable presence in the present.

Anticipatory climate governance works not to produce a future which offers a radical break with the present but rather securitises the climate in order to preserve the dominance of the present order of things – namely, liberal democracy and one global order (Anderson, 2010). So, whether it's adaption, mitigation or both, in these practices and logics of anticipation, the climate and its governance are realized symbiotically through efforts to solidify existing power relations. For example, across Andrew Baldwin's (2012, 2013, 2017) work on climate, racialisation and migration, he demonstrates how panic about climate migration is characterised by fear of a "yet-to-come" racial disorder, in which the supremacy of liberal whiteness is undone. In his latest book, Baldwin (2022: 1) consolidates these compelling ideas into his concept of 'racial futurism':

> "Racial futurism is a form of racial rule which stakes a claim on the future by constructing the racial other as that which could materialise if efforts are not taken in the present to pre-empt the future."

Termed by Baldwin as a "logic of adaption", racial futurism seeks to consolidate existing racial hierarchies and uphold the rule of liberal humanism across the globe. Similarly, Erickson (2020) examines how conservation animates settler colonialism in Canada's boreal forest. By naming environmental catastrophe as a planetary threat, the Anthropocene discourse legitimises settler authority over land and the denial of Indigenous land rights in the name of ecological protection for all. Collard and Dempsey (2022: 1548) show how environmental governance preserves the dominance of liberalism despite accelerating environmental decline through an anticipatory strategy they name as "the future eco-perfect" - "a time that is forever just ahead when species and economic growth are abundant, together." All the while, the imagination of these futures may rely on the erasure of futures that are deemed antagonistic to liberal environmental governance efforts – a process Paprocki (2020, 2022) terms as "anticipatory ruination." Together, these authors explore how climate governance

works to anticipate futures and prevent risks already incubating in the climate from disrupting the authority of liberal democracies.

Each articulation of the future through anticipatory governance relies on a narrative of vulnerability to anticipated risks, where societies must develop greater resilience to environmental instability and unpredictability. By calculating and performing these anticipated futures in the present, climate governance consolidates the power of liberal government. The future remains a possibility even as it moulds the present.

Experimenting with Futures

Climate governance has begun to increasingly take place through what has been termed 'experimentation.' Experimental climate governance functions through intervention in the present, where desirable climate futures are trialled and tested at a local scale (Bulkeley and Broto, 2013, Wakefield, 2021, Webber, 2014, Caprotti and Cowley, 2017). As Hodson et al. (2018: 1481) explain:

> "Experimentation, in this sense, can be understood as a process of governing that constitutes local capacity to materially embed 'new' interventions in place and learn from them."

Existing research which explores experimental climate governance has tended to focus on urban experimentation, with cities understood as laboratories for trialling place-based initiatives which may be scaled up or diffused elsewhere (Cugurullo, 2018, Castán Broto and Bulkeley, 2013). For example, Caprotti (2014: 1287) interrogates the rollout of eco-cities "which make the city the centre of transition towards a 'low carbon' economy." Elsewhere, Castán Broto (2020: 2373) explores the speculative futures which animate Jaca's aspirations to become an eco-city, noting how cities have "become the darling trope of the international environmental policy regime." Whilst it is true that the majority of work on climate experimentation in human geography does focus on urban case-studies, there is increasing research which explores experimental climate governance beyond the city. For example, some have explored how small

island states are imagined as laboratories for pilot studies that may be recreated elsewhere (Saddington, 2023) or the testing of global imaginaries of climate apocalypse (Farbotko, 2010). As Chandler and Pugh (2021: 399) comment

> "islands increasingly became generative as both laboratories for Western science and as key sites of creative adaptation, relational affordances, and feedback effects."

Elsewhere, others have explored rewilding initiatives as 'wild experiments' through which human-animal relations are governed (Lorimer and Driessen, 2014). These authors explore how decisions are made about who/what is wild, showing how biopolitics animates the governing of wildness (Biermann and Anderson, 2017, Lorimer, 2017). And, whilst not the focus of this particular review, others have also investigated climate experimentation beyond governance (Waitt and Rankin, 2022, Gibson and Warren, 2020). Whether it's speculative dreams of an eco-city or the imagination of islands as models of resilience, climate experimentation is commonly conceived as a situated mode of governance undertaken by testing sustainable living and desired climate futures.

Edwards and Bulkeley (2018) argue that a distinction can be drawn between anticipatory and experimental modes of governance when considering how each relates to and configures the future. While anticipatory approaches to climate governance are underscored by 'the presence of the future' (Anderson, 2010), experimental approaches to climate governance attempt "to demonstrate the presumed or hoped-for future" (Edwards and Bulkeley, 2018: 357). So, whilst anticipatory action seeks to securitise the present by calculating and closing down future uncertainty. Climate experiments work on the presumption that it is impossible to properly calculate or predict the future. Tomorrow remains ambiguous and uncertain, risky but infused with possibility (see Bulkeley, 2023). Receptivity to an open future is integral to experimentation. As Evans (2016: 430) explains an "openness to surprises and the unexpected" as a "defining feature of experimentation." Similarly, Kullman (2013: 890) argues that "experimentation usually entails a deliberate attempt to foster the

emergence of something unexpected in the world." Governance by experimentation demands flexibility and must foster the "conditions for learning-by-doing, as well as learning about the unintended impacts of new ways of doing things" (Sengers et al., 2021: 1150). Unlike in anticipatory action where scientific evidence can be said to precede the creation of policies which pre-empt futures, in climate experimentation knowledge is created through exploratory practices which demonstrate uncertain and potentially risky futures (Bulkeley, 2023). As Grove et al. (2023: 4) explain "experimentation reorients governance toward indeterminacy" rather than "the assumption that indeterminacy could and should be eliminated."

When future indeterminacy is embraced, governance no longer works exclusively through predictive imaginations which seek to control disruptive ecological relations. Instead, disruption is recognised as inevitable to life in the Anthropocene. So, governance improvises, governing instead through potentially unruly societal-ecological assemblages (Tozer et al., 2023, Wakefield, 2021, Nelson and Bigger, 2022). Nature is no longer understood as a separate entity controlled by human mastery, but rather the relations which tie societies to nature are utilised for experimental governance (Braun, 2015, Grove and Chandler, 2017, Swyngedouw, 2015). For example, Grove et al. (2023) examine New York City's 'Rebuild by Design' programme used in the aftermath of Superstorm Sandy, showing how governance interiorizes rather than maintains the nature-society boundary. Wakefield (2020b: 764) examines how oyster reefs act as coastal infrastructures, arguing that the Living Breakwaters project in New York City "enrolls oysters as a governmental technique to secure existing liberal, capitalist human life." Reiterating these ideas elsewhere, Wakefield (2020a: 15) again argues climate experimentation projects typically function by "fundamentally maintaining liberal orders by new means, projecting them into the future infinitely even amidst the catastrophes they generate." The move to govern through a recalibrated notion of nature-society relations relies upon fostering the exact amount of determinacy from the future – below the threshold which will disrupt liberal rule (Wakefield, 2020a). The imagination of the future in experimental and anticipatory modes of climate governance is symbiotic with control, even when experimental approaches reach for the creation of the new (Edwards and Bulkeley, 2018). As

Bulkeley (2023: 10) explains "experimentation is then a means through which indeterminacy is simultaneously suspended and sustained." The new must always be that which consolidates the existing order of things. The future cannot be allowed to be so indeterminate that it undoes liberal order.

So, while both anticipatory action and climate experimentation require a certain amount of closure and control, experimentation also demands some openness and indeterminacy from the future. Focused on experimentation and anticipation, literature on climate governance offers a particular way of understanding the future – that is how life is governed in and by the future. Climate governance then foregrounds closure as a primary relation to the future within climate crisis. There are however other relations to the future at stake in climate crisis, yet to be considered by geographers. Departing from the governance approach, I am interested in the temporal orders that emerge through a queer reading of environmental emergency. In this next section of this article, I review work on temporalities within queer studies before turning to a (re)imagining of the geographies of climate change through queerness.

2.3 Troubling times: Queer Theory's 'Temporal Turn'

Most writing which seeks to introduce queer theory, including important work in this journal (see Lesutis, 2023), begins by insisting on the multiple and divergent nature of the ideas which are typically gathered under the umbrella of queer studies. As Hall (2003: 5) warns "there is no 'queer theory' in the singular, only many different voices and sometimes overlapping, sometimes divergent perspectives that can be loosely called 'queer theories.'" Elsewhere, Jagose (1996: 1) writes that queer theories' "definitional indeterminacy, its elasticity, is one of its constituent characteristics." Berlant and Warner (1995: 344) even claim "queer theory is not the theory *of* anything in particular, and has no precise bibliographic shape." Writing over twenty years after Hall, Jagose, Berlant and Warner, it feels almost cliché to again define queer theories through their indefinability. However, it is undeniable that queer theories have an irreducible nature, which spills over disciplinary boundaries, refusing to rest easily

around a collective purpose. For many proponents of queer theory, its political potential lies in this very ability to antagonise the normative organisation of life, including its definition but also more broadly identities, practices, and beliefs (Keeling, 2019, Eng et al., 2005). As Sedgwick (1993: xii) writes "queer is a continuing moment, movement, motive – recurrent, eddying, troublant." A troubling or antagonistic disposition has itself come to characterise much of the research undertaken by queer theorists. So, ironically, queer theory's refusal to be bound by conceptual closure has led to its frequent identification with an 'anti-normative sensibility' – that is a far-reaching critical resistance to normativity alongside an embrace of antinormativity (Wiegman and Wilson, 2015, Jagose, 2015). In this review, I am interested in how queer theory's antagonistic disposition may trouble the ways in which geographers have typically imagined the temporalities of climate crisis. Before returning to climate futurity, across this next section I take a detour outside of geography, and review here the work of those associated with the 'temporal turn' in queer studies.

I look outside geography because those writing on queer time typically reside outside of our discipline. It is true that geographers have welcomed queer theories and particularly so within the subfields of geographies of sexualities (Oswin, 2008, McKeithen, 2017), feminist geographies (Wright, 2010), trans geographies (Browne et al., 2010, Howitt, 2024, Brice, 2018) and urban political ecology (Gandy, 2012, Heynen, 2018). Queer geographies have made many important, critical contributions to our discipline, including deconstructing the sex/gender binary, emphasising the fluidity of identity, and challenging the heteronormativity of space. However, within the work of those writing on queerness in geography temporality has often been sidelined in favour of spatiality (Oswin, 2008, Bayer and Browne, 2024). Queer geographies' focus on the sexualisation of space has often overshadowed the possibilities for (re)thinking temporality through queerness. And, where geographical work has focused on queer time, it has often been through a focus on those subjects and spaces that are deemed queer (for examples see Todd, 2023, Oswin, 2012, Bonner-Thompson, 2023, Wilkinson, 2020). While this work is undoubtedly powerful and necessary, my interest lies with unsettling the temporal heteronormativity that dominates imaginations of climate crisis. To do so, relies on extending queer theory's

potential to oppose liberal and political norms to areas of life that are not likely to be labelled as queer. It is my hope that rather than cleave queer theory's relation to marginalised subjects, this line of argument instead illustrates how heteronormativity in/through time configures and confines those very subjects to the margins of society – including in debates surrounding climate crisis.

Straight times

Outside the disciplinary boundaries of geography, a number of influential texts on queer temporalities were published from the mid 2000s. These works thrusted the issue of time into the spotlight queer studies (Edelman, 2004, Freccero, 2006, Ferguson, 2004, Love, 2009, Halberstam, 2005, Dinshaw et al., 2007, Freeman, 2010, Kafer, 2013, Muñoz, 2019, Stockton, 2009). In different ways, these authors illustrate how the processes of normalisation order temporalities, creating times which regulate gender and sex. For example, Halberstam (2005) outlines and contests what they term "repro-time" – that is heteronormative temporalities which govern family practices, sexual desires and gender roles. For Halberstam, repro-time maintains heteronormative lifestyles and social bonds as normal and thus valued across not only the course of a lifetime but also throughout generations. Respectability and normality are pinned in place by what Halberstam (2005: 1-2) refers to as a "middle-class logic of reproductive temporality" and "temporal frames of bourgeois reproduction and family, longevity, risk/safety, and inheritance." Freeman (2010) also explores the policing of sexuality and gender through a focus on the discipling of time. By proposing 'chrononormativity' as a form of temporal regulation, Freeman (2010) illustrates how populations are managed through the synchronization of bodily rhythms. Ordering life through the scheduling of practices such wealth accumulation, marriage, reproduction, 'chronobiopolitics' "organize[s] individual human bodies toward maximum productivity" (Freeman, 2010: 34) by utilising "forms of temporal experience that seem natural to those whom they privilege" (Freeman, 2010: 3). Both Halberstam and Freeman connect imaginaries of the nation's past to the intimate practices of the family, showing how the state's legitimacy and stability comes to be through the policing of social relations in accordance with heteronormative gender roles and

sexual desires. Whether its repro-time or chronomormativity, the future is the site of the reproduction for family values, generational wealth, the nation state or of the capitalist system.

In heteronormative times, life is often ordered along a timeline that progresses as a forward flying arrow, which in turn (re)imagines the state as developing along a similarly linear timeline. Emphasising this point, Muñoz (2019) proposes his own conceptualisation of heteronormative times in *Cruising Utopia* – termed now as "straight time." Muñoz (2019) emphasises the reproduction of time itself and the linearity of relations between moments in times, describing straight time as an "autonaturalizing temporality" (p.4) which progresses through "the linear temporal ordering of past, present, and future" (p.218). In straight time, the present becomes all-encompassing:

> "Straight time tells us that there is no future but the here and now of our everyday life. The only futurity promised is that of reproductive majoritarian heterosexuality, the spectacle of the state refurbishing its ranks through overt and subsidized acts of reproduction" (Muñoz, 2019: 22).

Focusing on the possibilities of gay marriage, Boellstorff (2007) examines the inescapable nature of a heteronormative present, arguing that 'straight time' "cannot conceive of copresence without incorporation" (p.243) because straight time "does not allow two "times," and thus two objects in time, to co-occur" (p.231). Together Boellstorf and Muñoz offer a notion of straight time that emphasises the suffocating nature of heteronormative temporal orders, which in moving only ever "backward and forward—but not laterally, in a circle, up or down" (Boellstorff, 2007: 231) stifle the possibilities for organising time differently. Together these authors illustrate that collective imaginaries which rely on the policing intimacies often take place along timelines that are linear or straight, where particular relationships and lifestyles progress naturally throughout time towards the promise of a happy future. Despite the seeming inescapability of straight time, bodies which do not adhere to the logics of heteronormativity are considered out of sync with 'natural' time (Kafer, 2013). By

focusing on those who are cast as out of sync with heteronormative temporal logics, many authors have drawn attention to how heteronormativity intersects with other forms of oppression, such as sexism, colonialism and ableism, to police identities through but, importantly, beyond sexuality (Ramberg, 2016, Rodríguez, 2014, Rao, 2020). Unfolding linearly and suffocating the possibility of alternative worldly arrangements, straight time normalises and privileges the middle-class, straight, nondisabled nuclear family across a timeline that progresses *straight*forwardly from past, to present to future.

Whilst the above authors argue that particular forms of time are heteronormative, Edelman (2004) claims that the future itself is heteronormative. Taking a Lacanian approach to his analysis of temporality, Edelman (2004) argues that the social order is maintained by 'reproductive futurism.' By which he means that society is always reproduced through a desire for a better future and the desire for a better future is always the desire for a better future *for the next generation*. So, for Edelman (2004), politics is always undivorceable from tomorrow and tomorrow is undivorceable from heteronormativity. Whilst Edelman (2004) argues that all forms of futurity are heteronormative, many have folded his arguments back into a theorisation of heteronormative times as particular forms of time within many more (Ensor, 2012, Ahuja, 2015, Lakind and Adsit-Morris, 2018). For example, Bliss (2015: 86) reads Edelman's anti-reproduction position alongside Black feminist theory, arguing that "reproduction without futurity, then, names nothing more (and nothing less) than the queer capacity of Blackness to reproduce without being." Elsewhere, Davis (2015: 232) extends Edelman's arguments around reproduction, to explore the toxic effects of plastics on permeable bodies, arguing "plastic can then be understood as a non-filial human progeny, a bastard child that will most certainly outlive us." Despite Edelman's wholesale rejection of futurity, many have shown that it is particular futures and forms of reproduction that are heteronormative. These authors maintain that within the future lies possibility for other ways of being beyond straightness.

When held together, it can appear as if these various conceptualisations of temporalities may harbour more differences than similarities. However different their

conceptualisations of temporalities may be, these authors illustrate how the ordering of time is inseparable from the normalisation of certain sexualities including through their relation to class, gender, disability and race. Together they show how the potential of queer theory lies "specifically in its broad critique of multiple social antagonisms, including race, gender, class, nationality, and religion, in addition to sexuality" (Eng et al., 2005: 1). Furthermore, each theorisation of straight time connects the intimate practices of/between bodies to attempts to legitimise and stabilise the state or society itself; showing how temporal orders police bodies which are deemed unproductive or out of time, casting some bodies as an interruption to "natural" time of the family and the nation.

Queer times

Across queer studies, those subjects, relations, and places that are deemed out of time have come to symbolise queerness, as Ramberg (2016: 223) reminds us "to be queer is to be out of step." Many queer theorists have understood queer times as an alternative arrangement of tempo-spatial relations to the normativity of straight time. For the purposes of categorisation, it can be helpful to divide these conceptualisations of queerness along the lines of positivity and negativity – or, put differently, queer optimism vs pessimism. Typically, queer optimists are understood as optimistic about the potential of relationality, the social and the future for queer politics. Queer pessimists reject relationality, sociality, and even sometimes the future, as a site for queer politics. However, what each author really does is grapple with the division between the relational and anti-relational in their own way, making a strict division of authors along the lines of positivity and negativity mostly impossible.

Through their own attempts to undo not only identity and relationality but also the fabric of temporality, various authors have theorised queerness as negation. Leaning into the appeal of the anti-relational approach, Halberstam (2008) locates queerness in "forms of negative knowing". In "The Queer Art of Failure", Halberstam (2011:2) turns to moments of failure because "success in a heteronormative, capitalist society equates too easily to specific forms of reproductive maturity combined with wealth

accumulation." Queerness, for Halberstam (2003: n.p.), then does not merely denote certain sexual identities but instead is "an outcome of temporality, life scheduling, and eccentric economic practices" that can threaten the notion of the family, the state and the temporalities which privilege heterosexuality. For Edelman (2004), like with Halberstam, queerness does not simply denote particular sexualities. Rather than a form of time, Edelman (2004: 6) however argues that queerness "dispossesses the social order of the ground on which it rests." Edelman (2004) proposes that queerness is the repetition of an unassimilable excess in the social order. As Wiegman and Wilson (2015: 13) explain "queer is not, for Edelman, antisocial. Rather, queer is the structural negativity that makes sociality and subjectivity possible." Following Edelman (2004), queerness's potential lies in its capacity to shatter the fabric of time and modes of relationality. Like Edelman and Halberstam, others have also explored queer negativity through notions such as "feeling backwards" (Love, 2009) and "growing sideways" (Stockton, 2009). Whilst all of these approaches attempt to locate queerness in negation, they differ dramatically in their approaches to relationality and community, and the degrees to which they embrace futurity. The future to be delayed (Stockton), abandoned (Edelman) or holds the possibility for queer times (Halberstam).

Muñoz's (2019) *Cruising Utopia* suggests queerness is utopian. Unsurprisingly, it is commonly understood as the anti-thesis of queer pessimism. Muñoz (2019) argues queerness is a forward reaching desire for a better world. It is the hoped-for not-quite-yet. "That is to say that queerness is always in the horizon" writes Muñoz (2019: 11). Following Muñoz, others have embraced optimism and attempted to turn away from the allure of wholesale negativity and anti-relationality. Drawing from black studies and decolonial theory, Keeling (2019) articulates queerness as relational but sometimes unintelligible. In doing so, her work carefully shows how the division between positivity and negativity is not a simple one. Like Edelman (2004), Keeling (2019: 17) argues that queerness is a "structuring antagonism of the social" which "anchors social orderings as their negative." For Keeling (2019), queerness is incomprehensible and unpredictable but "remains here and now in both recognizable and imperceptible forms." Connecting these ideas to Afrofuturism, Keeling (2019) shows queerness can create incommensurate yet utopian futures. Like Keeling, Brown (2021) also turns to

Black speculation to consider the political potency of intelligible worlds imagined through 'black alternative world making.' Arguing from an intersection of queer theory and black studies, Brown (2021: 8) disrupts the conventional ways in which time unfolds, through a theorisation of utopia that is relational but intelligible, and certainly "not discoverable along a human timeline." Whilst different in their approaches to queer temporality, what each of these authors does is rework the division between relationality and anti-relationality to offer queerness as (un)intelligibly outside/within/antagonistic to heteronormative conceptualisations of time. In this work, queerness becomes more than a subject position. Queerness runs throughout temporalities, disordering and reorganising the relations between bodies. The future is no longer simply ahead of us. It is the product of unsurprising relations between different times, times that may not be comprehensible.

Unlike governance approaches to (climate) futurity, where the future is realised so that it may be contained and the status quo consolidated, queer temporalities have an indeterminate nature which evades full capture, always arising through their antagonism to and within normative formulations of time. Queer temporal orders are often distinguishable by the ability to create futures that are open, full of risk/chance and indeterminacy. "'Queer temporality'" Keeling (2019: 19) writes, "names that dimension of the unpredictable and the unknowable in time that governs errant, eccentric, promiscuous, and unexpected organizations of social life." Elsewhere, Muñoz (2019: 25) insists that "queerness's ecstatic and horizonal temporality is a path and a movement to a greater openness to the world." Similarly, Ahmed (2010: 198) envisions queer futurity as that "would be alive to chance, to chance arrivals, to the perhaps of a happening." Following the lead of queer theorists, the political potentiality of time exists in those temporalities which are uncertain, unexpected, erratic and even intelligible. Queerness's value lies in its ability to surprise us with previously unthinkable connections, relations or possibilities. Since queerness can signify an "open mesh of possibilities, gaps, overlaps, dissonances and resonances, lapses and excesses of meaning" which may unravel identities, beliefs and practices along with the temporal and spatial orders upon which they rest (Sedgwick, 1993: 8). Importantly, these indeterminate futures, which arise from surprising entanglements of temporal

relations, are inseparable from a troubling of the temporalities which attempt to contain or control the future. Queerness works as a 'structural antagonism' (Keeling, 2019) threatening to shatter temporalities even as it makes them possible.

2.4 Queer ecologies & the straight times of climate crisis

Returning to the temporalities of the environment, in this section I consider how queerness may shine a light on the multiple temporalities of climate crisis. Approaching temporality through the lens of queer theory allows for an unsettling of the ways in which heterosexual norms discipline time. By imagining a linear timeline, such norms police intimacies between bodies, encouraging lifestyles which fit within their temporal boundaries. Consequently, heteronormative futures and relations to the future offer legitimacy to collective imaginaries of the liberal state. In this review, I am concerned with how heterosexuality is (re)produced in the futures of the climate crisis. If, as shown above, the (re)production of the family is closely linked to the stability of the nation, is the (re)production of the family closely linked to the future stability of the planet too? To answer this question, I turn to a particular strand of work within queer theory's temporal turn – work which explores the relationship between sexuality, temporality and nature.

Often gathered under the label of queer ecology, the work I am interested in here focuses on temporality but does so at the intersection of environmental humanities and queer theory. Edelman's reproductive futurism has been influential here, with many borrowing from *No Future* the imaginary figure of the Child – who, as Edelman (2004: 3) reminds us, "remains the perpetual horizon of every acknowledged politics, the fantasmatic beneficiary of every political intervention." Many theorists have drawn attention to the processes of reproductive futurism in contemporary (western) environmental politics, showing how a desire to protect the planet's future is often synonymous with a desire for securing a better future for the children (Sheldon, 2016). Opening with analysis of an environmental campaign, Seymour (2013) *Strange Natures* begins by thinking about the intersection between queer theory and environmental

politics. “Protect our children’s future. Clean up dirty power plants” reads the advertisement which Seymour (2013) eyes on her commute. Considering the accompanying picture of a white child playing in the suburbs, Seymour (2013: vii) argues the advert “frame[s] environmental degradation as a threat not just to a particular child, or even many children, but to a particular way of life.” Through the wedding of the Child to our environmental future, for Seymour (2013: vii), “the ad matter-of-factly links sentimental heterosexism and environmentalism.” This ‘sentimental heterosexism’ is a sexuality that is also white, respectable, middle-class and suburban.

Others have illustrated that reproductive futurism often extends heteronormativity into the governance of animal life. Drawing from ethnographic work at orangutan rehabilitation centres, Parreñas (2018) traces how reproductive futurism compels captive breeding programmes for endangered species. She shows how the desire to secure the future of an endangered species relies on forced copulation between orangutans at the physical and emotional expense of the females. Also concerned with the temporalities of captive breeding programmes, Szczygielska (2022) reflects upon the involvement of sexuality, reproduction and extinction in imaginaries of the Anthropocene. “The zoo project”, Szczygielska (2022: 657) writes, “makes reproduction the cornerstone of species survival and thus materializes temporality through genealogies, lineages, and familial-sentimental formations of species imagined as isolated entities.” In western imaginations of extinction, relations to and between non-human others make the future more-than-human, showing how heteronormative, futurity and the more-than-human are entangled in western environmental politics.

In an environmental politics underpinned by reproductive futurism, it is not only the contents of the future but the form of future (where it is and how we relate to it) that is shaped by the Child. Drawing parallels between how environmentalists and queer pessimists envision the future, Ensor (2012: 412) argues their “rhetoric agree[s] on how the future appears—legibly, at some point down the road, able to be recognized and harnessed and seized.” The future that is threatened is that of the heterosexual family’s – a future which remains ahead but does so very precariously. But it’s also the future of

liberal democracy. As Davis (2015: 240) argues in her own analysis of environmental apocalypse, toxicity and reproductive futurism:

> "That we want a 'better' future for our children, so often translated into material and economic wealth, without considering the costs on other (poorer) children, or the actual children that will be birthed, we uphold an economic and cultural voraciousness that defies all logic."

In much of the environmental discourse found in the West, the future which is so regularly imagined as threated by climate change is the future of liberal order. In invocations of this imaginary of environmental emergency, often little regard is given for the inequalities that the continuation of such a future demands. Building on this work, elsewhere I have argued that appeals to halt planetary extinction operate through a multi-species reproductive futurism which creates "the future (as out there ahead of us), our relation to it (as reaching towards that future), and our identities (as future making)" (Robson, forthcoming). In this straight timeline of planetary collapse, humans have failed to act appropriately as stewards for other non-human life, and as a consequence of this a particular type of future could be lost – one that is white, middle-class and straight.

The idea that we must save this type of planetary future acts also as distraction. The desire to govern the future through heteronormative ideals redirects attention from the conditions which gave birth to ecological crisis – namely fossil fuel capitalism and its bedfellow colonialism (Moore, 2015). By connecting Edelman's (2004) work to that of Berlant's (2011), Ahuja (2015) illustrates this point clearly:

> "To gloss Berlant, inhabiting late-carbon liberalism produces myths, icons, and feelings that may be 'profoundly confirming' despite binding a person or world to situations of 'profound threat.'" (Berlant, 2011:36 cited in Ahuja, 2015: 372).

In the straight timeline of environmental apocalypse, the Child keeps our eyes fixed firmly upon the horizon and, *importantly*, directed away from the uneven

environmental relations which underly the present. An environmental politics tied to reproductive futurism is then cruelly optimistic (Berlant, 2011). It is a form of long-term thinking which masquerades as a route to a liveable climate future. All the while, it reinforces what Bastian (2024) terms the "exclusionary, extractivist temporalities that underpin late capitalism." An environmental politics animated by reproductive futurism reproduces the social order with its uneven impacts and inequal conditions. Illustrating the perils of what Sturgeon (2009) warns is "a great danger for environmentalists: arguing from the natural can support the very relations of power produce environmental problems."

Across these articles outlined above, climate crisis emerges as a distinct threat to the future. Whilst climate crisis may appear as an indiscriminate threat to humanity or the planet itself, each author shows that the future invoked is in fact the future of the family, and whether that future is human or nonhuman it is often marked by a white, middle-class sentimentality. Furthermore, within environmental politics informed by reproductive futurism, the future threatened by climate change is a future posited along a timeline that unfolds linearly through the privileging of straightness. The threatened safety of the family then offers legitimacy to imaginaries of climate crisis as a single planetary phenomenon, showing how closely tied the reproduction of the family is to the stability of the planet. Appeals to save the environment for the next generation consolidate liberal rule in the future through the use of heterosexual norms, values and ideals. Which shows that planetary timelines are undivorceable from the policing of intimacies between bodies. Environmental degradation has real, uneven and devastating impacts. The apocalypse is nonetheless heterosexual.

Queer intimacies & environmental ethics

As well as offering a way of identifying and critiquing the straight time of environmentalism, queer theory is oriented to a multiplicity of alternative futures which give rise to novel forms of environmental ethics. Queer theory is generative and imaginative as it is antagonistic and troubling. It is generative of the norm

against which it is defined, but more hopefully, it is generative of alternatives (Jagose, 2015, Wiegman and Wilson, 2015). As Morris explains:

> “At the conjunction of “queer” and “ecology”, there is the potential for reconfigurations of the living material world, as well as for articulations of other possible worlds of life and livability” (Anderson et al., 2012: 90)

A queer time fosters novel modes of relationality for a world gripped by environmental harms (Morton, 2010, Parreñas and Seymour, 2022, Whitworth, 2019), or as Mortimer-Sandilands (2005: 18-19) explains “offers us a unique standpoint on *resisting* these destructive relations.” By (re)thinking sexual relations, research on queer environmentalisms have repositioned humans within nature, confusing the boundaries between sex and nature (Gaard, 1997, Morton, 2010). Specifically, I am interested in the temporal registers which may make these queer relations possible and the ethics possibilities such temporalities could animate. So, if, as Heather Davis (2015:246) explains, “the nihilistic, apocalyptic, or masculinist techno-fantasies of the future will only lead us to the continued reproduction of the social order” then how might we imagine the future of the planet differently? Should we imagine a planetary future? Or a future at all? In the midst of an *urgent* climate crisis pausing to question the temporal registers through which such an environmental imagination works may seem (or even prove!) foolish. However, these questions summon new ethical regimes which may become indispensable for navigating environmental emergency.

Through queer temporalities ecology fosters connections beyond the heteronormative structures of the family, the state, the nature or even the planet. Focusing on the figure of the spinster, Ensor (2012) for example, imagines a form of green futurity that is removed from reproduction. Arguing for a spinster ecology, Ensor (2012:410) “alters our notion not only of where the future lies but also of how (or whether) it arrives.” As a queer figure, the spinster performs “an avuncular form of stewardship, tending the future without contributing directly to it.” (Ensor: 2012: 409). Building on these arguments, Klaubert (2024) explores spinster ecology through a focus on Babushkas – older women who after the nuclear disaster returned to their homes in the Chernobyl

exclusion zone. Klaubert (2024:526) shows the Babushkas foster "hazardous hope; they recognize the injustices and hazards on which they are based but refuse to despair in the face of them." The Babushkas tend to a radioactive landscape with hope that the present will be enough, and without guarantee the future will arrive. Given their childless and asexual nature, an environmental politics based on reproductive futurism would position the spinster as the figure with the least to lose from climate change. However, like others who take part in nonreproductive intimacies (see Ensor, 2017), the spinster fosters an ethics based on a nonteleological care. Whether the future arrives or not, she still cares for more-than-human others. Spinster ecologies can offer a form of what Seymour (2013:185) terms 'queer empathy' – that is an ethical orientation that stresses how "one must care for nameless, faceless future beings, including non-humans, to which one has no domestic, familial, or financial ties."

Staying for a moment with toxicity, others have shown that climate crisis might make spinsters of us all yet. The presence of plastics, everywhere from the far corners of the oceans to the microplastics now found within our own bodies, are known to be leaching toxins which interfere with hormones, affecting sexual differences and increasing infertility rates (Ah-King and Hayward, 2013). As it queers the body, plastic toxicity delinks sex from reproduction, demanding a futurity that can account for microbial entanglements (Davis, 2015). An increasing exposure to toxins demands even greater urgency in developing an environmental ethics which may contend with non-reproductive futurity. As Davis explains "we must learn from queer subjects to build worlds of familial care that are not bound by biology" (p.245). Queer ecological timelines emerge from strange intimacies, as Chen (2012) illustrates toxicity can be considered as a form of intimacy itself. In their exploration of lead poisoning, Chen (2012) argues that toxins challenge designations of animacy, confuse subject-object boundaries as well as disrupt visions of relationality and affectivity. As they explain "such a toxic queer bond might complicate utopian imagining" and instead invite us to rethink environmental relationality, the futures and ethical regimes which are prompted by such relations (Chen, 2011: 265).

While toxins can interfere with reproduction within species, at the microbial level toxicity also gestures towards interspecies forms of reproduction. Focused on a particular figuration of toxicity - infection borne from parasitic insects - Ahuja (2015) and Straube (2019) explore interspecies intimacies, illustrating how bodies are racialised and gendered through their relation to toxicity. Ahuja (2015) connects panic about a climate induced explosion in mosquito numbers to racial capitalism, colonial histories of disease control and the desired reproduction of nondisabled futurity. By focusing on interspecies reproduction, Ahuja (2015:372) poses inhuman queering as "an affective materiality that interrupts anthropocentric body logics and space-time continuums." Meanwhile, Straube (2019) draws parrallels between the toxic figuration of tick and trans bodies to consider ethical questions of response-ability and killability. They consider toxicity's

> "potential for making livable worlds and survivable futures and the acknowledgment of the queer affinities that sit in this place of the toxic as a material-discursive boundary figuration" (Straube, 2019: 235).

Toxicity dispels fantasies of purity, muddies heteronormative notions of intimacy and, importantly, provokes alternative temporalities reliant upon novel ethical vocabularies. Toxic intimacies highlight the complexity of more-than-human life, which always moves through multiple temporal orders and in forms of relationality that cannot be reduced to imaginations of the family or the planet. They are intimacies which force us to reckon with our enmeshment with the environment and draw affinity with, rather than a border around, the possibilities and perils which lurk within it.

The spinster and the toxin are but two examples of strange intimacies. These intimacies work through queer temporal registers, where one is oriented openly towards a future full of risk and chance. Queer intimacies reconfigure both the contents and form of the future. The future is no longer tied to only the success of heterosexual reproduction. The future is no longer waiting ahead to be saved.

Whether it's the work of the spinster or toxicity, these strange intimacies provoke alternative environmental ethics. A queer environmental ethic is nontelelogical and nonfamilal. Acting with 'queer empathy' (see Seymour, 2013) dissolves planetary imaginaries, the familial intimacies upon which they rely and their related ethical vocabularies that tie environmentalism to reproductive futurism. While climate governance provokes an ethical register in which risk must be, to some extent at least, known and pre-empted. A queer ethical relation embraces an unpredictable horizon without desire to control but with a relentless urge to act with empathy to others – who "we can never fully know and that make no recognizable attempts to know us" (Ensor, 2017: 157).

2.5 Conclusion

We're hot, we're drunk
Wow, look at her moving, baby, she's the one
Oh yeah, I need
A super graphic ultra modern girl like me (shake it for me)

- *Super Graphic Ultra Modern Girl, Chappell Roan*

Throughout this paper, I have illustrated that queer theories can firstly, locate and critique heteronormative times, secondly offer novel temporal orders and queer intimacies, and lastly pose alternative ethical regimes for environmentalists. To conclude, I return to Chappell Roan to illuminate these arguments. Locating queer futurity, as *Super Graphic Ultra Modern Girl* does, may feel like a distraction from the looming environmental Armageddon. Given that the world's collapse is reduced to background noise, secondary to the desire for other women. *Super Graphic Ultra Modern Girl* however disrupts what Seymour (2018) calls a "binarized logic of despair/hope" upon which planetary imaginaries typically rest. In the face of apocalypse, *Super Graphic Ultra Modern Girl* moves through strange timeframes and summons a joyous desire for queer intimacies.

In this article, I have aimed to illustrate that *straight* imaginaries of climate catastrophe pose the real distraction. The uneven effects of a warming planet are undeniable. An environmental politics based on apocalyptic thinking however allows for the continuation of the system causing environmental degradation – specifically, patriarchal capitalism. Through straight timelines, environmental ethics are reduced to attempts to save the climate from such a future. *Super Graphic Ultra Modern Girl* exemplifies that alternative intimacies, relations and temporalities can resist the affects and sensibilities of planetary collapse.

By drawing from those writing on the temporal turn (Dinshaw et al., 2007, Edelman, 2004, Halberstam, 2005, Muñoz, 2019), I have brought together queer theories and the geographies of climate change (Bulkeley, 2019, Hulme, 2008, Swyngedouw, 2013) – a crossover which is yet to be thoroughly explored by geographers (for exceptions see Clark and Yusoff, 2018, Bosworth, 2022). Focusing on research in queer ecologies and environmental humanities (Ensor, 2012, Seymour, 2013, Davis, 2015, Parreñas, 2018), I have argued that apocalyptic thinking in environmental politics positions the future along a timeline which is straight. Apocalyptic environmentalisms rest on time which progresses from past, to present, to future. Such visions of climate change summon a single earthly future as under threat. I have argued that the future threatened in such imaginaries is in fact the future of the family – specifically, the white, middle class, nondisabled family. The (re)production of the family is bound up in imaginaries of a healthy planet, illustrating that apocalyptic imaginaries police intimacies between bodies. As a result, liberal rule is consolidated through heterosexual norms and ideals. Imaginaries of environmental apocalypse are founded on the fantasy that liberal order can/should be saved.

Using queer theory, I have centred sexual politics within my analysis of climate futurity. What effects does such an approach hold for geographers? A recognition of how heteronormativity informs both the form and contents of the climate's future remains largely missing from geography; despite the many important contributions geographers have made about how the future animates attempts to govern the climate (Bulkeley, 2023, Anderson, 2010, Paprocki, 2022, Oels, 2005). If

governance works through attempts to stabilise the future of liberal democracy against a backdrop of ever increasing climate uncertainty (Wakefield, 2020a), these governance attempts must also stabilise the lifestyles which legitimise the state's existence. Future work in geography could, like I have done here, centre sexual politics within their analysis of the relations made in climate crisis, showing how the future is governed by straight temporalities.

Such a move would not only challenge heteronormative conceptualisations of climate change but could shine a light on strange intimacies and temporalities. By reviewing work from queer ecologies and environmental humanities (Davis, 2015, Ensor, 2017, Szczygielska, 2022), I have shown that at stake in climate crisis are relations other than those fostered by governance such as pre-emption and closure. I have used the figure of the spinster and figurations of toxicity to explore environmental temporalities and intimacies which exist beyond imaginaries of planetary apocalypse. These authors elicit new vocabularies for environmental ethics – not based on a deferral to a heterosexual future or rooted in the social bonds of the nuclear family but through non-familial and nonteleological empathy (Seymour, 2013, Ensor, 2012, Ahuja, 2015). Further geographical work could explore the presence of non-normative intimacies beyond the spinster or the toxin, which may offer subsequent timeframes for nurturing environmental empathy. Rather than despair at the world's decline or hope beyond all hope to save the planet, by centring sexual politics in their understandings of climate change, geographers might develop novel ethical vocabularies from ecology's strange intimacies and queer temporalities.

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Three

How do you critique climate activists?
Some reflections on doing environmentalism badly

Abstract

Environmental activism in the West is animated by a widespread and resolute belief that climate change poses a significant threat to the future life on earth unless we act now. Environmental activists are not known then for feelings of hesitation or uncertainty - but that is exactly how I felt as I researched the social movement Extinction Rebellion UK. It is by drawing on Nicole Seymour's notion of "bad environmentalism", I reflect upon my many shortcomings as an ambivalent environmental activist. By following feelings not typical to environmental politics – like hesitancy, ambiguity and uncertainty – I consider both my own and the other climate activists' improper relations to climate crisis. Focused on sites and scenes of bad environmentalism drawn from an 18-month ethnography with Extinction Rebellion UK, I show that the uncertain ground of academic-activism actually provides rare opportunities for developing careful, thoughtful and ultimately ambivalent practices of critique.

Work in Progress for Social and Cultural Geographies.

3.1 Intro

On a freezing cold day in Glasgow, I am stood with other activists gathered outside the Home Office. We're here for one of a number of climate protests taking place while the city hosts the United Nations Climate Change Conference (COP26). It's the first Extinction Rebellion protest I've attended as a researcher, and I am nervously attempting to recruit participants. A journalist overhears me talking about my research and asks if I could do an interview for the TV. "Being on TV is my worst fear" I laugh anxiously. An activist, who happens to be carrying a sign reading "war = extinction and despair", comments that shouldn't be my biggest fear.

At a community centre, I'm meeting a local Extinction Rebellion group for the first time. I am here to study how futures are imagined by climate activists as part of my PhD. Considering myself an activist-academic, I am aiming to situate myself within the field I'm hoping to study. As means of an introduction, we're asked to say why we have come today. I'm feeling anxious about meeting the requirements of my project's ethical approval, so I explain first that I'm here as a researcher, but I hasten to add that I'm *obviously* here because I care about the environment too, *of course*. The activist sitting next to me crossly explains that she's here because she's angry at the decisions other's make. If someone tells her they are buying something, she wants to scream at them, "no you don't need that!" Fast forward fifteenth minutes, the same woman compliments my shoes and asks if they're vegan. With her words ringing in my head, I have to tell her no.

As these two vignettes gesture at, entering 'the field' as an activist-academic brings with it various contradictions, and sometimes discomforts. Moreover, these opening passages also illuminate how in Extinction Rebellion events, a performance of 'the right' environmentalist is detectable. Even with the best of intentions, I always seem to be hopelessly getting it wrong. Feeling like I wasn't quite doing environmentalism 'right' extended beyond these reoccurring faux pas. I wasn't driven by the same existential fears and anxieties that motivated many environmentalists. I felt ambivalent about the activists, about climate crisis—about my research. It was this overwhelming

feeling of ambivalence that left me feeling guilty about my own environmental politics. In this article, I reflect on how this uncertain and hesitant feelings played out across my research with the social movement – Extinction Rebellion UK.

Entangled within this social movement, I found myself in an in-between space, never quite an activist, never only a researcher (Stephens & Bagelman, 2023). I was always faced by the dilemma of weighing my research interests against my affinities to the climate activists I knew. Many geographers have reflected upon their own entanglement within the communities they study (Derickson & Routledge, 2015; Ward, 2007), showing how ambiguity surrounding where activism ends and research begins can complicate critique (Pickerill & Chatterton, 2006). By reflecting on my own work, I have found the uncertain footing of scholar-activism can however provide an interesting position through which to develop careful forms of critical thinking.

Recently, debates in geography on critique have begun to explore the possibilities of developing ambivalent modes of enquiry – that is critique which spans multiple affective registers (Dekeyser et al., 2024; Linz & Secor, 2021; Ruez & Cockayne, 2021). However, scholar-activism remains largely missing from geographical debates surrounding affect and critique. Given the ambivalent nature of scholar-activism, an engagement between these two literatures feels overdue. Drawing together research on scholar-activism (Gillan & Pickerill, 2012; Joseph-Salisbury & Connelly, 2021; Routledge & Derickson, 2015; The Autonomous Geographies Collective, 2010) with debates elsewhere in geography on critique (Anderson, 2021; Gibson-Graham, 2008; Woodyer & Geoghegan, 2012), I show how scholar-activists can weave together multiple tones and styles of critical analysis. Extending debates which largely consider critique as a writing process, I consider how ambivalent critique was adopted and adapted across all stages of my research.

Embracing ambivalence is a difficult task for those involved in mainstream environmental politics. Environmentalism in the West is not known for its uncertainty or ambivalence, but rather for an unshakeable belief that climate change poses an existential threat to life on earth and that we are not doing enough to fix it. For the

environmental movement I researched, Extinction Rebellion UK, the clue was literally in the name. However, not all forms of environmentalism are quite so serious. Nicole Seymour (2018a) argues that environmentalism can be deeply unserious, and even ironic, absurd, perverse or ambivalent. These forms of environmentalism, Seymour argues, are "bad environmentalisms." They are 'improper' and 'inappropriate' attachments to and feelings about the environment, which offer alternatives to mainstream environmental thought. Building on Seymour's ideas, I consider my ambivalent but critical analysis of climate activism as a performance of bad environmentalism.

With the framework of bad environmentalism, I attempt to make sense of the multiplicity of emotions I felt as I navigated the uncertain ground of scholar-activism and the dilemma of critiquing activism I felt an affinity to. In section one, I connect existing geographical research on scholar-activism to literatures on affect and critique. I show that the uncertain positionality of the scholar-activist offers a unique position for academics to pursue ambivalent critiques. In section two, I briefly sketch out some of Seymour's main ideas about bad environmentalism, showing that ambivalent critique can offer a novel form of bad environmentalism. In section three, I offer three moments of reflection where I was struck by ambivalence and uncertainty in my research – in the ethnographic encounter, when designing my arts method, and when analysing and writing up my research materials. Each reflection does not seek to resolve ambivalence but rather sit with it, showing how bad environmental affects like ambiguity, ambivalence and uncertainty complicated my research encounters. Finally, to conclude, I argue that scholar-activism is uniquely placed to develop thoughtful and careful modes of critical enquiry.

3.2 The Place of Critique in Scholar-Activism

Am I researcher or an activist? Whether I'm casually chatting to somebody I've just met or giving a talk at a conference, it's a question I am often asked. Existing research within geography shows that there is no easy answer. The boundary between activism and research shifts constantly demanding "continual reflexivity about our roles and

positionality" (Gillan & Pickerill, 2012, p.137). When academics are embedded in the communities which they research, scholar-activism complicates the distinction between either position (Reynolds et al., 2018). Many scholars have illustrated that this positional uncertainty can reconfigure the hierarchical nature of the researcher-researched relationship. "This in-between positionality" as Stephens and Bagelman (2023) argue, "can be generative and mobilising, enabling movement and minor actions" (p.343). It is exactly this entanglement within activist movements, that for many scholars, presents an opportunity to reflect deeply on the power relations within research processes.

Often those working in activist geographies seek to advance the political cause of the social movements they study, by creating research which will contribute to the demands made by activists (Derickson & Routledge, 2015; Routledge & Derickson, 2015). Here, there is often an overlap with participatory action research, as scholars may work alongside activists to devise research projects that emerge from the concerns of the community (Chatterton et al., 2008). Prioritising the concerns of activists within research agendas can often be a tricky process. For many scholars it becomes:

> "a balance between the kinds of data and approaches to research that our collaborators desire to advance their projects and the theoretical and epistemological objectives that the academic literature push us toward" (Derickson & Routledge, 2015, p. 2).

Balancing your own critical instincts with the wishes of your participants may be more appealing for those who work with communities whose politics mostly align with their own. When academics work with activist groups whose values conflict with their personal beliefs, positional uncertainty can become particularly tricky, and especially so when researching groups who have high expectations of reciprocity but who may perpetuate logics which could led to the harm of others (see Creek, 2012; Gillan & Pickerill, 2012). The distinction between research and activism is blurred in ways distinctive to the political context the scholar-activist finds themselves in. The

positional uncertainty found in scholar-activism throws up a myriad of ethical and political concerns, with no easy solution for resolving ambivalences.

By muddying the neat boundary between researcher and researched, by attempting reciprocity and research, the ambivalent disposition of the scholar-activist complicates the style of critique usually adopted by social scientists. As others have warned, participation within and reciprocation with social movements can become particularly problematic when it "blurs the ability of academics to think critically about their subject" (Gillan & Pickerill, 2012, p. 137). How researchers position themselves in relation to activists, then has direct implications for the form critique takes within their work. The engaged scholar-activist, who is a familiar face at organisational meetings, who makes up the numbers at a scarcely attended protest on a Saturday morning, and who may even within their own research seek to amplify the political aims of the communities with which they work, seems at odds with the negative disposition that is so frequently adopted in critique. Described as "suspicious reading" (see Felski, 2015) or "paranoid inquiry" (Sedgwick, 2003), critique has a reputation for a tone which is overly negative, a style that invokes distance from the object of study, and a mode of enquiry which searches for hidden meanings lurking beneath the surface. Furthermore, embracing this overly distant and cool critical approach could become unethical if activists have been promised reciprocity and participation in exchange for access. Debates within and beyond geographies have sought to explore the implications of this negative approach and offer a range of other styles of critique (Anderson, 2021; Latour, 2015; Ruez & Cockayne, 2021; Woodyer & Geoghegan, 2012). However, such work is yet to explore how the role of the scholar-activist uniquely complicates critique. Similarly, those working on scholar-activism have been yet to fully consider these debates on critique when examining their own research practices (for an exception see Stephens and Bagelman, 2021). An engagement between these two literatures then feels overdue. Largely because the embedded nature of scholar-activism and its subsequent positional uncertainties and ambivalences make negative modes of critical thinking so particularly difficult. Faced with this dilemma then, what is a scholar-activist to do?

The remedy to this disjuncture between the realities of scholar-activism and the dominant moods of critique found across the social sciences could be a move to what is termed as affirmative or reparative critique (Gibson-Graham, 2008; Sedgwick, 2003). Central to reparative critique is the performativity of knowledge. Drawing on feminist epistemologies, proponents of affirmative critique argue that knowledge production is always performative – that is, how researchers think and feel about the world also assembles and creates the world too (Gibson-Graham, 2008). 'Strong theory', or what we might think of as negative/suspicious/paranoid critique, risks overdetermining the power relations which researchers' study. The result of which can be to reinforce existing dominance within the world, harming further those who are already marginalised (Woodyer and Geoghegan, 2012).

Seeking to challenge overdetermination through a reparative approach, Gibson-Graham proposes researchers perform a type of 'weak theory' and 'thick description' that invokes "readiness to explore rather than judge, giving what is nascent and not fully formed some room to move and grow" (Gibson-Graham, 2008, p. 620; see also Gibson-Graham, 2014). Often, essential to this affirmative mode of enquiry is an embrace of positive affects such as surprise and curiosity, rather than negative affects like suspicion and paranoia. Or as Woodyer and Geoghegan (2012, p. 192) explain, reparative thinking includes "an open, ready-to-be surprised 'disposition' before, in, with the world." Such an approach is already implicit in the work of activist-scholars who have sought to be more accountable and resourceful to the groups they study (for examples see Derickson & Routledge, 2015; Joseph-Salisbury & Connelly, 2021). Within this work, it is often through a reparative reading of activist agendas that researchers advance the causes of activist collaborators and marginalised communities. So, even while debates on affect and critique are largely missing from scholar-activist work, affirmative and reparative styles of thinking have often been adopted by researchers hoping to be more useful to their collaborators.

However, it is important that affirmative critiques do not simply become about swapping 'bad' feelings – such as paranoia or suspicion – for 'good' feelings – such as enthusiasm or curiosity (Ruez & Cockayne, 2021). Instead, affirmative approaches

should seek to multiple critical modes of enquiry because, as Sedgwick (2003:146) explains, “a disturbingly large amount of theory seems explicitly to undertake the proliferation of only one affect, or maybe two, of whatever kind.” For scholar-activists, this is important point to take forward in their work because an approach which abandons the negative wholesale could conceal the positional uncertainty felt by many researching activism. While an approach which wholeheartedly adopts negativity risks minimising the complexity of feeling and competing sensibilities which so often exist in activist-research encounters.

The scholar-activist, as someone who is always “working through an in-between, ambivalent register, between activist agendas and scholarly ambitions” (Stephens & Bagelman, 2023, p. 342), is well positioned to adopt what others have termed ‘ambivalent critique’ (see Ruez and Cockayne, 2021). Ambivalent critique is not limited to singular critical disposition but instead moves through both positive and negative affect (Ruez and Cockayne, 2021). In their theorisation of ambivalent critique, Ruez and Cockayne (2021) unsettle hierarchies of feeling which seek to privilege particular types of affect over others. In doing so, they show that critical thinking which foregrounds ambivalence is able to:

> “sit with ideas and concepts in ways that ignore neither the subjectivities of the researcher nor the plural and uneven world they seek to understand” (Ruez and Cockayne, 2021 p.102).

Those who weave together multiple modes of thought through ambivalent critique are then better equipped for grasping both the plurality and unevenness of difference within the world. As a figure of ‘in-betweenness’ (Stephens and Bagelman, 2021), the scholar-activist is uniquely placed to test these forms of critique which embrace uncertainty, complexity and ambivalence. By moving between positions, spaces and agendas, the critical practices of scholarly activism are always already bound to transversality. And, while debates on critique largely consider it a mode of enquiry found within writing practices, the engaged nature of scholar-activism reminds us that the processes of critique are never only confined to academic writing. Instead, the near

constant reflexivity necessitated by participation in and engagement with activism (see Gillan & Pickerill, 2012), demands also a near constant negotiation of various and competing critical moods across all stages of the research project.

Across the rest of this paper, I reflect upon my own feelings of ambivalence and how they inform an uncertain form of critical thought in my research with climate activists from the movement Extinction Rebellion UK. Following other feminist geographers (Gibson-Graham, 2008; Rose, 1997), I consider my critique as an embodied practice which shifts and alters throughout the research process. I explore therefore how critique was practiced and adapted when designing my research project, through the research encounters I had with activists and during a writing process which struggled to balance affinities with the social movement with the genres of critical writing typical to geographers. Before I do so, in the next section I consider what place – if any – ambivalence has in mainstream environmentalism and the consequences this has for adopting ambivalent and uncertain critiques of climate activism.

3.3 But can an environmentalist afford to be ambivalent?

Ambivalence or uncertainty are affects which are not characteristic of mainstream environmental thinking in the West. Quite the opposite, in fact. Environmental politics is renowned for feelings of seriousness and certainty – that is a seriousness about the existential threat climate change poses and a certainty borne from a wealth of scientific research which evidences this threat (Seymour, 2018). A declaration of support by Extinction Rebellion scientists illustrates this point clearly:

> "We declare that scientific evidence shows beyond any reasonable doubt that human-caused changes to the Earth's land, sea and air are severely threatening the habitability of our planet" (Scientists for Extinction Rebellion, 2020, p.1).

Such feelings are not exclusive to Extinction Rebellion. From the International Panel on Climate Change (IPCC) to the beloved British broadcaster David Attenborough, there

exists a certainty that all of us have a moral duty to act now to address climate change (see Verlie, 2024; Watts & Taylor, 2018). Alongside certainty and seriousness, there are whole host of affects which are typical to environmental politics in the West. The affective repertoire of western environmentalism, Nicole Seymour (2018:5) argues, includes "guilt, shame, didacticism, prescriptiveness, sentimentality, reverence, seriousness, sincerity, earnestness, sanctimony, self-righteousness, and wonder." As others researching the affective atmospheres and emotional registers of environmental politics show, there are many more emotions which can be added to this shopping list of environmental affect. For example, within the research on climate activism and affect, authors have explored how activists sustain hope even as they already believe it's too late to avert climate crisis. Through a reparative reading of negative emotions such as despair (Huber, 2022) or doom/gloom (Thaler, 2024), these authors illustrate how activists remain invested in radical hope against all odds (see also Cassegård and Thörn, 2018; Stuart, 2020; Robson, forthcoming). The belief that its already too late to prevent much of the harm climate change will cause means hope must be mediated through these negative but normative environmental feelings. This wealth of work on environmentalism and affect suggests that there are a range of normative emotions associated with environmental politics and climate activism. It suggests too that there are typical affective registers through which climate change and other environmental issues are normally thought and felt by those invested in environmental politics (see also Seymour, 2018).

Are there other less obvious affects and sensibilities through which environmentalism can work? Or are other affects such as ambivalence or ambiguity un-environmental? If so, what happens when an environmental researcher exudes such uncertainty? To answer these questions, I turn to the work of queer theorist Nicole Seymour. In *Bad Environmentalisms,* Seymour (2018) argues that there are affects, moods and sensibilities beyond those typical to mainstream environmental thinking. Seymour considers bad environmentalism, not as normatively bad but instead as:

"environmental thought that employs dissident, often-denigrated affects and sensibilities to reflect critically on both our current moment and mainstream environmental art, activism, and discourse" (Seymour, 2018:6).

Blending an interest in affect with queer theories, Seymour focuses on 'improper attachments' to and 'inappropriate feelings' about the environment. By examining various cultural works, Seymour argues that environmentalism can also work through feelings and sensibilities not usually associated with green politics - such as that of irony, absurdity, perversion, campness, and ambivalence. These alternative affects are what Seymour terms 'bad environmentalism.' By naming such affects and dispositions as 'bad', Seymour is not making a normative judgement about their value or usefulness for fighting environmental destruction, climate change or other issues environmentalists may be driven by. "They teach us something crucial" Seymour (2018:5-6) explains, "about what is intrinsic to environmentalism as most of us know it, and what environmental stewardship already is and entails" (p.5-6). Bad environmentalisms offer alternatives to mainstream environmental politics. Even if they are not necessarily "useful" ones.

Drawing on Seymour's theorisation of bad environmental affect, I consider my critique of environmental politics as shrouded in affects which are typical seen as inappropriate responses to climate crisis – uncertainty and ambivalence. I argue that when directed at environmental issues ambivalent critique works as a specific form of bad environmentalism. Like other forms of bad environmentalism, ambivalent critique is "premised on a refusal of purity politics— and, subsequently, on an embrace of contradiction, imperfection, and ambiguity" (Seymour 2018, p.232). Across the remainder of the paper, I consider how two forms of environmental ambivalence play out across three moments in my research project. The first form of ambivalence I explore is the ambivalence I felt as I navigated being both an environmental researcher and environmental activist. Following on from this first form of ambivalence, I also explore how I felt ambivalent too about what climate change actually is and how we should relate to it.

3.4 Bad Environmentalism in the Field

For 18 months, I immersed myself in one of the UK's most active environmental movements in recent years - Extinction Rebellion. Here, I used ethnography to document the tone and forms of the futures imagined by climate activists. I attended meetings, handed out flyers, marched at protests and helped with recruitment talks. My specific interest in Extinction Rebellion developed from my left leaning environmental politics. Many of the people I met through my research I would consider now as friends. My personal belief in the value of the social movement and my closeness to the activists made critical research difficult at times. In this next section I explore this difficulty, by sitting with bad environmental affect - such as ambiguity and uncertainty. Here, I navigate the changeable positionality of the scholar-activist, letting myself refuse the friend vs foe mentality found within much of environmental politics.

In April 2022, I stand in the middle of Hyde Park listening to two activists deliver 'Know Your Rights' training. By outlining our rights as protesters, the training is intended to prepare the group of activists I am with for a day of civil disobedience – forms of disruptive protest which intend to break the law (Berglund, 2023; Extinction Rebellion, 2019). The two activists are telling us that if a section 14 is issued by the police *do not tell other activists*. Section 14 of the Public Order Act (1986) allows police to place conditions on protests such as ordering crowds to disperse (Green & Black Cross, n.d.). We're told it's important that we do not tell others if we know a section 14 has been issued. Collectively we act out a role play to illustrate the point. The speakers are the police trying to inform us of a section 14. We're instructed to shout and whoop so that we drown out what the pretend police officer says. We're told that if we make enough noise, other activists won't know about the section 14 and so they can't *lawfully* be arrested. To find someone guilty of violating a section 14, it must be proven that activist knew or ought to have known that the condition was in place (see Green & Black Cross, n.d.).

As I listen to the two activists talk, I begin to feel conflicted. Mass arrest has been a significant part of Extinction Rebellion's strategy. At the time of writing, around 2000

have been prosecuted for their involvement in Extinction Rebellion actions.[5] Forms of civil disobedience which risk arrest and possibly prosecution are so important to Extinction Rebellion because they raise more awareness than other quieter forms of climate activism - such as signing petitions or writing to politicians – do.[6] I know that it says on my university risk assessment that I should leave immediately if a section 14 is imposed. The researcher in me knows I shouldn't stick around if I could be arrested. However, the activist in me thinks that sticking around and making noise is important because it could prevent others being arrested - or *lawfully* arrested at least. It would also allow the protest to continue if the police do try to shut it down. I feel pulled in different directions, uncertain about what is the correct thing to do.

Although, it's not primarily my risk assessment which stops me from taking part in actions where arrest is a significant threat. I feel the financial precarity that comes with being an early career researcher pretty sharply because of my working class roots. As I nervously listen to the speakers, I am acutely aware my arrest would have pretty catastrophic circumstances for me personally. Negotiating unequal power dynamics has long been a central focus of existing work on scholar-activism. However, it is often presumed the researcher is the one wielding the power, given that they have the resources to complete and carry out the research (Chatterton et al., 2008; Routledge & Derickson, 2015). As a working class person researching a mostly middle class movement, I often felt the opposite of powerful. I felt vulnerability and I felt marginalised. I didn't have the financial security that meant I could risk arrest in the ways some of the really dedicated activists were. I was often at protests where mass arrest was not only a possibility, but a tactic pursued by many activists. And I was frequently with activists who believed arrest was a necessary sacrifice for fighting climate change that not enough people made.

Environmental politics has long been criticized for its association with the middle classes (see Seymour, 2018) and Extinction Rebellion is no exception. Extinction

[5] See https://extinctionrebellion.uk/category/the-arrestees/ and also https://www.theguardian.com/environment/2019/oct/07/extinction-rebellion-arrestables-photo-essay
[6] See https://www.xryork.org.uk/blog/why-i-was-arrested/

Rebellion's strategy of mass arrest has faced criticism for advocating arrest in a way that does not appropriately recognise how class and race position us differently towards the impacts and effects of arrest (Gayle, 2019; Smoke, 2019). While Extinction Rebellion does note that "the decision to risk arrest or prosecution is a personal one and is of course affected by your social position" (Extinction Rebellion, 2019, p. 5), the march is routed today so that we will unlawfully block the road for many hours. In this moment it is my positionality and specifically my working-class-ness which stops me from performing reciprocity that many believe is at the core of scholar-activism (for further discussion on reciprocity see Gillan & Pickerill, 2012). I was not in the position where I could put everything on the line for the climate – so, I asked myself, was I really doing enough?

I begin to feel worried for others too. I'm conscious that for the activist next to me it's her first time at an Extinction Rebellion action so I ask if arrest is a possibility for her. Looking incredibly worried, she turns to me. I can't be arrested, she explains, because I'll lose my job. At this moment, the two speakers ask us to get into groups and practice a key method of Extinction Rebellion's - 'going floppy.' If arrested were advised to purposefully go limp because a number of officers will be needed to carry us away rather than one. My attention returns to the activist I am talking to, and I offer to share some advice around how to avoid arrest. Another activist overhears our conversation and asks me to share my experiences with our group. I talk about my risk assessment and share from it some of the actions I take to avoid arrest: standing on the pavement rather than the road, moving away from the area when there's an increased police presence, making sure I am not carrying any arrestable items e.g. spray paints, markers, glue etc. I also stress to the others that just because we follow the law it doesn't mean that the police will.

It feels counterintuitive to why we're here today, but I feel concerned for those who might face disproportionate harm if arrested. Whenever I attend an Extinction Rebellion action, the researcher in me cannot help but feel a creeping critical suspicion, as I wonder and worry about the unevenness of power within the room. I want to be sure that we remain aware that various privileges protect some more than

others when it comes to arrest. So, I continually ask myself, how much should I intervene to prevent harm? Shouldn't the researcher observe, not intervene? Will it be detrimental to the movement or even my research if I do? I know that the neutral and detached researcher is a fiction (see Rose, 1993; Rose, 1997), but I don't want to become too involved or disruptive. As I don't exude the usual sensibility that environmentalists are known for (Seymour, 2018), I am cautious that I might seem unserious about the scale of the climate crisis or what would need to be done to avoid planetary extinction. I worry too that I am undercutting the effectiveness of the actions with my apprehension about arrest. I'm worried I appear as pretty bad at environmentalism.

Bad environmentalisms often sit with "the unclear, unexpected, or "useless" feelings— the ambiguity, the ambivalence, the emotional stagnation — that crises like climate change trigger" (2018 p.72). Such ambiguous and ambivalent feelings reject what Seymour refers to as environmental politics' "us-versus-them dynamic." It is a dynamic which polarises the climate debate into two opposing camps, where any questioning of environmental thinking equates to climate delay, or worse denial (Akómoláfé, 2019). My contradictory feelings surrounding arrest refuses this binarized logic. I share with the activists a desire for meaningful climate action. I appreciate how willing these activists are to fight for that climate action. But I am worried for myself and for the other activists. And above all, I feel vulnerability because of my working-class-ness. As I navigate positional uncertainty, I feel a constant movement back and forth between researcher and activist (Stephens and Bagelman, 2021). It's an ambivalent approach which is jarring to the certainty which underpins Extinction Rebellion's belief that we have to act now, and urgently otherwise we all might die (see Robson forthcoming). In the face of an issue as a pressing as climate crisis, unlike most climate activists, I am ambivalent about how and when I should act, even though I know I should act. These feelings of ambivalence were near constant across the whole of my ethnographic field work. When participating in protests I reminded myself and others that there are other ways to do environmental activism that do not require enough financial security to face down the courts. And that environmentalism didn't have to entail a sacrifice as huge as losing your personal liberties. While collecting my research, I allow myself to be pulled

in different directions by my role as activist and researcher and to unashamedly sit with my working-class-ness. I remain in the 'in-between' (Stephens and Bagelman, 2021) which undercuts the foe vs friend mentality typical to climate activism. An in-between which makes me a bad environmentalist – at least, by some climate activists' standards.

3.5 Designing a Method for Multiple Futures or What Exactly is Climate Change?

Alongside an ethnography which sought to document public performances of futures, I also led 20 arts interviews in which activists made an artwork of their imagined futures. In this next section, I reflect upon creating a methodology that sought to leave room for the ontological complexity of climate crisis. By ontological complexity, I mean the many meanings, affects, temporalities and sensibilities which constitute the climate change (see Bulkeley, 2019; Huysmans, 2023). By staying with multiplicity, I explore how my research methodology became infused by a second form of ambivalence – an ambivalence which sought to hold together both my relations and the activists' relations to the climate's future.

It is particularly challenging to research futures because "as a not-yet temporality, the future is slippery, ill defined, constantly moving and, hence, intangible" (Coleman, 2017, p. 525). I chose to use creative methods then because of their ability to engage with intangibility, to sit with hard to articulate feelings and attune to affective atmospheres and sensations (Hawkins, 2015; Robson, 2024). When designing my arts method, I was aware that recent work in geography had emphasised how knowledge production – including research methodologies – are largely shaped by Euro-American frameworks (Radcliffe, 2017). I tried then to think carefully about how my interview method may encourage and legitimise certain relations futures whilst discourages or foreclosing others. In designing this method, I sought to leave space for a myriad of ways in which climate futures are made and remade, and especially for those temporalities which are less dominant and more marginal within mainstream discussions of climate change. I tried to design a method which could hold in tension a

range of affects, sensibilities, and dispositions about climate futures, spanning from the normative and dominant to the more irregular and marginal.

With this in mind, I structured my arts interview with four steps that sought to bring each activist closer to a completed artwork. Every interview followed the same format: firstly, participants were to bring an object that symbolised how they felt about the climate's future or why they were compelled to be an activist; secondly, they were shown a range of exhibitions which each dealt differently with the relationship between the environment and the future; thirdly, they were given a range of creative materials (paints, crayons, pencils, etc) and ask a series of questions to which they could creatively respond; fourthly, they were offered collaging materials that related to the discourses of climate crisis (e.g. headlines, tweets, Facebook comments). Every phase of the interview was designed so that participants with no experience or expertise in arts practice would be able to take part. Organising the interview in a structured manner was necessary as it added consistency to the research process and helped participants with less creative experience.

Each phase of the interview had the unintended effect of placing particular limits on how activists imagined futures. It was important to show exhibitions at the start of the interview because they acted as creative prompts that might inspire participants to think creatively about the climate. However, when deciding which exhibitions to show my participants, I was aware that each artwork would legitimise certain futures while foreclosing other relations to the future (see Baldwin, 2016). So, I tried to think carefully about how I could "place diverse knowledges on a horizontal relation, bringing knowledges from different settings into juxtaposition with each other" (Radcliffe, 2017, p.330). In the end, I chose three exhibitions that each had very different relations towards time and the environment: "*Highway Gothic*" (2017) – Ellen Gallagher and Edgar Cleijne, "*Everywhen: The Eternal Present in Indigenous Art from Australia*" (2016) – Havard Art Museum, and "*It Is Not the End Of The World*" (2019) – Superflex. Spanning Afrofuturist thinking, Aboriginal Dreamings and a western post-apocalyptic vision of climate change, these exhibitions each dealt with the relation between past, present and future in different ways. I included work on temporalities

from Black feminism and Indigenous thinking in my research design so that western notions of time would not appear as the only temporalities through which climate change works. Inspired by geographical research on racialisation, decolonialisation and climate change (Baldwin & Erickson, 2020; Davis & Todd, 2017; Yusoff, 2018), I intended for these exhibitions to situate western notions of climate crisis as a particular type of imaginary within the many that make climate change.

My attempts to situate this narrative of climate crisis as one particular form of futurity signalled once again the presence of bad environmental affect – or rather, my feelings of uncertainty. I had a creeping feeling of suspicion about a belief prevalent in western environmental politics: the belief that we should care for the environment because if we didn't, we would lose *our only future*. I was concerned by the uneven impacts of climate crisis and a lack of appropriate action from politicians, I wasn't driven by the idea we would lose our future. I understood the urgency that many activists felt climate change presented but I was keen to not flatten difference or plurality found in the climate's countless meanings and timelines (see Kumar, 2023; Bulkeley, 2019). I believed and do believe the science which shows that the climate is getting hotter, that the seas are rising, and that weather is ever more volatile. But I am wary of how by projecting western fears and anxieties into the future, these scientific imaginaries may legitimise dominant understandings of climate change (see Rickards et al., 2014). I am also cautious how the performance of these imaginaries might project forward unequal power relations too – power relations that are rooted in racial capitalism and the legacies of colonialism (Erickson, 2020). Following Bulkeley (2019), Akómoláfé (2019) Campbell et al., (2019) and others, instead I understood climate change as unfathomable issue which resisted clear demarcation, shifting and changing through our many attempts to capture it. The methodology was therefore guided by a desire to make space for a multiplicity of relations to both climate change and climate futures, including through both normative and nonnormative affects.

Figure one: Lauren's artwork

No matter how strong my own beliefs about climate change were, I was ultimately interested in how the activists' imagined the climate's future. So, my desire to undermine the dominance of western narratives in my method design was not intended to prevent activists from articulating western visions of the future if they wished to. I simply recognised that it was important to recognise – and hopefully challenge - how I may reinforce the centrality western ways of knowing my methods design (Radcliffe, 2017). Subsequently, my arts interview did not prevent western imaginaries and their associated normative environmental affects from becoming central across my participants' paintings.

Many of my interviewees were mainly motivated by the idea that it was the children of tomorrow whose future was at stake (see Edelman, 2004). Such participants often spoke at length about their own children's futures and made these futures central within their artworks. Lauren, for example, chose to bring along a photograph of her

two children, onto which she painted a rising sea. The waters climb past the mouths of the two children, the sun beats down from above, floating in the waves are the words "your children deserve a habitable planet" and "it's time to act", (see figure one). The artwork evokes a largely normative fear surrounding accelerating climate change – the belief that if we don't act now, we risk losing the future of the next generation (Robson, forthcoming; Seymour, 2013). Another participant, Chloe expressed a similar sentiment:

> "you know, sometimes my friends have had children and I'm like, I kind of don't want to see them because I feel like I might cry if I hold them. And like, people don't really understand why"

As these two activists show, even with a method attuned to multiplicity and difference, it still remained possible for activists to express more normative beliefs and feelings surrounding climate crisis. My method then retained an ambivalent sense of climate change and its associated futures. It held in tension both normative temporalities of climate crisis and my scepticism about such imaginaries.

Even though my method elicited extremely dominant narratives of climate crisis and normative environmental affects at times, I propose that it was still a methodology that made space for bad environmental affect. Through its attunement to multiplicity, my methodology resisted what Seymour (2018) understands as the tendency of academics to "reproduce the same dominant affects and sensibilities found in mainstream environmentalism" (p.7). I didn't harbour the same fears about how climate change would impact the next generation, but rather an ambiguous sense that climate imaginaries could consolidate the harms that climate change was already causing. Therefore, rather than reproduce the affects and sensibilities that are common to western environmental movements like Extinction Rebellion, my method held onto the multiplicity of climate change. It held on to my own feelings of contradiction and ambivalence. Even if dominant affects won out most of the time, this method still held together both my uncertainty about narratives of climate crisis and the activists many relations to the future.

I suggest then that by making space of a multiplicity of meaning, which spanned both normative and nonnormative, dominant and marginal knowledges, this method was capable of holding in tension the ambivalence surrounding both mine and my participants beliefs about climate change. It was a method that traversed mainstream environmental feelings and other alternative, improper or inappropriate affects. Even if the dominance of normative, western environmental feelings did suffocate the potentiality for other more marginal environmental affect.

3.6 How do you critique activists?

Across the previous two sections of this paper, I have sought to show that two forms of ambivalent feeling circulated within my research project. The first type of ambivalence plays out through intervention in my ethnographic method and relates to my uncertain positionality as a researcher and activist. Following this, I have illustrated that a second form of ambivalent feeling emerged in my methods design – an ambivalence surrounding mine and my participants differing relations to climate change. In this last section, I reflect on how these two forms of bad environmental feeling lingered in my writing process, leading to a juggling act of various affects, sensibilities, dispositions and loyalties.

As I was writing I often asked myself, how could I critique activists who were fighting for climate justice? When thinking through this question, I often felt a sense of guilt and anxiety. Two affects, that Seymour (2018) reminds us, are typical for an environmentalist. As I suspiciously scanned for power relations lurking beneath the surface of my participants imaginaries, I often felt guilty about it. Seymour (2018) argues that “environmentalism tends to lack self- awareness and self- reflexivity” (p.13). Maybe my unease then was down to the fact that, as an environmentalist, it seems almost inappropriate to question the logics of environmentalism. I felt uncomfortable to be super critical of these activists – who when it comes down to it were personally sacrificing so much to make the world a better place. Truthfully, I felt jealous of peers who chose much easier targets to land their critique on. I felt certain it must be more

straightforward to critique something that was distant and abstract like a dodgy governmental policy, a corrupt corporation or the actions of powerful politicians. In *The Limits of Critique*, Felski (2015) argues that negative critique often works through "an attitude of vigilance, detachment, and wariness (suspicion)" (p.3). While I was certainly vigilant and wary in my analysis, my mode of enquiry missed one key ingredient – detachment. It was impossible to detach myself from the activists I spent so much time with. How was I meant to critique a movement I had been part of? Maybe I was the type of environmentalist who lacked appropriate self-awareness, but how do you critique people you would consider friends? In order to navigate these complex feelings, I thought carefully about the tone, style and target of my critique. I decided that by applying affirmative and suspicious modes of enquiry selectively to my research materials, I could retain my loyalty to the activists without ignoring how power unevenly circulated within imaginaries of the future.

When writing my first paper on Extinction Rebellion activism, I leant into my critical instincts and subsequently stressed my concerns surrounding normative/western articulations of climate crisis. Starting from a position which recognised climate change as a multiplicity of meaning, I focused upon how the logics of heteronormativity, whiteness and class circulated within climate futures (see Robson, forthcoming). In style and tone, my critique did tend to be mostly suspicious and wary – but importantly, this depended on the object of critique. Like others who are critical of existential anxieties (Huysmans, 2023), I chose to critique a dominant mechanism through which environmentalists imagine futures. The object of my critique was not Extinction Rebellion itself, but rather what I term 'the extinction script' – the belief that we must act now, do so urgently, or all die of extinction. Here, I zoomed in upon the existential anxieties and their associated affects, showing how they animate western environmental politics. Carefully, I tried to avoid acting critical of the activists themselves - who after all were tirelessly fighting for meaningful climate action. This cautious finetuning of a suspicious mode of enquiry entailed strategic decisions about the inclusion of research materials. So, to better facilitate a move away from critiquing the activists as individuals, I concentrated on the public performances of Extinction Rebellion activism. The research materials which I analysed then were fieldnotes and

photographs from my ethnographic research on Extinction Rebellion talks, meetings and protests. By drawing from public displays of activism, I hoped to apply more suspicious tones of thinking towards futures which were much broader, less personal and which I felt more detachment from. At all times, I was trying my best to juggle my own concerns about heteronormativity, whiteness and class alongside a strong affinity to the activists within the movement.

This paper differs from how others have typically written about climate movements in the social sciences. This existing work has largely adopted an affirmative lens towards post-apocalyptic activisms (see Cassegård & Thörn, 2018; Thaler, 2024). Many of these articles argue that within the belief that the climate apocalypse has already begun there still lies the potentiality of radical forms of politics (Friberg, 2022). However, as Ruez and Cockayne (2021) warn, overly affirmative approaches run the risk of overlooking the ways in which affect circulates unevenly. Even when academics have the best of intentions, overly affirmative approaches can consolidate unequal power relations because, as Eng (2016) argues, reparation "constitutes and separates good objects deserving of care and redress from bad objects meriting no consideration" (p.15). It isn't only my research which is wary about how uneven power relations underpin normative environmental fears about humanity's extinction. Other critiques of postapocalyptic thinking illustrate what lies at risk in a rush to affirm activist imaginaries. Mitchell and Chaudhury (2020), for example, dispute universal claims to the world's end, arguing instead that "these 'end of the world' discourses are more specifically concerned about protecting the future of whiteness" (p.310). A mode of critical thinking which overly affirmed the activists' imaginations of (post)apocalypse, risk also affirming their reliance on whiteness and heteronormativity too. Instead, by holding onto a critical wariness and paranoid vigilance, I was able in my subsequent writing to dabble in intentional and selective affirmation of imaginaries that undercut these problematic power relations.

By moving away from an overly negative mode of analysis in a subsequent piece of writing, I felt able to focus on the futures expressed in the arts interview. I didn't want to launch into a critical mode that would wholly dismiss all of the futures which

motivated the activists. This approach felt unethical. It could abuse the participant's trust and could even disillusion activists who already felt so exhausted from fighting inaction on climate crisis. The artworks were often deeply personal and articulated with a great deal of trust from my participants, so I needed to think carefully about how they could be included in my writing. Throughout writing this article, I continually asked myself: what are these activists getting right? If existential anxieties around planetary extinction reinforce whiteness and heteronormativity, then which articulations of the future unsettle these dominant power relations? How else do activists imagine the future in ways other than (post)apocalyptic fantasies of extinction? By thinking through these questions, I sought to challenge the ways in which existential anxieties may already be overdetermined in my writing (see Gibson-Graham, 2008, 2014).

I did so by looking for how my participants themselves challenged the typical post-apocalyptic narratives of climate crisis. This intentional search for disruption and refusal had an unexpected effect. It made bad environmentalists out of my research participants too. The critical disposition of the first paper may have emphasised and even possibly overdetermined the normative tendencies of western environmentalism. However, the second paper evoked the ways in which activists had too fostered ambivalent and contradictory feelings, exposing them as bad environmentalists also. It was selective and intentional application of suspicion and reparation across various research materials which drew out how this mainstream environmental movement performed bad environmentalism too. Maybe my conscience needn't have been so guilty. After all, these activists too had felt uncertainty, ambiguity and ambivalence – all of which could be considered as bad environmental affect.

Staying with ambivalence and uncertainty in my writing wasn't intended to be a zero-sum game where my positive critiques balanced out my more negative ones. Instead, my ambivalent approach wove together multiple forms of critical thought and juggled different dispositions towards various research materials. Linz and Secor (2021) warn that "accepting the offer of ambivalence may be quite uncomfortable, an invitation to the underside of our affective attachments that we would rather not know about"

(p.110). My writing was an uncomfortable and confusing process. It dug into the messy 'in-betweenness' of being a scholar-activism, including bad or shameful environmental affect such as my own ambivalent, ambiguous, and uncertain feelings about climate change. Writing through a single tone of critique may have made the process much easier and my conscience less guilty, it would have however glossed over the shifting and confusing nature of scholar-activist research.

3.7 Conclusion

This article has grappled with the messiness of scholar-activism. Sitting with uncertainty, ambivalence, ambiguity, and indecision, I have sought to make sense of the discomfort I felt when developing critical research about climate activism. Uncertain feelings such as ambiguity and ambivalence are largely missing from the affective repertoire of western environmentalists. Who, after all, are known for an unshakeable belief that the end is nigh. Encouraged by Seymour's (2018) articulation of bad environmental affect, I have embraced moments of hesitation within my research with the climate movement Extinction Rebellion UK. In doing so, I have developed ambivalent critique as a particular performance of bad environmentalism.

Reflecting on moments imbued with uncertainty, I have developed critique into a process which extends well beyond the parameters of writing. In this paper, critique is woven into my ambiguous disposition towards my research, and as such shapes and alters research design, research encounters and ultimately complicates the practice of writing. In particular, I have traced two forms of ambivalent feeling across three different moments within my research. Firstly, I have considered the ambivalence which arises from the unique positionality of academic *and* activist. And, secondly, I have examined the ambivalence which arises within multiple attachments and dis-attachments to the climate's many futures. By following these two forms of ambivalence through my ethnography, my methodology design and in my writing practices, I have reflected upon mine and other activists' performances of bad environmental affect.

Through focusing on ambivalent critique as a specific performance of bad environmentalism, I have also contributed to a growing body of work on climate change and affect (Baldwin, 2016; Ranjan, 2024; Tschakert et al., 2023; Verlie, 2024). While this work has tended to explore normative feelings about climate change (such as hope, fear, despair, grief), I have stuck with the types of feelings not usually associated with environmentalism. In doing so, I have situated this paper within a much smaller body of work which explores nonnormative environmental affects (Bosworth, 2022; Seymour, 2018a, 2018b). Through such an approach, this paper navigates the typical expectations that those who research environmental politics face.

Literatures on scholar-activism (Bagelman & Bagelman, 2016; Keeler et al., 2022; MacKinnon & Derickson, 2012) and geographical debates on critique (Dekeyser et al., 2021; Linz & Secor, 2021; Ruez & Cockayne, 2021) have both recently grappled with the ambivalent nature of research, however these debates remain largely separate (for an exception see Stephens and Bagelman, 2021). This paper has brought these two sets of literature into conversation with one another, showing that academic-activism raises a unique set of problems for practicalities of critique. Entangled within the movement they're studying, academic-activists have to juggle affinities with and sympathies for social movements with their training as critical researchers. Reflecting upon how I dealt with this impossible dilemma, I have shown that the uncertain footing of academic-activism is actually well suited for the development of careful and thoughtful critique. Scholar-activism questions the implications of tried and tested modes of enquiry, showing that a more ethical approach may lie in the weaving of multiple modes of critical thought.

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Four

Before it's too late: The Extinction Script, Multi-Species Reproductive Futurism and Extinction Rebellion

Abstract

Whether seen in an advert by the UN, in the pages of academic journals, or uttered in the chants of activists on the streets, climate crisis is made and remade through competing claims about the future. Within the Western environmental movement such claims often take the form of calls to forestall looming planetary extinction. The belief that we have to act now to avoid a future lost to knowingly self-inflicted extinction operates through what I term 'the extinction script'. As a technology of power that regulates climate crisis futurity, the extinction script implores the already threatened subject to act now and to do so urgently. Drawing from an ethnographic fieldwork with Extinction Rebellion UK that spanned across 18 months, this paper traces and analyses the presence of the extinction script across public performances of activism. By exploring how collective climate futures are scripted by activists, this paper offers a novel approach for understanding how individuals imagine collective futures.

Revised for Transactions of the Institute of British Geographers.

4.1 Introduction

On the streets of Westminster, "UNITE TO SURVIVE" reads a banner suspended from the mainstage at a protest organised by Extinction Rebellion and other climate organisations. Underneath the banner, a speaker faces a packed crowd punctured by signs carrying urgent pleas. "Before it's too late" leaps out from one placard. "Stop killing us" is sprawled across another. These claims are united by a demand to act now and to do so urgently. The speaker – a self-proclaimed ecologist and activist – illustrates how impending multi-species extinction animates the urgency behind such claims:

> "my heart bursts with love and a desire to protect my two nieces … from the unliveable future that this failing government is driving them towards. My heart breaks yet burns with commitment and dedication for every non-human species we are dragging with us down this ecocidal path. My heart bursts with gratitude and pride for every single one of you here today – stepping up and speaking out. But it's not enough. We must stay."

For Extinction Rebellion activists, we are living through the sixth mass extinction. Another placard, "64% fewer flying insects since 2004 in the UK", shows a stretching of crisis from the future into the present, intensifying the feeling that time is running out. The climate and ecological crises exist not only as potential catastrophic but as present emergency (Cassegård and Thörn, 2018).

The belief that we must act now and do so urgently to avoid planetary extinction is found throughout Extinction Rebellion. It is what I term 'the extinction script' – a technology of power that regulates climate crisis, producing particular subjects, futures and relations. As one type of climate script amongst many, the extinction script orders and simplifies the affective complexity of the climate crisis and its associated futures. It does so by regulating the future (as out there ahead of us), our relation to it (as reaching towards that future), and our identities (as future making). In making this argument, I develop Edelman's (2004) concept of reproductive futurism. Reproductive futurism

names the desire for a better future for the next generation as the rhetoric through which the limits of politics are drawn. Here, meaning is given to the future through the imaginary figure of the Child - those children of tomorrow for who we must make sacrifices in the present. This paper argues that Extinction Rebellion's use of the extinction script complicates reproductive futurism through their concern for a shared planet. The result is a form of multi-species reproductive futurism that demarcates the human from the animal by conceptualising the future as white, middle class and straight.

For over a decade, geographers have made important and influential contributions to research on the future (Anderson, 2010; Oels, 2013; Rickards et al., 2014). One area in which future geographies has been particularly impactful is geographical understandings of climate change, where scholars have shown that unruly climate futures are governed through techniques of anticipation and experimentation by liberal governments (Edwards and Bulkeley, 2018; Baldwin, 2022). There has been however considerably less work on how individuals imagine, experience, resist and relate to futures, including climate changed futures (Jeffery and Dyson, 2021). By exploring how activists perform collective futures through scripts, this paper responds to repeated calls for further geographical research on the futures imagined by actors other than institutions (Anderson, 2010; Cox, 2024). It does by drawing from the work of queer theorists concerned with the relationship between temporality and heteronormativity (Halberstam, 2005; Muñoz, 2019; Davis, 2015). Building on this work, I illustrate how straightness informs the future imaginaries found within western environmental activism. Through an emphasis on sexual politics, I contribute to a still emerging set of debates in which cultural geographers examine the political narratives surrounding climate change – including work which focuses on the geographies of extinction (see Symons and Garlick, 2020; Searle, 2020; Collard and Dempsey, 2022).

To do so, I draw from ethnographic fieldwork to explore how the extinction script is made present across public performances of Extinction Rebellion activism. First, I explore geographical work on institutional climate governance and the calls by geographers for further research focusing on how other actors imagine futures. I then

name scripts as an alternative means through which activists articulate climate futures. Second, I outline how my ethnographic method stayed with claims about the future in Extinction Rebellion. Third, I situate Extinction Rebellion within the broader environmental movement, highlighting the presence of the extinction script elsewhere and illustrating how Extinction Rebellion's use of it is distinctive. Fourth, I explore the processes of multi-species reproductive futurism by outlining the presence and effects of the extinction script across three sites of futurity. Finally, to conclude I argue that climate scripts offer a novel means for geographers to explore how individuals perform and imagine climate futures.

4.2 Climate futures and geography

In geography, work which considers how climate futures are imagined has typically focused on how institutions shape the future. Leading the way for this governance approach, Anderson (2010) illustrates how the state attempts to forestall unruly futures which lay waiting to disrupt the present through what he terms as 'anticipatory action.' A wealth of geographical work now considers the presence and effects of anticipatory action. For example, Rickards et al., (2014) considers how climate adaption efforts such as anticipatory scenario planning "exposes, critiques, replicates, and amplifies our existing orientations to the future" (p.588). Elsewhere, through their notion of 'anticipatory ruination', Paprocki (2019) illustrates how climate adaption limits futures, arguing that adaption is "a discursive and material process of social and ecological destruction in anticipation of real or perceived threats" (p.296). Often through a Foucauldian approach which emphasises the relationship between knowledge and power, this research illustrates that by performing potential futures, anticipatory action forecloses a range of climate futures which would disrupt liberal democracies (for other examples see Baldwin, 2022; Oels, 2013).

More recently, those working on climate governance in geography have turned their attention to a new set of logics and practices for governing the future – that is climate experimentation (Bulkeley, 2023; Liu & Lo, 2021). Again, this research largely takes a Foucauldian approach to explore how the climate's future is rendered governable, but

here the processes of experimentation rather than anticipation are the focus. Edwards and Bulkeley (2018) argue that while anticipatory action performs a hypothetical future, “experimentation works in a subtly different fashion, because it seeks to demonstrate the presumed or hoped-for future” (p.357). Exploring this point, Wakefield (2020) shows how nature is enrolled into experimental modes of governance. Focused on the New York State’s Living Breakwaters project, Wakefield (2020) argues oysters are reimagined as “a critical infrastructure to govern storm surge, rising seas, and flooding along New York City’s coasts” (p.762). Through climate experimentation desired futures are tentatively demonstrated in hopes that they may make more societies resilient to the forthcoming perils of climate change (for further examples see Caprotti & Cowley, 2017; Evans, 2016). While anticipatory action uses techniques of government to calculate and foreclose futures which may risk the stability of liberal democracies (Anderson, 2010), climate experimentation “embraces the period of uncertainty and uses it as an opportunity to test out new management approaches” (Wakefield, 2021, p. 333). Although different in how they configure the future, research on anticipatory action and climate experimentation share a common interest in exploring how institutions deploy various techniques to foreclose unruly climate futures.

This existing research in geography has made important contributions to the theorisation of climate futures, particularly in demonstrating the close relationship between institutional governance and the future. Cox (2024) argues that there are “many ways that climate futures are being (re)made now—by multiple actors, toward multiple ends, and through multiple means” (p.2), reminding us that the future is made by actors other than institutions and through practices other than anticipatory action and climate experimentation. Pointing to the absence of geographical work exploring futures other than those calculated by institutions, Jeffrey and Dyson (2021) explain:

> “Analysis of this ‘anticipatory politics’ has been revelatory, but it also raises the question of how others, including those marginalised by the dominant, imagine, invest in, and defend visions of the future” (p.653).

They echo an earlier call by Anderson (2010) for research on "how futures are made present by anticipating other desired futures through a range of utopic sensibilities, skills and techniques." (p.793). Despite these repeated calls for a diversification of geographical research on futures, by and large there remains a lack of work on how individuals perform futures. Where geographical research does exist on counter-futures, it focuses on how hoped-for futures are prefigured through activism (Chatterton & Pickerill, 2010; Dyson & Jeffrey, 2018). Given the relatively small number of articles in this area of geographical research, how climate futures are articulated by non-institutional actors remains yet to be fully explored by geographers (for exceptions see Anderson, 2023; Fash et al., 2023). Consequently, a geographies of climate change focused on the processes of institutional power has then overlooked the myriad of futures which are made by other actors.

Pushing for further research which explores these counter climate temporalities, Cox (2024) presses cultural geographers to consider how the present may "establish collective feelings that there is no future, only certain kinds of futures, or perhaps more desirable and urgently needed futures in a given place" (p.3). I respond to such a provocation by examining how the climate's future is made and remade by activists hoping to mobilise the broader public to fight climate change. If institutions like the state mould the future through strategies of anticipation and experimentation – that is by performing potential futures or demonstrating hoped-for futures, what other ways do individuals shape collective feelings related to the future? Rather than redeploying the logics of anticipatory action or climate experimentation, I claim that activists imagine futures through climate scripts. In particular, I argue that climate activists imagine the future through what I've termed the extinction script – the belief we must act now, do so urgently or we will die. In the following section, I outline the central features of the extinction script, showing how scripts are used by individuals to navigate the affective complexities of climate change.

4.3 Scripting futures

If anticipatory action performs potential futures (Anderson, 2010) and climate experimentation demonstrates hoped-for futures (Edwards and Bulkeley, 2018), I argue that the extinction script asserts a threatened future and instructs others to act now, urgently. By using scripts, activists articulate a future with the intended purpose of mobilising others. In this section I define my use of climate scripts by outlining their theoretical underpinnings and key features. Rather than drawing from a Foucauldian approach familiar to geographical research on governance, I do so by reading against the grain of psychologist Silvan S. Tomkins' work.[7]

Climate scripts – of which the extinction script is one – mediate between action and discourse within pre-defined parameters. Twisting and altering with each reiteration, climate scripts regulate affect and order a climate changed world, even as they remain incomplete. They are patterns of thought and practice that emerge in the making of the climate's future. By focusing on the ability of the extinction script to regulate affect across many temporalities and spatialities, I borrow Tomkins' (1995) script theory to make these claims. First conceived as a theory of personality, script theory conceives life as a sequence of scenes ordered through scripts. For Tomkins (1995), scenes are "a happening with a perceived beginning and end" (p.320). They involve stimulus that elicit particular affects and responses. Through scripts individuals order scenes across numerous temporalities:

[7] Despite the prominence of affect within our discipline, geographers are yet to engage with Tomkins' work in any depth. Perhaps because Tomkins' (1995) work naturalises nine affects and some scripts as innate to human nature; a claim which, as Sedgewick and Frank (2003) point out, could be easily dismissed as biological essentialism. By following Sedgewick and Frank's (2003) 'reparative' interest in Tomkins' and resisting the temptation to dismiss his work outright, my reading practice allows for a weaving of multiple forms of critical thought. I still recognise the limits of Tomkins' claims even as I dissect his notions of scripting from their broader context and move them elsewhere for entirely different purposes. So, rather than a theory of personality "built upon a particular theory of the innately endowed nature of the human being" (Tomkins, 1995, p.313), here scripts become a mechanism for grasping the fluidity of meaning within climate imaginaries.

"scenes experienced before can be co-assembled with scenes presently experienced, together with scenes which are anticipated in the future" (Tomkins, 1995, p.318).

Held within script theory are lines of flight waiting to scramble the linearity of time and the coherence of space. They underly the taxonomy of scripts (nuclear scripts, ideological scripts, innate scripts, etc) found across Tomkins' writing. Rather than designate the extinction script as one type of script, I undo and remake some of their more general features into four properties of the extinction script below:

Firstly, the extinction script regulates our interpretations of, and responses to, climate crisis. As "rules for predicting, interpreting, responding to, and controlling a magnified set of scenes" (Tomkins, 1995, p.320), numerous scenes are scripted through co-assemblage. Building upon the notion that scripts offer a way of knowing and responding to experiences that exceed the script itself, I argue that the extinction script offers pre-defined parameters for ordering and simplifying the complexity of climate crisis. By positioning extinction as pressing and urgent issue, the extinction script regulates an array of potential climate futures and structures how we know and respond to climate crisis.

Secondly, the extinction script governs affect. Through magnification and amplification scripts regulate both affect and response, as Tomkins (1995) explains, "meaning and impact of one affect-laden scene enriched and magnified by co-assembling and relating it to another affect-laden scene" (p.318). I abstract the notion that scripts make sense of affective experience through rules of interpretation from Tomkins' broader theory of affect. Reshaping this point for a new purpose, I argue that the extinction script orders the *affective complexity* of the climate crisis within pre-determined parameters for action. As a means for knowing the threat of climate change, the extinction script tells us to act now or die of extinction.

Thirdly, the extinction script ties together different temporalities and spatialities. As they move across time and space, for Tomkins (1995), scripts are then never fully

complete. Affective experience impacts the incomplete nature of the script, creating a co-constitutive relation between scripts and affects. By magnifying affective experiences scripts show,

> "the present is vitally connected to much of our past life and to our future and that we must attend with urgency to continually act in such a way that the totality will be as we very much wish it to be and not as we fear it might be." (Tomkins, 1995, p.324).

Borrowing this notion that scripts are made across time and space, I argue that the extinction script is written and rewritten as it makes and remakes futures. Through its reiteration the extinction script scrambles temporal and spatial cohesion.

Fourthly, the extinction script sketches a path between discourse and action as it regulates how we know and respond to climate crisis. As sets of claims, discourses offer language for constructing knowledge about topics through systems of meaning (Hall, 1992). The discourses around climate change found in contemporary activism, for instance, represents extinction as a specific threat to the future. Whereas by mediating between discourse and action, scripts provide a set of rules for action within particular discursive formations. It is through the extinction script that the subject is prompted to act on the discursive belief that humanity is endangered.

Through these four properties, the extinction script offers regularity amidst the swirling claims made about the planet's future. Expressions of the extinction script take place through a messy interaction between discursive representations, affective atmospheres and embodied practices that is always future orientated. The notion of the extinction script offers a means to think through the ways climate futures are imagined and performed by individuals.

4.4 Researching the Extinction Script

My focus on climate change and futures is empirically grounded in research with Extinction Rebellion. Originally created in the UK in 2018, Extinction Rebellion is a climate focused social movement. Extinction Rebellion is now a global movement with an international mission to raise awareness of, and demand action on, the climate crisis.[8] I focused on Extinction Rebellion activism for a project that sought to document the tone and form futures take in contemporary climate activisms. Over 18 months, I attended protests, talks, and meetings held by Extinction Rebellion throughout the UK. At the same time, I conducted creative interviews with 20 Extinction Rebellion activists who under my guidance created a painting of the future. In the interviews, activists were given space to articulate personal futures that at times were at odds with the larger movement. As this paper focuses on the public performance of climate activism and the specific ways collective futures are used to mobilise others, the research material used in this paper is ethnographic fieldnotes and photographs taken at the protests, talks and open meetings. The majority of the empirics in this paper come from Extinction's Rebellion's bi-annual national protest - aptly named 'rebellion'. The centrality of rebellion to Extinction Rebellion's public performances cannot be overstated. It is at rebellions where some of Extinction Rebellion's most notable actions have taken place – here, activists have glued themselves to roads, blocked bridges and thrown (fake) blood at banks (see Browning, 2021; Gayle, 2021).

The aim of the ethnography was to track the specific ways in which futures are 'made present' in the public performance of climate activism. For eighteen months, I sought to document the content and tone of claims about the futures (extinction, catastrophe, justice etc), and how those claims are made (through posters, chants, speeches and so on). I am sympathetic to Extinction Rebellion's aims and motivations, and I did not want my research to be merely extractive. So, I became quite involved within the movement while I carried out my research. At protests, I handed out leaflets, carried

[8] See https://extinctionrebellion.uk/the-truth/faqs/

signs, chanted and marched alongside others. I lay on the floor at die-ins and used my body to occupy the road. At meetings, I painted banners and talked through ideas. At the request of other activists, I spoke of my experiences of the movement at recruitment talks. While gathering research materials, I took an active – albeit a non-arrestable - role in Extinction Rebellion activism. I did so knowing that the neutral and detached research is a fiction (Rose, 1997). Even when my own personal politics departs with the broader movements', I still find (what can be) the distance and cool nature of critical writing uncomfortable (Felski, 2015). This discomfort has shifted my critique from Extinction Rebellion itself towards the presence of existential anxieties which exceeds them. Similar to work by Huysmans (2023), my intention is not to trivialise these apocalyptic concerns, and I certainly do not underestimate the very real threat of climate change. Rather, my writing is beholden to a conscious effort to advance environmental politics through its critical engagement. Still, my critical approach chafes against my affinities with the social movement. As through my uncertain activist-research, I remain implicated in the iteration of the extinction script - even while tracing its limits. It is this positional uncertainty within my ethnographic work which lends itself to an ethos of description and critique that expresses the multiplicity of the extinction script found across the rest of this paper. Through empirical storytelling possible only from the position of an ambivalent scholar-activist (see Stephens & Bagelman, 2023), I next move between describing the components of the script and evaluating what the script produces.

4.5 'THIS IS AN EMERGENCY': A Late Liberalism in Crisis

In the days leading up to COP26 in Glasgow, an advert is released by the UN. Politicians in suits gasp and shriek as a t-rex makes his way across the UN General Assembly. He strides up to the lectern, feet pounding the floor, tail swishing backwards and forwards, narrowly missing the heads of those in attendance. The dinosaur takes the stage and leans over the microphone,

> "I know a thing or two about extinction and let me tell you, and you'd kinda

think this would be obvious, going extinct is a bad thing! And driving yourselves extinct? In seventy million years that's the most ridiculous thing I've ever heard. At least we had an asteroid, what's your excuse?"

The dinosaur's speech exemplifies the presence of the extinction script beyond Extinction Rebellion. Similar to Extinction Rebellion's own rhetoric, for the UN climate crisis presents an existential threat for humanity because we are knowingly propelling ourselves towards extinction. With a link to www.dontchooseextinction.com the advert ends by prompting us to act. The message clearly follows the extinction script: act now, do so urgently, or we will die.

The dinosaur's warning illustrates the presence of the extinction script across the broader environmental movement, showing how the extinction script is found beyond its iteration by Extinction Rebellion. From the pages of prestigious journals to the global stage of international politics, the looming presence of extinction has become a familiar call for action in Western environmental politics. The extinction script is supported by, and contributes to, a widespread scientific framing of the climate crisis (Hulme, 2020). More specifically, the extinction script draws from scientific research that claims we are now living through a Sixth Mass Extinction Event. It is claimed that the Sixth Mass Extinction Event is extraordinary in the fact that this event is driven by human activities rather than natural causes (Ceballos et al., 2015). Pausing to consider either the background rate of species extinction or the previous five mass extinction events, it is possible to reason that "planetary life has, crucially, never not been in a time of extinctions" (O'Key, 2023, p.170). However, the singularity of our current mass extinction event remains unquestionable in the extinction script. There is no ambiguity in the claim we have to act now to survive.

On https://rebellion.global the warning is clear:

"THIS IS AN EMERGENCY.
Life on Earth is in crisis. Our climate is changing faster than scientists predicted and the stakes are high. Biodiversity loss. Crop failure. Social and ecological collapse. Mass

extinction. We are running out of time, and our governments have failed to act. Extinction Rebellion was formed to fix this.

WE HAVE A MORAL DUTY TO TAKE ACTION – WHATEVER OUR POLITICS."

Through an alarmist rhetoric, the extinction script prompts the already threatened subject to action, fast. Others have shown that since the publication of the 2007 IPPC report that the growing consensus around the unequivocal existence and the inevitable effects of climate crisis calls for "techno-managerial" solutions (Swyngedouw, 2010, p.219). Extinction Rebellion echoes these calls found throughout the broader environmental politics in the west by arguing for collective action based on scientific and political consensus - 'whatever our politics.'

Amongst an environmental politics flooded with claims about our existential crisis, what is distinctive about Extinction Rebellion's use of the extinction script is the belief that the threat of extinction is approaching so rapidly that regular politics with its election cycles cannot respond quickly enough. In the words of Extinction Rebellion cofounder Gail Bradbrook "conventional politics is fucked! It's finished" (Extinction Rebellion UK, 2019). Extinction Rebellion have three demands which go beyond business-as-usual politics: Tell the Truth, Act Now and Decide Together. In practice, they're arguing that, firstly, the scale of climate crisis must be communicated, secondly, that we all must act to reach net zero by 2025, and, thirdly, that the government must create a Citizens' Assembly to deal with climate crisis[9]. Uniting these demands is the desire to use extrapolitical processes to forestall extinction. This desire for immediate extrapolitical action has been present since Extinction Rebellion first announced their rebellion against the UK government in 2018. Back then, a Declaration of Rebellion, read aloud in front of the Houses of Parliament, warned of catastrophe (Extinction Rebellion UK, 2018). Although the extinction script is found throughout western environmental politics in various iterations, Extinction Rebellion's use of the extinction script is distinctive and interesting as it calls for these

[9] See https://extinctionrebellion.uk/the-truth/demands/).

extrapolitical processes.

While Extinction Rebellion positions themselves as an alternative to conventional politics, their particular use of the extinction script clutches for social order in crisis. Their understanding of climate crisis depends on scientific theorisations of climate change. Their proposed solutions take place within the framework of liberal democracy. And their belief of a coming future in crisis relies on western conceptualisations of time as linear and space as coherent. So, whilst Extinction Rebellion may desire to go beyond politics, their campaign holds onto the very things in crisis – that is the modes of governance common to Western Modernity and their associated temporalities and spatialities. For Extinction Rebellion activists, the extinction script makes and remakes attachments to the conditions which have created climate crisis. These attachments hold the promise of transformation whilst making such a possibility impossible. For Berlant (2020) such attachments are cruelly optimistic:

> "optimism is cruel when the object/scene that ignites a sense of possibility actually makes it impossible to attain the expansive transformation for which a person or a people risks striving" (p.2).

Cruel optimism names a shared affective present in which such "regulatory fantasies" pin down individuals within harmful relations (Anderson et al., 2023, p.144). The use of the extinction script by Extinction Rebellion is distinctively cruel because in their calls to prevent future self-annihilation, they position themselves as an alternative to the fantasy of late liberal governance, whilst tending to the fraying social order of liberal democracy. In their attachment to a better future out there ahead of us, Western Modernity becomes blessing and curse, solution and cause, of the climate crisis. Edelman (2004) argues that reproductive futurism props up an unstable social order. His work offers a way for us to think about how attachments to the future are made. Throughout the rest of this paper, I consider how the Extinction Rebellion's use of the extinction script makes and remakes attachments to a future that is in crisis through what I term 'multi-species reproductive futurism'.

4.6 Forestalling extinction

The imaginary figure of the Child shapes the present through encouraging an obligatory investment in a collective and better future for the children of tomorrow – a process described by Edelman (2004) as "reproductive futurism." Across the rest of the paper, I explore three types of futurity related to the Child: the future as threatened, the future as extinct, the future as multi-species extinction. As each form of futurity circulates round attempts to forestall the possibility of extinction, the extinction script regulates the movement towards an extinct future. How does the extinction script – as one type of climate script – govern the futures imagined by Extinction Rebellion? What types of subjects and relations are expressed through its public performance? And what form of climate crisis does it draw from and draw into being? I argue that the extinction script regulates the future (as out there ahead of us), our relation to it (as reaching towards that future), and our identities (as future making).

4.7 Threatened Futures

The Child *is* the future and the only form of future for Edelman (2004). At Extinction Rebellion protests, the Child appears in multiple forms, invoking an array of potential futures. A family photograph on a placard, a chant rippling throughout the crowd, or in snippets of conversion spoken during the march, the Child is pervasive throughout Extinction Rebellion activism. In this section, I focus on reiterations of the extinction script which claim that the future of the next generation is threatened.

In April 2023, on one placard the limits of the future are drawn clearly by the Child. Alongside photographs of a young toddler, the sign carried a desperate question, "how can I tell him they could have stopped it but they didn't?" (see figure one). When asked, the activist told me that the toddler was her son and that the photograph "visualised" the climate crisis "through a human life." The activist believed her son's future to be dismal, insisting that "it's not statistics or a fact it's a person, my son." For

Extinction Rebellion activists worried for tomorrow's children, the future is no longer inevitable as climate crisis scrambles the belief that a better future is out there ahead of

Figure one: Placard, April 2023

us. Edelman (2004) explains "we are no more able to conceive of a politics without a fantasy of the future than we are able to conceive of a future without the figure of the Child" (p.11). Following Edelman, the activist's fears about the future show how a politics tied to the aspiration for an improved social order, that is a commitment to any desirable future, is shaped by the Child. Before I finished speaking to the toddler's mother, she stressed that the politicians know people will have "devastating futures."

Here, the form of the future is an innocent child's, ruined through no fault of his own, too young to know the damage done to his coming world.

The notion that the future will be much worse for next generation stirs up feelings of responsibility that show how subjects are created through articulations of the future. By caring for our collective future, the activist is made into a responsible subject. The realisation of her subjectivity takes place through deferrals to the future. The future, following Edelman, offers an alluring promise to the subject – the promise of returned ontological completeness. Following Lacan (2006), at the centre of the subject there is a void. The subject "circulates around the lack" guided by "an unconscious desire for fulfilment" (Pohl & Swyngedouw, 2023, p.5). This lack is constituted by our entrance into the Symbolic order – primarily language, but more broadly those structures and rules which organise and regulate society. In the articulation of difference between self and other, there is a gap left between the signifier and signified (Lacan, 2006). Through reproductive futurism, the future offers fulfilment of the Symbolic void. The heteronormative Child gives assurance that the division between signifier and signified will cease to exist in the always deferred tomorrow. Meaning is deferred to the future where identity becomes unified (Edelman, 2004). Through the threat of extinction responsibility is bestowed upon the activist, illustrating how subjecthood and futures are made and remade through enactments of scripts.

The feelings of responsibility invoked by the extinction script are present later that same day. I'm walking along the bank of the Thames where the climate march is snaking its way past Parliament. An activist swirls a pink umbrella, across its top are the words 'act now'. In green and red the words, 'unite for our future – choose life', are spelled out across a yellow placard held high in the air. Appeals to protect the future are in abundance. I continue walking and spot an older lady carrying a placard displaying dolls (see figure two). I ask her to tell me about her sign, and she explains,

> "It's a basically a picture of my three grandchildren and friend's grandchildren who are all concerned about the climate. I can't bring them

with me and … because it's about their future not my future. I'll be long dead. Try and hope things might change…"

Figure two: Placard, April 2023

Showing that her sign includes Greta Thunberg's famous line "I don't want you to be hopeful. I want you to panic", the activist explains that being hopeful is not enough. The weight of responsibility resonates through the extinction script, the responsibility of not having acted urgently enough, the weight which accompanies having let the bad guys get away with it – the oil industry, the fat cats, the politicians, all those responsible for ruining our future. Our subjecthood is one that is reduced to

responsibility because we must act now, and do so urgently, otherwise our future, *our only future*, will be destroyed. For these activists, at best, the future will be worse than the present, or at worst, the future will vanish completely. Either way the future is unmistakeably threatened.

These placards illustrate more than the threatened Child. They signify peril to identity itself because in the onto-epistemic regime of Western modernity the subject is made through its relation to the future. Decolonial thinkers have illustrated climate crisis to be a "crisis of meaning" (Escobar et al., 2022). This crisis of meaning is distinctive to our particular historical juncture because it "is a crisis of a dominant modelo civilizatorio, or civilizational model, that of Western capitalist modernity" (Escobar, 2021, p.1). The threatened future of the Child is one such way that the crisis of meaning materialises. Climate crisis then permeates not only world-building but personhood in carbon capitalist modernity. In threatening the promise of a better future, climate crisis unsettles the social order by threatening meaning itself.

The deferral of meaning to the future attempts to stabilise the uncertainty of identity (Edelman, 2004). The climate crisis upsets these attempts at deferral whereas the extinction script acts as the attempt at deferral. If the crisis of meaning is an onto-epistemic crisis distinctive to late modernity, then the Child is a figure unique to late liberal politics. Imaginings of the Child act as attempts to stabilise identity. As Edelman (2004) explains, the future:

> "marks the impossible place of an Imaginary past exempt from the deferrals intrinsic to the operation of the signifying chain and projected ahead as the site which being and meaning are joined as One" (p.10).

The Child holds in place the future out there ahead of us, and by consequence our relation to such a future – that of reproductive futurism – and, finally, our sense of identity which comes to be through such relation. When the future disappears, so do our usual attachments to it, and the identities we form through such attachments. Following Edelman, it is both our sense of the future, that is our understanding of the

future and how we relate to it, that our identity comes to be. It is through our commitment and investment in the social order, in the promise of tomorrow, through which meaning is given to being. Through the extinction script, the Child enacts "a logic of repetition that fixes identity through identification with the future of the social order" (Edelman, 2004, p.25). The extinction script acts as an attempt to stabilise a future threatened by climate crisis, our relation to it, and thus our identity. The extinction script responses and regulates a crisis of meaning in western modernity.

4.8 Extinct Futures

Extinction Rebellion's articulations of climate crisis signify a crisis of meaning in Western Modernity. Given that the Child holds within its grasp the fabric of the social order, for Edelman (2004), when the Child's future is threatened so too is the social order. Using claims that the future will be lost to extinction, in this section I argue that the Child is a specific form of futurity through which the climate is imagined. More specifically, I argue that the future theorised through the Child in XR activism is straight, following Edelman, but also white and middle class.

For Extinction Rebellion the threat of humanity's extinction remains a burden shared by all. As the principal victim of extinction, this makes the Child one incarnation of the universal subject who inhabits the discourses of western environmental politics. In western discourses surrounding climate change the human often emerges as a universal figure – that is as unmarked by specific characteristics such as gender, race, or sexuality. In environmental politics the universal human emerges most typically through the notion that humanity as a whole is responsible for the climate crisis (Vergès, 2017; Baldwin & Erickson, 2020). This sentiment is expressed the next day on another sign which reads,

> "I'm here fighting for my grandchildren's future. They won't have one if we don't ACT NOW! It's my fault, and yours, and yours – maybe we didn't know. BUT WE KNOW NOW! LETS TAKE RESPONSIBILITY AND BRING ABOUT CHANGE. WE CAN'T LET THEM DOWN"

I ask if I can take a picture. I'm given the go ahead by a woman several decades older than myself. As I take the picture, she says "I'm sorry!" "Oh … thank you" I reply, surprised by the comment and unsure how to answer. The women, both elderly and a grandparent, feels responsibility for the destruction of the planet. At the time of collecting this research, I am in my late twenties and it's clear to most that I am an adult. For this woman, however, I represent the Child because I am a young person whose future looks bleak. On this placard, the message is clear: we must act now for the sake of the future, or our only future will be gone – the future of tomorrow's children. This activist's guilt implores us to act now because all of humanity - past and present - are responsible for the potential loss of the future. After all, why wouldn't you act when it is entirely your fault? By figuring all of us as responsible for the climate crisis, the extinction script characterises humanity as the culprit guilty of warming the planet.

Work within geography, and the social sciences more broadly, has queried who should shoulder the burden of responsibility for climate crisis, particularly so in work critical of the naming of the Anthropocene (Davis & Todd, 2017; Kumar, 2023; Simpson, 2020). It is argued that in naming all of humanity as the single agent responsible for climate crisis, the Anthropocene obscures the fact that it is the global north's capitalist class that bear this responsibility (Moore, 2015; Vergès, 2017; Yusoff, 2013). Such a move not only conceals the role of capitalism, colonialism (Baldwin & Erickson, 2020), and imperialism in the creation of climate crisis, but also produces the human of the Anthropocene as universal and unspecified as the Child of Edelman's reproductive futurism. It is through such universality that the extinction script figures the human in the era of climate change, not only as responsible but as innocent. The human of yesterday is guilty of letting the planet burn, the human of today is culpable if they don't act now, and the human of tomorrow is an innocent victim of environmental destruction.

Themes of collective responsibility are invoked beyond the protests at recruitment talks where claims about the future are also intended to mobilise the public. Sitting at the

back of a vegan café, I listen to such a talk filled with reiterations of the extinction script. "The most scary of all reports is the IPPC third report" Will, an activist, tells the room. "The IPCC report says we have a brief and rapidly closing window to secure a liveable future" Conveying the urgency of the situation, he uses a particular scene from Indiana Jones as a metaphor. In the film Indiana Jones' hat is knocked off as he rolls beneath a rapidly closing trap door. At the last moment, his hand slips back under the door to retrieve his hat. All is well. Will hopes that we – humanity that is - will be like Indiana Jones, "saying shit that was close, but we made it." Will is giving a rousing performance of the 'Heading for Extinction' Talk. Through appeals to a collective responsibility for humanity's future, the talk is used to recruit members to the movement. Again, he tells the room, "we haven't got much time to act. The window is closing on an opportunity being lost." Will summons a sense of responsibility for a shared problem. The move to make humanity collectively responsible for the climate crisis gives the world a single historical trajectory (Davis & Todd, 2017) – that is a past where humans have carelessly ruined the environment, a present where we must act urgently, and a future that will be apocalyptic. When this Eurocentric way of knowing the world is mistaken for the history of the entire planet, time becomes totalizing and linear (Erickson & Baldwin, 2020). In other words, it becomes straight.

My use of the word 'straight' signifies more than the totalizing tendencies of time in Western environmental politics. I use the word straight to signify a mode of time that is progressing predictably and straight-forwardly – as past, to present, to future - but also in recognition that straight time operates through a feverish investment in heterosexual reproduction (Muñoz, 2019). Straight time, as Halberstam explains, is a "narrative coherence of adolescence – early adulthood –marriage – reproduction – child rearing – retirement –death" (Dinshaw et al., 2007, p.182). This narrative schedules lifecycles along a linear timeline, progressing orderly through various heterosexual milestones, across generations, and always towards the promise of a better future. This better future, in the words of Davis (2015), "so often translate[s] into material and economic wealth, without considering the costs on other (poorer) children, or the actual children that will be birthed" (p.239). The future imagined through reproductive futurism is straight and middle class; it is a "middle-class logic of reproductive temporality" which

operates through “temporal frames of bourgeois reproduction and family, longevity, risk/safety, and inheritance” (Halberstam 2005: 1-2). By folding theories of race, class, and gender into their notions of reproductive futurism, Muñoz, Halberstam, Davis and others have shown that the Child signals not *the future but a future* – and one that is white, middle-class and heterosexual.

Human geographers have made substantial contributions to theorising the racial politics of environment futures (Yusoff, 2013; Baldwin, 2022). How sexual politics informs climate temporalities has however been less apparent in geographical research (for exception see Patchin, 2021). Tying together this geographical research on climate futures with work on queer temporalities, I claim that the extinction script functions through a straightening of time which positions a white and middle class future as the future threatened by climate crisis. In articulations of the extinction script, the future is under serious threat from climate change - *but only for those who have a promised future to lose.* For those who have no guarantee of a better future and who instead work to secure the very possibility of the future, a safe liveable future can’t be lost because it was never certain. In articulations of the extinction script, the Child is then a particular form of futurity amongst the many that seek to narrate climate crisis. The extinction script implores you to act now and do so for the future, the only future – but in reality, it is a future marked by heterosexuality, whiteness and class. Such a rhetoric names a particular type of futurity held in place by straight time. In a crisis of meaning unique to late liberalism, the extinction script invokes a sense that the future of Western Modernity could be lost.

4.9 Multi-species extinction

At Extinction Rebellion protests, it is unsurprising to see family photographs or even an ultrasound scan stuck to a placard alongside the extinction script (see figure 3). In these repetitions of the extinction script, a specific form of futurity emerges as white, middle class and heterosexual predicated on time as straight. However, in the extinction script the future emerges often through the vision of a shared planet. By recognising how multi-species entanglement complicates reproductive futurism, in this section I claim

the extinction script extends beyond sexuality, class and race to animality through what I term multi-species reproductive futurism. Multi-species reproductive futurism is a form of straight time that demarcates the human and/from the animal, and which shapes the future by classifying species.

Figure three: Placards, April 2022

The extinction script extends towards nonhuman others, figuring extinction as a burden shared across species' lines. Through a multi-species lens, research within geography and across the environmental humanities has theorised extinction as "a spatial, ethical, and political process that does not begin or end with the death of a species" (Symons & Garlick, 2020, p. 294). In this research, there is an attempt at moving beyond the "all-too-human scripts" which shape typical extinction stories and instead carefully engage with the complexity of nonhuman world-making (Rose et al., 2017, p. 2). While this work is important and necessary, my approach to multi-species extinction finds more commonality with work on extinction geographies which explores the multiple temporalities which order these 'all-too-human scripts' (Collard & Dempsey, 2022; Searle, 2020). More specifically, it is by turning articulations of the extinction script which focus upon multi-species loss, I attend to the ways in which nonhuman extinction is folded back into the processes of human exceptionalism. Others have

considered how interspecies reproduction unsettles the processes of reproductive futurism (Ahuja, 2015). In articulations of the extinction script however nonhumans are drawn into the processes of multi-species reproductive futurism, where nonhuman others become part of a future built on (hetero)normative strategies. In 2023, a sign reading "I WANT MY CHILDREN TO SEE NATURE IN THE GARDEN NOT IN THE HISTORY BOOKS" indicts that nature must have a future but only because it is in the interests of the Child. The Child's future may be one not of their own extinction necessarily, but a future worsened by the extinction of others. On another day, another sign carries a similar sentiment: save nature for the Child. This time a photograph shows a child looking through binoculars, scribbled above the words, "I want to spot birds forever" (see figure 4). Even in articulations of shared extinction, the extinction script positions the human as central. In these various appeals to save nature for the children, multispecies entanglement is inscribed with straight time and white, middle class futurity.

Figure four: Placard, April 2023

These appeals to halt nonhuman extinction rely on an understanding species as bounded and fixed categories of difference, which are at risk of disappearance. It is their singularity and distinctiveness which makes their loss even more unbearable because a species could be lost that we might never see the likes of again. This notion of extinction is anthropocentric paradigm through which species are not only classified but ordered into a hierarchy of lifeforms (Brown, 2021). This ordering takes place through an "animacy hierarchy", described by Chen (2012) as "a scale of relative sentience that places humans at the very top" (p.89). As the most rational and sentient of species, humans are understood to be the most evolved species, while nonhuman species are considered to be previous stages in the evolutionary process (Chen, 2012). Building upon Chen's work, Brown (2021) argues that it is "the 'hierarchies of sentience' that distinguish Homo sapiens as a species set apart from and above other biological entities" (p.114). It is from this position at the top of the animacy hierarchy and as the temporal endpoint of evolution from which humans,

> are granted the right of stewardship over all other life forms (including those ranked as inferior and/or tenuously within the fold of the human) and ownership of all inanimate materials in the known as well as yet-to-be-discovered worlds (Brown, 2021, p.113).

Drawing on Brown and Chen, I argue that the idea that nonhuman others should be saved for the Child implies a notion of nature as fixed, threatened, separate to, and in need of protection by, and ultimately for, humans. In these articulations of the extinction script, straight time extends the hierarchy of sentience into the future.

The extinction script works then not only to position the future as white, straight and middle-class but as anthropogenic too. In multi-species reproductive futurism our participation in the Symbolic order is not ours alone. Instead, it is a participation made through the hierarchical organisation of those deemed nonhuman. Through multi-species reproductive futurism, human deferrals to the future are inscribed upon the natural world. Through claims that we should save nature for the children of tomorrow, the extinction script shapes a future in which the human remains separate from, and

the rightful steward of, the nonhuman. In making futures based on animacy hierarchies, the extinction script projects forward human exceptionalism and control.

In the examples above, nature must be saved for the Child. Elsewhere, humanity extinction is inseparable from the extinction of other species. At a protest held outside the fortified gates of the COP26 Climate Summit in Glasgow such a message was clear: the prospect of any future for humanity depends on the health of the planet. You have to act right now, or we all die. In front of the gate, six people lie beneath white sheets, two gravestones act as bookends. One of which bears the message "R.I.P HABITATS BIODIVERSITY RESILIENCE". To the left of the bodies, two activists hold placards. "INACTION = GENOCIDE ECOCIDE" reads one. "where have the insects gone?" scribbled on the other. On the pavement, an activist clutches a papier-mache puffin. Moving its wings back and forth, the women chants over and over,

> "oceans are warming, ecosystems are collapsing, there will be no more fish, there will be no more food, there will be conflict."

Dressed in court robes and wig, an activist looked on at the protest. Stitched across his back is "STOP ECOCIDE" and in his hand a placard reads "MAKE ECOCIDE A CRIME UNDER INTERNATIONAL LAW." Outside the COP26 summit, the survival of the human is entangled in the survival of other non-human beings. The extinction script is present in multiple forms however commonality is found in references to ecocide. Defined by the Stop Ecocide International as "the mass damage and destruction of the natural living world. It literally means 'killing one's home.'"[10] As the literal killing of one's home, ecocide underpins extinction. Protesting ecocide shows our threatened tomorrow is embedded within a planetary ecosystem. We must act now, and do so urgently, to save not only humanity but the planet. The natural world must be saved for the human's survival. Through multi-species reproductive futurism, the entanglement of species creates a belief in one totalizing planetary future stretched out ahead of us.

[10] see https://www.stopecocide.earth/

As those six activists play dead, they act out those lives already claimed by climate crisis. The deadened future is stretched into an ever deadlier present. Demonstrated through a sense of 'already occurring' harm (see Cassegärd and Thörn, 2018), the spilling of the future into the present surfaced across numerous sites of protest. In Hyde Park, an elephant dances with a sign hung beneath its neck – "when the elephant in the room is dancing … TIME TO ACT." A family looks on, one of the children grips a sign with a warning, "IT'S HAPPENING NOW." Six months later, an activist clutches a placard in St James Park this time. "In memory of the LIFE already LOST to the CLIMATE CRISIS" it reads. Fast forward another six months, outside the House of Commons, several signs warn of already occurring ecological collapse. "NATURE IS VANISHING" spells out one. "RECENT RATES OF EXTINCTION RUNNING HUNDREDS OF TIME FASTER THAN IN PRE-HUMAN TIMES" reads another. Across these public displays of activism, Extinction Rebellion cultivates a sense that the ecological crisis has now begun.

The notion of continuing climate crisis intensifies the present and causes a once feared future to spill into the here and now. For Extinction Rebellion, the future appears now as a slow worsening of the present (Friberg, 2022) in which losses have already occurred (Casdsegärd and Thörn, 2018). The future's place in the temporal order - as always out there ahead of us - is complicated by an urgent present. Through the extinction script, the future's place within the Symbolic order begins to unravel. The uncertainty at the heart of identity creates a contradiction within imaginaries of the future. The deadened future is waiting to be saved out there ahead of us even as it spills into a dying present. Then, multi-species reproductive futurism undoes the stability – in our identities, in our futures – that the extinction script desperately wishes to create. However, there is something more than human stewardship and control in the spilling of the future into the present. There is a recognition of an entangled vulnerability in a shared planet; within which may exist the seeds for relating to others and other futures beyond multi-species reproductive futurism.

4.10 To Conclude

The extinction script is one way in which activists imagine and perform climate futures. It is the belief that you must act now and so urgently otherwise the future – the only future – will be lost. In reality, the future which the extinction script articulates is a future marked by heterosexuality, whiteness and class. It is one particular future held in place by straight time. Through the straightening of time, the extinction script governs our futures by regulating the future (as out there ahead of us), our relation to it (as reaching towards), and our identities (as future making).

Through visions of an extinct planet, the extinction script invokes a multi-species form of reproductive futurism. These futures consolidate the existing hierarchy of lifeforms by offering custodianship of the world and its future to those deemed human. In this conceptualisation of time what is at stake is the future of Western modernity as the dominant onto-epistemic formation. Confusingly, the future slips away and spills into the present, signifying a crisis in our ability to imagine the climate otherwise that the extinction script scrambles to resolve.

In exploring the extinction script's presence and effects within public performances of Extinction Rebellion activism, I have sought to contribute a novel way of conceptualising how activists imagine futures. In geography, work on futures has primarily focused on the techniques institutions use to govern futures which could disrupt liberal democracy (Jeffrey and Dyson, 2021; Anderson, 2010). Geographers working on climate change have mostly explored climate futures by examining the processes of anticipatory action (Oels, 2013; Baldwin, 2022) and climate experimentation (Bulkeley, 2023; Evans, 2016; Wakefield, 2020). Departing from geographer's usual preoccupation with institutional futures, I have set forth a novel theorisation of how individuals imagine and perform counter futures.

While this paper has largely focused on the extinction script, more broadly I propose that climate scripts are a key way in which individuals articulate futures. Climate

scripts help us understand two things: firstly, they demonstrate how futures are made present within the discourses of climate crisis, and, secondly, they show how the complexity of climate futurity is governed by various actors and across different sites. Climate scripts offer a novel means for geographers to consider how individuals respond to the collective threats of climate change and extinction.

Furthermore, my theoretical grounding in queer theory (Edelman, 2004; Halberstam, 2005; Muñoz, 2019) has enabled this paper to pay particular attention to how sexual politics informs the imaginaries of western environmentalism. This paper then compliments a plethora of work within geography which has made significant and important contributions to how race and racialisation informs understandings of climate change (Yusoff, 2013; Kumar, 2023; Simpson, 2020). By arguing that straight time underlies existential anxieties about extinction, I have shown how heteronormativity is tied up within multiple forms of difference which shape how the climate's future is imagined and felt. Included in this analysis is a consideration of how multi-species concerns are folded back into heteronormative narratives of extinction. By making this argument, I add to an emerging and lively set of debates where cultural geographers have problematised the dominant narratives surrounding climate crisis – including work which has focused specifically on extinction and its temporalities (see Symons and Garlick, 2020; Searle, 2020).

As an ambivalent scholar-activist (see Stephens and Bagelman, 2023), I have written with positional uncertainty and close entanglment with Extinction Rebellion. As such, the object my critique has not been Extinction Rebellion itself but rather a form of existential anxiety which exists across western climate politics more broadly (see Huysmans, 2023). The presence of the extinction script lies beyond Extinction Rebellion, and its meaning and effects are never fixed. There are then potential lines of flight, lurking within the complexity of climate futures, waiting to make time and space differently. As the climate crisis intensifies, scripts concerning the future of our planet multiply. By exploring the presence and effects of other iterations of the extinction script by different actors, or entirely different climate scripts concerned with other

forms of futurity, geographers may offer environmentalists new tools for responding to an ever intensifying crisis.

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Five

Straight time in the (Post)Apocalypse: Imagining Climate Futures with Speculative Methods

Abstract

Whether the future offers the arrival of catastrophe or the worsening of an already existing crisis, this paper argues that articulations of (post)apocalyptic environmentalism rely on straight time. In the discourses of climate change, straight temporalities unfold linearly, working hard to universalise the future and place the world along a singular timeline. Sticking with moments of uncertainty and frustration, this article examines how marginal futures disrupt and unsettle the dominance of (post)apocalyptic environmentalism. Drawing from 20 speculative arts interviews undertaken with Extinction Rebellion UK, I show that activists anticipate a future otherwise, even as they cannot fully articulate what such a future would look like. The future arises here not as located out there ahead, but instead as a surplus of futurity which is affective and anticipatory. While uncertain and tentative, these futures shape the present, as they guide the lives of many activists.

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Figure one: Robyn's painting

5.1 Intro

"Some of this is a crisis – it's a failure of imagination, isn't it?" Robyn remarks. "The fact we're not finding solutions here. So, is the challenge partly to put the time and effort into telling other stories?" Robyn is involved with climate activism through the environmental movement, Extinction Rebellion UK. As we talk, she blows through a straw and directs black watercolour across a sketchbook. As the colour spills across the page, I'm reminded of an oil spill. I ask her to imagine the future and she responds, "yeah, I don't know … I still have a bit of a blank I think when it comes to the future and imagining what that might look like." By the end of our arts-based interview, Robyn's artwork expresses many temporal relations. The future is imagined in numerous and competing ways – as apocalyptic, as surplus or even sometimes absent. It is an artwork full of ruptures and breaks, filled with contrasting colours and imagery (see figure 1). Her imaginaries of the future pull us in different directions, disrupting a narrative of planetary (post)apocalypse. Robyn's artwork antagonises a temporality which positions the future as only ever an extension of the

present. It unsettles the timeline of slow decline into environmental apocalypse, by offering competing and conflicting climate temporalities.

Robyn's painting is one of twenty produced as part of a broader research project which sought to document the futures which populate contemporary climate activism. Through this project, I worked with activists from Extinction Rebellion UK using ethnography and participatory art interviews. Using primarily the material collected in these interviews, in this paper I trace the multiple temporalities which unsettle (post)apocalyptic narratives in the activists' imaginations. By adding to a growing literature on climate imaginaries (see Celermajer et al., 2024, Farbotko, 2010, Thieme, 2021, Davoudi and Machen, 2021), I show how multiple disorderly temporalities make and remake the phenomenon of climate change. These multiple temporalities allow for the meaning of climate change to shift and change beyond the planetary imaginaries that typically dominate environmental debate (Kumar, 2023, Paprocki, 2022).

In a situation as urgent as ecological breakdown, why exactly do imaginations and the temporalities that inform them matter? Imagination is a crucial tool for navigating a warming planet (Yusoff and Gabrys, 2011). The way in which we imagine the future has real implications for how we respond to and manage climate crisis. From the predictive outcomes of earth modelling systems to speculative climate fiction, the imagination of future climate scenarios legitimises present ideas about climate crisis and subsequently particular forms of action (Gergan et al., 2020, see Bettini, 2012). The stories told about our changing climate then have material consequences for worlds (Davis and Todd, 2017).

With the rise of movements like Fridays for Future and Extinction Rebellion, such climate movements are now a key site in which the climate's future is imagined within the Global North (see Cassegård and Thörn, 2018, Friberg, 2022a). Whilst these movements make many claims about the climate's future, existing scholarship across the social sciences shows that apocalyptic and postapocalyptic visions are dominant within Western environmental politics (de Moor, 2022). Whilst apocalyptic narratives

warn of a potential catastrophe, the postapocalyptic narrative cautions that the future offers more of the same – *only worse* (see Calder Williams, 2011, Cassegård and Thörn, 2018). In these imaginaries, discussions of tipping points, thresholds, and deadlines frame climate crisis as a biophysical problem and fix the future as the endpoint of a linear temporality (Hulme, 2008a, Foust and O'Shannon Murphy, 2009). Here, a temporal endpoint overdetermines the present by means of a continuation of an already existing apocalypse or a deterioration into an apocalypse to come.

Others have argued that the anxieties underlying (post)apocalypse narratives are informed by racial imaginaries that seek to sustain white supremacy (Bettini, 2012, Mitchell and Chaudhury, 2020, Gergan et al., 2020). I contribute to and expand this literature, by drawing from the work of queer theorists to argue that (post)apocalyptic environmentalism relies upon straight time. As a mode of time, straight time is fixated on the temporal horizon of the next generation (Halberstam, 2005). Through the naturalisation of heteronormative and western values and ideals, in straight time the future only ever appears as a continuation of the present (Muñoz, 2019). However, in the imaginations of climate activists present are futures other than the (post)apocalypse. In this paper, I examine the moments in which the (post)apocalyptic narrative is unsettled and disrupted.

Whiteness and heteronormativity still exist within the imaginations of the activists I interviewed. It would be impossible to escape these logics. Nevertheless, by using a reparative approach (Sedgwick, 2003), that I hope fosters neither a romanticised nor dismissive tone, I amplify the tensions which began to unravel the straight times of (post)apocalypse. Inspired by Muñoz (2019), I show how activists' relate to climate crisis through a surplus of futurity – that is an affective excess of desire for an alternative without certainty of what that could be. Even as an affective surplus, futurity has impacts that are transformative of the activists' relations to their worlds. It is by offering an account of these speculative and prefigurative relations to the future, that I add to an existing literature within geography which has tended to focus on calculative and pre-emptive relations towards imagined climate futures (Anderson, 2010, Edwards and Bulkeley, 2018).

To do so, this paper progress in four parts. Firstly, I outline the common characteristics of (post)apocalyptic imaginaries, showing these narratives can often (re)produce the straight time of environmental breakdown. Secondly, I outline how my methods enabled multiple climate temporalities which work through and beyond straight time. Thirdly, using materials from the arts interviews supplemented with ethnography from protests, I illustrate how a surplus of futurity unsettles the dominance of straight times. The future emerges here as an excess of affect which fractures the universalist narrative of climate crisis, complicates the separation of Nature from Society, and causes implications for/on the present. Lastly, to conclude I argue that a failure to imagine the future should not always be reason to lose hope.

5.2 Straight time in the apocalypse: is there no alternative?

Whilst there are many and often competing imaginaries within Western environmental politics, research from across the social sciences has typically stressed the overwhelming presence of apocalyptic and postapocalyptic temporalities (de Moor and Marquardt, 2023, Cassegård and Thörn, 2022, Skrimshire, 2014). Across research focusing on climate politics in the Global North, it is argued that Western environmental movements often use apocalyptic narratives to invoke fear about future environmental collapse (Killingworth and Palmer, 1996, Skrimshire, 2014). As Cassegård and Thörn (2022) explain “the mobilizing emotion of the apocalyptic narrative is fear, linked to its main theme of the future as disaster” (p.54). Alongside fear (Dörries, 2010), those using apocalyptic narratives can prompt other affective conditions such as urgency around the need to act now (Garrard, 2020, Robson, forthcoming), grief for the scale and inevitablity of environmental losses (Hamilton, 2010), or even hope in the form of collective action (Cassegård and Thörn, 2022). Across these various affective relations to apocalypse, the catastrophe emerges an event to come. When apocalypse lies ahead of us, a threat as serious as the climate’s breakdown itself emerges – our recognition of the coming crisis: “for the rhetoric of apocalypticism implies that the fate of the world hinges on the arousal of the

imagination to a sense of crisis" (Buell, 1995, p. 285). In the rhetoric of apocalypse, the limits of our future are drawn in relation to an ability to grasp the gravity of the coming disaster and act in light of such a recognition. Whilst some argue apocalypse can inspire more ethical acts (Veldman, 2012), others warn that a sense of fatalism can lead to overwhelm and inaction (O'Neill and Nicholson-Cole, 2009). Across this work, climate crisis and its related affective registers make and remake the future as one of coming environmental apocalypse.

However, more recently, research points to another climate temporality materialising across Western environmental politics. Alongside these apocalyptic anxieties about the future, many now warn of an apocalyptic present in which climate crisis is already here (de Moor, 2022). Cassegård and Thörn (2018) describe the postapocalyptic politics characteristic to contemporary climate movements – like Extinction Rebellion and Friday's for Future – as "environmental activism based on a catastrophic loss experienced as already having occurred, as ongoing or as impossible to prevent, rather than as a future risk or threat" (p.563). And so, as the disastrous effects of a rapidly warming climate are seen across the globe, as our seas rise and as weather events become ever more unpredictable, it is widely argued now that for many the "ecological Armageddon is already a reality" (Swyngedouw, 2013, p.11). The move to recognise environmental apocalypse as already here brings with it a series of new claims about the future and our relation to it. Rather, than the future looming threateningly ahead of us, the rhetoric of post apocalypse can invoke what (Friberg, 2022a) terms a "prolongation of the present" in which "the activists understand the present as a beginning; the signs of global warming that are visible today are taken as omens of what to expect from the future" (p.7). Elsewhere, Friberg (2022b) describes how through environmental presentism "the future is no longer something far distant but, in many ways, already a reality" (p.57). For Cassegård and Thörn (2018), it is a "temporality of continuous catastrophe" that is found within postapocalyptic environmentalism (p.573). Across this work, then, authors illustrate how postapocalyptic imaginaries of climate breakdown reshape the future into an extension of an ever intensifying present. In postapocalyptic thinking, the apocalypse is already here and will only continue to worsen without appropriate and necessary action.

The presence of postapocalyptic imaginary accompanies, rather than replaces, apocalyptic thinking in Western environmental politics (de Moor, 2022), meaning that the boundary between these two imaginaries is often indistinct. So, despite their differing orientations to the future, (post)apocalyptic temporalities tend to rely upon a certain framing of climate crisis. Both imaginaries work through "the 'scientisation' of climate change"; a process in which climate change is constituted as a biophysical transformation of the earth systems which will lead to - or arguably is already producing - drastic and devastating environmental outcomes (Garrard, 2020, p.1). This understanding of climate change is dominated by the scientific expertise of the IPCC, which largely reduces climate change to an issue for the expertise of the environmental sciences and policy makers to solve (Hulme, 2008b).

This notion of climate change as a biophysical problem relies upon, and produces, a linear form of temporality. Through the language and logics of earth systems theory, time progresses towards a fixed endpoint, whether that be through a worsening of the present crisis or through the arrival of climate catastrophe, as Foust and O'Shannon Murphy (2009) explain:

> "the combination of tragic telos, deterministic linear temporality, and an extrahuman force guiding history appear most dramatically in discussions of feedback loops, self-perpetuating cycles that exacerbate warming and its effects" (p.159).

Similarly, Hulme (2008a) argues that through the logic of 'tipping points' earth system models predict, and therefore produce, new climate futures by "simulating our alleged impending approach to triggering major re-organisations of large-scale functions of the Earth system" (p.11). The bioscientific notion of climate change as an overwhelm of the earth's systems, offers legitimacy to (post)apocalyptic visions of breakdown by conjuring a particular form of temporality in which catastrophe and the speed of which it arrives and/or worsens can be measured and predicted along a linear timeline. The future emerges here as only ever a continuation or deterioration of the present. As Alt

(2023) explains (post)apocalypse is “constituted by slowly unfolding processes which, nevertheless, accelerate as the end gets nearer” (p.907). Environmental (post)apocalypse is informed then by a scientific rationality which summons forth a temporality that is linear, predictable, and hastening alarmingly.

Through the linearity of (post)apocalypse, other future possibilities are also foreclosed; as Davidson and Kemp (2023) argue when visions of climate catastrophe are used to mobilise political action, they tend to

> “falsely reduce the options open in the future to either the apocalypse or its prevention, suggesting that humanity has a universal interest in the latter over the former” (p.6).

Visions of (post)apocalypse that largely rest upon the threat of exceeding planetary boundaries or tipping points construct a linear timeline within which the whole planet is implicated. The linearity found within (post)apocalyptic environmentalism then gives rise to a universalising tendency; as Alt (2023) explains (post)apocalypse establishes “a planetary articulation of climate change and the universalising, threatened ‘we’” (p. 909). Kumar (2022) terms this universalising imaginary a “one humanity narrative” which risks “de-historicising responsibilities for climate change” (p. 3). By constructing a planetary timeline that is totalising and linear, (post)apocalyptic temporalities can establish a humanity that is undifferentiated and a sense of climate change that is indiscriminate. Through its reliance of scientific accounts of climate change, (post)apocalypse then functions as a global emergency which must be dealt with urgently before ‘we’ – humanity that is - pay the price. The future emerges only ever as a continuation of already existing apocalypse, or deterioration of the present into apocalypse. (Post)apocalyptic time is linear, planetary, and predictable. Apocalypse awaits us all.

Whether the apocalypse is imagined as happening now or eternally postponed, both apocalyptic and post-apocalyptic imaginaries work through modes of linearity and universalisation arising from an overly scientific conceptualisation of the crisis.

Through these logics, (post)apocalyptic thinking summons forth a future which functions as a continuation of the present – either as deterioration or more hopefully salvation. Queer theorists have been critical of temporalities which reinforce the grasp of the present, terming such imaginaries as straight. By looking to these debates in queer theory, I argue that the temporalities which animate (post)apocalypse are forms of straight time. Described by Muñoz (2019) in *Cruising Utopia*, straight time is "the linear temporal ordering of past, present and future." Through this temporal ordering, the present becomes understood as our only existing version of reality; as Muñoz (2019) explains the logics of straight time prompt, "a notion of nothing existing outside the sphere of the current moment" (p.12). For Keeling (2019), this version of the present is marked by a "quotidian violence" which "maintains a temporality and a spatial logic hostile to the change and chance immanent in each now" (p.17). Like (post)apocalyptic narratives formed on the basis of scientific rationalism, straight time is predictable and measurable; because it offers a future which is only ever an extension of our present. Straight time is the spatiotemporal logic which underpins earth systems theory with its predictive nature and associated modes of measurement. Straight time animates (post)apocalyptic thinking where a world destroyed by climate crisis becomes the logical outcome a planet of warming rapidly without meaningful climate action.

Elsewhere, I have argued that concerns surrounding humanity's impending extinction establish one historical trajectory ending with a planetary future through straight time (Robson, forthcoming). Given that humanity's extinction is one form of (post)apocalyptic thought amongst many, here I argue that (post)apocalyptic discourses more broadly are upheld by a straightening of time that universalises the future. Others have argued that debates surrounding climate change which conceptualise the crisis as a single planetary issue, such as those of (post)apocalypse or the Anthropocene, are coded by whiteness (Davis and Todd, 2017, Gergan et al., 2020, Kumar, 2022). Here, it is argued that Western epistemologies reframe the climate crisis as an issue facing all of humanity, and in doing so conceal the legacies of racism, colonialism, capitalism and imperialism through a rewriting of European history as a planetary history (Baldwin and Erickson, 2020). Building on this research, I argue that this planetary timeline is inextricable from the naturalisation of norms and values typical to Western society

through straight time. Beyond its linear and predictable qualities, straight time sustains heteronormativity and capitalism through “a middle-class logic of reproductive temporality” (Halberstam, 2005, p. 4). More specifically, lifespans governed by notions of the good life, the biological clock, the desirability of married life, and the imagined needs of children constitute a normative scheduling of time that is deemed natural across Western cultures (Halberstam, 2005). By working across generations, straight time animates collective imaginaries beyond the nuclear family. This heteronormative construction of time/space “connects the family to the historical past of the nation, and glances ahead to connect the family to the future of both familial and national stability” (Halberstam, 2005, p.5). Straight time connects family life to collective imaginaries of the climate’s future, including (post)apocalyptic narratives of environmental collapse. It does so, given that imaginaries of apocalypse, whether located in the future or present, symbolises a breakdown of Western society and the normative lifestyles such cultures sustain. Furthermore, in Western environmental politics often appeals to tackle climate change invoke the idea that children, who have contributed the least to climate change, stand to have the most to lose (Sheldon, 2016). (Post)apocalyptic thinking which invokes concerns for children’s futures demonstrate how the familial anxiety comes to feature in (post)apocalyptic visions of planetary instability (Robson, forthcoming). Through the lens of straight time, apocalypse may be understood as the end times of linear, modernist trajectories of progression tied to normative notions of heterosexuality, the nuclear family, and the stability of a single global order. Straight time sustains Western conceptualisations of climate catastrophe as a single planetary phenomenon situated along a universal timeline.

In these articulations of already happening catastrophe and a-yet-to-come apocalypse, there lies a danger of reinforcing the present order of things, and with it the dominance of the structures, regimes, and conditions which have given rise to the crisis in our climate – specifically, fossil fuel capitalism and its legacy of colonialism and imperialism. Others have resisted the temptation to fall into a fatalist diagnosis of (post)apocalypse environmentalism. Instead, they underscore how the imaginaries found within contemporary climate activism critique the structural conditions of the present whilst remaining open to a different order of things (see Friberg, 2022a, Thaler,

2024). Inspired by this genre of work which seeks to affirm and amplify the more radical elements of imaginaries found throughout Western climate activist movements, throughout the rest of this paper I consider how activists' imaginations of the future unsettle (post)apocalyptic straight times. Nevertheless, by taking seriously critiques of (post)apocalyptic thinking (for an example see Mitchell and Chaudhury, 2020), I recognise that activists will still reproduce straight time, but as only one of multiple, coexisting temporalities.

5.3 Making way for multiple temporalities

As part of a broader project which sought to research how futures are produced and circulated in the spaces of contemporary climate activism, I worked with climate activists from the social movement, Extinction Rebellion UK. Extinction Rebellion campaigns against mass extinction caused by climate change through non-violent but often illegal forms of activism (see Taylor, 2021). Motivating their activism is a belief that the future of all life on earth is threatened by the prospect of environmental collapse.[11] Whilst Extinction Rebellion are united in their mission to forestall the threat of planetary extinction – what I have outlined above as straight time – my methods sought to make space for many relations to the future. Making space for multiple temporalities was my priority when designing the research methods because, as Akómoláfé (2019) writes, climate crisis is not an in issue that you "can draw lines around, encompass or own" but rather "it is ontologically unframeable, unthinkable and incalculable." Given the ontological complexity of climate crisis there is no singular mode of time or space through which it exclusively works. Instead, climate crisis is made and remade through various temporal, spatial and social relations; as a 'condition' through which politics are mediated (Bulkeley, 2019). Recognising these multiple temporalities translated into a research process which involved an 18 month long ethnography that sought to document the claims made about the future within Extinction Rebellion protests, meetings, and events. Alongside a participatory arts interview which attempted to actively hold open the possibility for participants to

[11] See https://extinctionrebellion.uk/the-truth/about-us/

articulate competing and contradictory climate temporalities. Through the ethnography, I was able to meet – and, importantly, gain the trust of - the twenty individuals who ultimately took part in the participatory arts interview. As Extinction Rebellion does not have an official membership, the participants were individuals simply considered to be active in the social movement. In this paper, the majority of my research material comes from the artworks themselves along with their associated transcripts.

By participatory method, I mean that my participants played a role in the data collection by creating their own artwork of the (climate's) future. The future as a felt but intangible and ill-defined phenomena can be particularly difficult to research (Coleman, 2017). Even as they actively shape the present, futures may remain unthought because they often emerge through the habitual and taken-for-granted (Lyon and Carabelli, 2016). However, artworks have a distinctive capacity to stay with the affective, embodied, and sensual elements of the world (Hawkins, 2015). Each artwork in this project expresses a lively sense of the future, which was felt as an embodied sensation, often exceeding verbal communication (Grosz, 2011). The interview process itself was not a method for capturing or reducing the affective nature of these temporalities but rather relied on the notion that art processes and artworks themselves offer the possibility for creating knowledge otherwise (Hawkins, 2015). More specifically, creative methods can unravel dominant narratives including the temporalities and spatialities upon which they depend. As they approach experience through juxtaposition and combination of various elements which is not typical of linear narratives (Magrane, 2021). The arts then can hold onto multiple possibilities in what can sometimes be an uneasy tension. Similarly, by centring the research subject as not only a participant but a creator of knowledge, participatory methods offer a means for participants themselves to deconstruct dominant ideologies and their accompanying spatiotemporal logics (Askins and Pain, 2011, Lyon and Carabelli, 2016). A *participatory arts* interview then offered space for the participants to experiment creatively with their imaginations without foreclosing notions of climate crisis and its associated future scenarios to only forms of the dominant

(post)apocalyptic timeline. The outcome was an art process that attempted to stay with an affective, unknowable sense of the climate's future.

Alongside holding open the possibility for various affective temporalities to materialise, the interview was designed to be accessible to those who lacked confidence or experience in art processes. As there was no minimum threshold in terms of artistic competency, it was important then for each step to bring the participants closer to creating a finished artwork. The below steps then acted as prompts which would guide the participant towards a creative expression of their various relations to the climate's future. In addition, each stage also offered a form of standardisation that allowed comparison across what was ultimately a more fluid and experimental form of data collection.

Over the course of a couple of hours, participants created their artwork as I guided them through the following steps. Before each interview, I asked each activist to bring along an object that expressed why they were compelled to be involved in climate activism. Within the interview, objects brought by the participant can generate conversation around sensory experiences (Degan and Rose, 2012), therefore this stage sought to ease the participants into thinking about the future creatively. Secondly, the participants were shown three exhibitions which each expressed various relations to the future climate. Using works from Superflex, Ellen Gallagher and Doreen Reid Nakamarra, importantly these artworks situated Western (post)apocalyptic straight time as one climate temporality amongst many (see Gallagher and Cleijne, 2020, Gilchrist, 2016, Superflex x Cisternerne, 2019). Thirdly, the participants were asked a range of questions which they were asked to respond to verbally and creatively, using accessible materials I had supplied e.g. pencils, crayons, felt tips, acrylic and watercolour paints. And, lastly, to situate their artworks in relation to contemporary climate politics I offered a range of other materials that related to contemporary climate crisis discourses e.g. newspaper clippings, tweets, Facebook comments, memes. Through cutting and sticking, these materials could be incorporated into the artwork if the participant wished. Overall, this art method allowed for an orientation to the future

through multiple and often contradictory temporalities, without requiring the participants to have any pre-existing familiarity or experience with art processes.

5.4 The limits of (post)apocalyptic straight time

Like many of the activists I interviewed, Sam struggled with my questions about the future. Sitting beside Sam, I began to worry about the feasibility of the interview process, especially because even before the interview began Sam had admitted he didn't think there would be a future. As Sam painted, tensions and limits began to surface in his imaginaries of the future (see figure 2). Beginning with Sam, I show how apocalypse timelines flourish when activists struggle to imagine alternatives, posing as the only schedule of climate crisis and attempting to limit other possibilities. Nevertheless, the activists desire to challenge these imaginaries fosters a temporal coincidence which signals a crisis of meaning specific to the West. When asked to imagine what a climate changed world will look like, Sam describes a fairly typical apocalyptic scenario – for him, the future of western societies will be a wasteland:

> Interviewer: "So you think it's going to be a wasteland?"
> Participant: "Yeah"
> Interviewer: "So what inhabits that? Can you, like, give me more detail?"
> Participant: "Ummm, nothing. Nothingness."
> Interviewer: "Nothingness?"
> Participant: "Nothingness. Just, just, just, just rocks you know?"
> Interviewer: "So there's no food?"
> Participant: "They'll be something that comes out of it something that we don't view as life, you know? I don't know how to explain that."

Apocalyptic scenarios, like that imagined by Sam, seemingly exemplify the ease of imagining the end of the world rather than any alternative to capitalism (see Fisher, 2009). Such imaginaries can consolidate a belief in an absence of potential ruptures in the continuity of present experience (Anderson, 2017, Calder Williams, 2011). The environmental (post)apocalypse symbolises a slow deterioration of the present, a slide

Figure two: Sam's painting

towards the loss of 'the otherness of the future' (Anderson, 2017). Sam's claim that they'll be *no future* seems to point to the complete loss of a future – one that is liveable on a planetary scale at least. As I push Sam repeatedly to think about the future, my questions provide clipped responses. His short replies exemplify an obvious struggle to imagine the future, even as he does outline this apocalyptic future world. Wiegman (2000) describes apocalyptic time as "temporal disorientation", where "the future may now be unattainable because the present fails to bring the past to utopic completion" (p. 807). On the page this temporal disorientation is exhibited as Sam's apocalyptic future lacks full coherence, seemingly struggling against its own limits. Blank spaces surround the various attempts at visualising the future. The superrich flee a burning planet on their rocket, dead crops frame other fiery futures, whilst the figures holding hands express an attempt at a more hopeful world. Despite its incoherence (post)apocalypse seems to grip Sam's imagination.

Sam isn't the only activist I talk to who defaults to a (post)apocalyptic narrative when struggling to imagine the climate's future. Robyn – who's painting I began this paper with – also resorts to a (post)apocalyptic imagination when I ask, "if you imagine the future what does it look like to you?":

> Robyn: “Umm, short term is probably pretty negative as it’s a more extreme version of the negatives we’ve experienced recently in terms of extreme weather events, refugees, destruction of environmental resources, um. And I think when I go down that line of thinking, the further future is just abandoned edifices of civilisation, possibly with humans around, possibly not”

Robyn, like Sam, wrestles with the limits of her imagination. An (post)apocalyptic narrative takes hold when Robyn fails to imagine a future otherwise, suggesting that there is absence of an alternative imaginary. Writing on apocalyptic times, Boellstorff (2007) explains “this temporality’s uninhabitability is predicated on its straight character: it is as if only one object can take its place at any point along its linear trajectory” (p.230). A timeline which lacks coincidence underpins planetary understandings of climate change, like those futures imagined by Sam and Robyn, because they emphasise a “universal framing and universal urgency” (Kumar, 2023, p.202). Writing on the Anthropocene, one such version of this planetary climate imaginary, Davis and Todd (2017) explain

> “The Anthropocene is a universalizing project, it serves to re-invisibilize the power of Eurocentric narratives, again re-placing them as the neutral and global perspective” (p. 763).

The universalising tendencies of the Anthropocene are sustained by (post)apocalyptic straight time. As a Western narrative of the climate crisis, the Anthropocene positions humanity’s past as responsible for the overwhelm of the earth’s biophysical processes today and subsequently the endangering of the planet’s future (Baldwin and Erickson, 2020, Chakrabarty, 2018). A ‘temporal disorientation’ which renders “the present as the failure of the future” (Wiegman, 2000, p.807). (Post)apocalyptic environmentalism, like that imagined by Robyn and Sam, suffocates the potentiality of alternative timelines with worlds otherwise - “leaving that trajectory is not a thinkable option” (Boellstorff, 2007, p. 231). The universalising nature of (post)apocalyptic straight time draws limits around the future by refusing temporal coincidence.

Despite the seeming inescapability of the straight apocalyptic timeline, Robyn does express that she wants to challenge these doomist narratives. Following her description of apocalypse, she explains:

> "um, but then that's when I feel like I need to challenge myself because like I do love a post-apocalyptic narratives and have done since I was a kid so I am always a bit like is that just … the narrative I find easiest to imagine…"

Elsewhere, in Will's artwork a desire to push beyond the (post)apocalyptic imaginary is also present. Looping around the page, a green line depicts the limits within which we can safely live on a shared planet in Will's artwork (see figure 3). The segments which are seen stretching past the threshold represent, for Will, the over consumption of various resources beyond what the earth can sustain. His artwork bears a striking resemblance to the planetary boundaries diagram by Rockström et al. (2009), which outlines what they term as "the safe operating space for humanity with respect to the Earth system" (p.472). Similar to Will's own artwork, red stretches beyond the safety of the earth's capacities, sounding the alarm that we have already exceeded the earth's thresholds. This framing of climate crisis as an overwhelm of the earth's biophysical limits underlies a familiar mantra at Extinction Rebellion protests: 'there is no planet b!' (see figure 4). Even through an understanding of planetary emergency, Will wrestles with the limits of his imagination. He remains convinced that the global accumulation of capital will have to stop. He tells me,

> "So, I think that ah when I think about the future, I think about um the end of globalisation and capitalism, because I think they are delusional and because they are delusional, the only way you can stop their delusion is to stop them. So, the fetishisation of GDP, so that, you know, infinite growth on a finite planet and all that kind of nonsense."

While the (post)apocalyptic temporality of straightness may seem suffocating in its universality, there is a desire present for otherwise here which disrupts

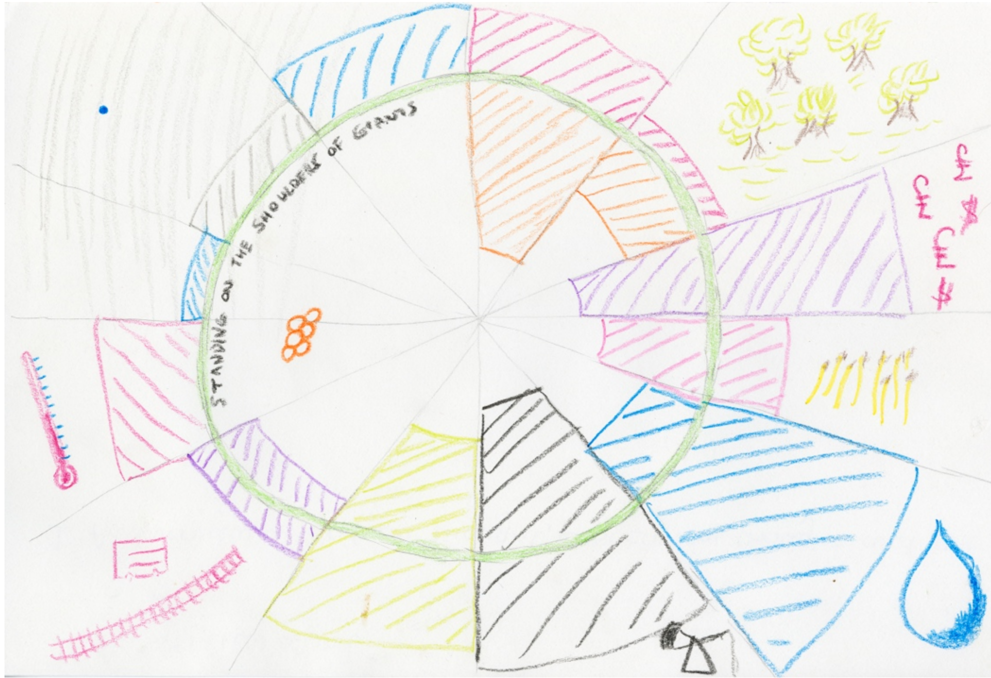

Figure three: Will's painting

Figure four: "There is no planet b!" placards seen at Extinction Rebellion protests in April 2022 (left) and November 2021 (right)

(post)apocalyptic thought. Even though he can't quite put his finger on what it may be, Will's certain that another world will come. This certainty interrupts the straight temporal norms that sustain capitalism's dominance. It disrupts a present where the future is promised to be more of the same. It complicates (post)apocalypse's universalism by suggesting it's specificity. It begins to position the (post)apocalyptic as one timeline amongst many.

At first glance, Will, Robyn and Sam's paintings may appear as typical doomist climate narratives, a slow decline to the world's end – a loss of both the future and its otherness. However, these paintings disrupt the guarantee of the future as a fixed endpoint of a singular linear trajectory (Muñoz, 2019, Boellstorff, 2007). Even though (post)apocalypse's linear course doesn't allow for temporal coincidence (Boellstorff, 2007), these imaginations insist on it. This thinking and feeling towards another temporal-spatial order animates a crisis which has manifested in Western modernist imaginaries (Escobar, 2021). Drawing from indigenous thinkers and activists particularly in Latin America, Escobar names climate change as a 'crisis of meaning' distinctive to Western capitalist modernity, in which the onto-epistemic dominance of a one world imaginary has begun to unravel (see Escobar et al., 2022). This 'crisis of meaning' materialises here in a desire to make sense of the world beyond a (post)apocalyptic globalism. It is a desire which fractures the pretence that straightness is the only timeline. It unsettles the notion that global (post)apocalypse or salvation is our only fate. In this unsettling of straight time, (post)apocalyptic environmentalism is situated as a certain kind of climate imaginary that is specific to Western Modernity, one that is now scrambled.

Notwithstanding his uncertainties, Will's imagination is optimistic. He can't imagine a new world with a new spatiotemporal order, but he knows it will come. For Will, an anticipatory desire works through the limits of this straight imagination. It is a desire that moves beyond the universalising conditions of the (post)apocalypse. His desire speaks to a concern Keeling (2019) names as "the tension between the hermeneutics of recognizing one's alterity within structures that guarantee futurity and the determination of a politics in the face of such a recognition" (p.90). It is the scrambling

of the dominant structures which promise a future without the certainty of a different, liveable future with new epistemic and ontological orders. It points to the desire for a new time and place – or, described otherwise as, "a different organization of things, incommensurable with the logics and violences of straight times operating today, moving now" (Keeling, 2019, p.105). Anticipation moves through and beyond the limit of Will's imagination. As his imagination pulls in different ways, anticipatory desire pushes through the limits of his imagination, moving him towards a time and place that is not yet certain. Will anticipates a then and there, without a guarantee of what that will be.

5.5 'a better world is possible', or a surplus of futurity

The imaginaries described above disrupt the relations which anchor the future as existing only ever in front of the present, scrambling the straightening of time and with it climate narratives which warn of environmental apocalypse. (Post)apocalypse's universalism fractures when activists hope for something else – *something otherwise, sometime otherwise* – and this climate imaginary is situated as a narrative that is specific to a crisis of meaning in Western Modernity. Even as imagination falters, anticipation persists, demonstrating temporal coincidence and the possibility of otherwise. Activists still hope for new worlds without a clear understanding of what or how they could be. It is such a desire that can move through and beyond the limits of imagination. Across the next section of this paper, I explore further the qualities of this anticipatory desire. I illustrate how such an impulse produces a surplus of futurity which further confuses the straightening of time and its dependence on the separation of Nature from Society.

Fracturing the page in two, a dark line of watercolour holds two imaginaries in tension (see figure 5). Between brushstrokes Tasha tells me that, for her, the future is,

> "On the one hand, very, very positive and exactly at the same time really scary and depressing and um challenging for every section of society."

Figure five: Tasha's painting

Here, two imaginaries with multiple temporalities and spatialises crystalise in my sketchbook. Tasha describes a "desperate sense of hope" but still she envisions a "pretty fiery future for large parts of the world." Like we have seen with Sam and Will above, Tasha speaks of the super-rich's attempts to "barricade" themselves from what she sees as "the reality of what's going on." These imaginaries are held in tension through Tasha's artmaking; they speak to a divided society, in which the effects of climate crisis are felt unevenly through time, space and society. A boat crosses across through the line dividing these two imaginaries, at first seemingly expressive of Tasha's concerns about how people will have to 'move' and how certain areas will face 'overcrowding'.

Andrew Baldwin's work importantly shows how concerns around migration in the context of climate crisis are racialised; he writes that "the climate-change migrant expresses a set of 'white' anxieties to do with an impending loss of control and disorder, and the dissolution of boundaries" (Baldwin, 2013). This painting then could

be read as animated by racial anxieties surrounding climate migration – or what Gergan et al. (2020) calls "the white supremacy politics of the apocalypse." However, what I want to coax further into existence is the ways in which Tasha disrupts the straightening of (post)apocalyptic time and the racial registers through which this timeline works. To do so is to adopt a "performative orientation to knowledge" that grapples with "scholarly responsibility" for opening up new possibilities for better worlds (Gibson-Graham, 2008). This is an important move as by actively negotiating the power relations that constitute imaginations of the climate's future, imagination can act as a tool for carving out more egalitarian futures.

Still, tension remains on the page where Tasha imagines the climate's future. The boat crosses through the partition of these imaginaries, illuminating too the permeable nature of the future. Reminding us that a movement between and beyond the limits of these temporalities is possible. Animating this tension then is not only concern for the planet entangled within anxieties about migration. But more hopefully, a desire for a world otherwise – a type of futurity dependent on a logic that undoes rather than reinforces the dominance of Western Modernity. This desire materialised through a set of principles which appears at odds with a planet governed by fossil fuel capitalism. As a swirl of colour erupted across the sketchbook, Tasha explains how she's hopeful for a future in which "nature is valued" and that "everybody understands that we are part of nature, that we're not separate from it." Tasha gestures towards another world with different values even without a concrete design for otherwise. It is what Muñoz (2019) describes as an 'surplus' of futurity – that is an excess of affect that burns with anticipation. This form of futurity emerges not as the endpoint as linear temporal trajectory but rather exists in quotidian moments. It is what Muñoz (2019) refers to as,

> "a way of being in the world that is glimpsed through reveries in a quotidian life that challenges the dominance of an affective world, a present, full of anxiousness and fear" (p .25).

In this painting glimpsed is a utopian desire for a different world yet to come. For Tasha, there is a sense of embeddedness within our natural world and a desire for

connection that always escaped full comprehension. By avoiding the logics of figuration, Tasha gestures towards a future that burns with promise even as it escapes full recognition.

Figure six: Jess' painting

Across my other interviews, this sense of embeddedness within our natural world continued to surface. Jess painted a desired future where "people would be in sync with nature" and communities would work together locally "rather than like entire population of the world as one community" (see figure 6). Her painting remains mainly abstract however at the centre figures begin to emerge from her loose brush strokes. They point towards a sense of community that is not quite legible within the logics of our current social order but utopian in nature. Muñoz (2019) writes that,

> "to live inside straight time and ask for, desire, and imagine another time and place is to represent and perform a desire that is both utopian and queer" (p. 26).

'Utopian' and 'queer' because, for Muñoz (2019), to do so is to imagine a future not as solitary or isolated but as a collective that which through its very imagining rejects the straightness in the present. As a surplus, futurity surfaces in moments of contact - in those forms of sociality that cannot be reduced to the temporal logics of straight time. This rejection of a straightness marked by isolation and singularity surfaces elsewhere when another participant, Becky, discussed a sense of "connectivity" across time and space. As Becky struggled to articulate a sense of a world in which everything and everyone is interrelated and connected, her hand – sometimes clutching a paintbrush, sometimes clutching a felt tip - moved freely across the paper, spilling out lines in all directions (see figure 7). Across these artworks, there is an intangible sense of fluidity that escapes full comprehension. They are all moved by a sense of embeddedness within our shared world, that isn't captured fully by words or on the page. It is an anticipatory desire for something new that pushes against our world's current spatiotemporal logic, pointing towards the presence of a better world.

Figure seven: Becky's painting

This surplus of futurity complicates a thought structure that characterises Western Modernity and its associated climate responses – the separation of Nature and Society. In his discussion of the Anthropocene, Moore (2017) argues that capitalism is underpinned by "the premise that we inhabit something called Society, and act upon something called Nature" (p. 600). Adding further complexity to this spilt, Anthropocene thinking, as a Western mode of climate governance, understands "humans as part of nature whilst separating Humanity from Nature" (Moore, 2017, p. 597). By recognising humanity as a 'geological force', humanity becomes understood as a force acting within the natural world. At the very same time, Nature is imagined as wild and untouched, anticipating either stewardship from, or destruction by, a Humanity so powerful it now shapes geology (Moore, 2017). So, even as climate crisis itself muddies the (fictional) division of these two categories, Anthropocene thinking relies upon a nature society dualism which continues to mask "the fact that relations between humans are themselves produced by nature" (Vergès, 2017, n.p.). Tasha, Becky, and Jess imagine a world of connectivity that disrupts human exceptionalism. They imagine communities in which nature is respected and where there is a recognition of interrelation with other, wider, worlds. They are futures which we can gesture towards without full comprehension. They echo a familiar mantra heard in chants, speeches and songs or portrayed on banners and placards at Extinction Rebellion protests – 'another world is possible' (see figure 8). It is the anticipation for a then and there, that isn't fully recognisable from within the thought structures of (post)apocalyptic environmentalism.

As an affective surplus of futurity, these principles disrupt a straightening of time which divides humanity from nature along a temporal axis that progresses from past, to present to future. Returning to Tasha's painting for a moment, it is possible to understand the boat not only as expressive of racial anxiety within this world, or even as simply the permeable nature of such an imaginary, but as also the undoing of a division that holds Society as separate from Nature, and with it the temporal orders that such a division sustains. In these interviews, the messy nature of art processes enabled for a holding together of competing temporalities in a creative and speculative surplus. Here, "the utopian function of art" (Muñoz, 2019) – their ability to promise a surplus of

Figure eight: A better world is possible' placard spotted at an Extinction Rebellion protest held in November 2021

futures otherwise - loosens the grasp of (post)apocalypse time on Tasha's imagination (p. 7). In these artworks, any understanding of climate crisis is complicated by the presence of multiple disorderly imaginaries. Some of which reinforce white (post)apocalyptic anxieties and others which rupture the dominance of this imagination. There is not a singular climate problem (see Bulkeley, 2019), rather climate change's multiple forms are enacted in this temporal disorientation, alongside both the conditions which have led to crisis and other ways of being. As these paintings show there are possibilities for different temporal relations towards climate crisis, together with other ways of knowing, and responding to, climate breakdown.

5.6 Making futures present

"If you imagine the future, what does it look like?" I ask. Lily replies, *"I'm a bit frightened to imagine the future really. I'm almost best not imagining the future."* Lily is struggling through my list of questions. Later in the interview, I ask questions that I

anticipate will elicit responses about Lily's hoped-for future - not the future she expects but the one she desires. I assume these questions will be easier on Lily, who increasingly looks saddened by each question focused on the future she is frightened of. *"So, who'd be in this future?"* I ask expectantly. She hesitates and her voice stumbles towards a sentence, *"Um, that's ah, that's, I just find that one a quite difficult question really."* It is in moments like this, when a question remained unanswered, where the page lays empty, or when my own expectations are unmet, that I worried the creative interviews were a failure. Why isn't she imagining a future - apocalyptic or otherwise? Was the process too complex? Or maybe my questions too abstract? Imposing strict parameters on my method could foreclose an array of potential futures. It felt important then to leave space for various relations to the future to emerge. Reflecting now on these twenty artworks, these moments of (what felt like) failure appear now as the fracturing of the typical tale of environmental (post)apocalypse. Previously, I have outlined how principles held by the activists worked as a surplus of futurity that confused the straightening of time by undoing the separation of Nature from Society. Next, by returning to those moments where participants really struggle to imagine otherwise, I show that even as a surplus which teases the limits of imagining, futurity disrupts the present in real and material ways.

As she spoke slowly and sadly, Lily's demeanour indicated despondence at the prospect of looming climate catastrophe. On the page, she draws an earth with fiery areas surrounded by rising waves, but this is only legible when you look closely. Lily's painting is full of imagery and colours that are strikingly positive. A sun, a heart, a rainbow, and a circle of people holding hands point to the presence of a more hopeful alternative (see figure 9). After gentle coaxing, Lily articulates her desire for a world organised around principles in line with those articulated by other activists. She desires to live more simply, with less consumption and waste, to respect and care for others as well as the earth, and with greater sharing of objects but also concerns and worries. I ask her if she thinks such a world is possible. She replies:

> "I don't know. I think, I really, I don't know if it's possible, Amy. I mean, you know, and sometimes I think, that, that, it's too late, but then I think, okay, it may

be too late for something else, but it's not too late, um for yeah, because whatever happens, it's not too late to live in a way which is kind of loving."

My question remains attached to a sense of the future out-there ahead, whilst Lily's uncertainty draws the future back to the present. In the absence of a clearly defined future world, Lily expresses a set of principles and values which ground her life presently. By 'living simply', having less, sharing with and listening to others, Lily tries to foster 'more harmony' throughout society and within nature in her daily practices.

Figure nine: Lily's artwork

This all seems pretty abstract however Lily's principles underpin her professional role, as do the principles of the other activists I interviewed. Many performed roles in their community, undertook certain forms of employment, and some had even opened businesses, which aligned with a desire to live in more ethically within the community around them. Breaking with ontologies that separate praxis from imaginary, Celermajer et al. (2024) argue that how we "live on the Earth and in relation to each other and the

natural world can entrench or challenge existing imaginaries, and also engender new ones" (p. 1019). In doing so, they emphasise that imaginaries then arise from, and are productive of, the relations performed within and beyond human life. Whilst remaining always beyond the grasp of full comprehension, futurity here acts a utopic surplus that works through Lily's relations within the world. Futurity is performed through Lily's actions in the present, unsettling the (post)apocalyptic feeling that is 'too late' to live differently and further confusing the straight temporal order.

Others across the social sciences who have written on the post-apocalyptic condition (Cassegård and Thörn, 2018, Huber, 2022, Friberg, 2022a, 2022b) underscore how the imaginaries found within contemporary climate activism critique the structural conditions of the present whilst remaining open to a different order of things. Through a utopic lens, these authors resist the temptation to fall into a fatalist or defeatist diagnosis, instead locating radical potential within (post)apocalypse environmentalism itself. For example, Thaler (2024) in his diagnosis of (post)apocalyptic environmentalism as 'eco-miserabilism' illustrates how such a disposition towards climate change is "a unique kind of critique that keeps being sustained by a hopeful, even utopian disposition." In my reading of (post)apocalyptic environmentalism, potential is located not within (post)apocalyptic environmentalism itself, but instead those moments which disrupt its imagining. Through the actions of Lily and the other activists a collective will to perform alternative modes of relationality arises as previously dominant modes of relationality fray (Celermajer et al., 2024). By listening to, sharing with, and caring for others, Lily's desired future plays out in her present as she tries to live in harmony with others and the earth. By living in a "way which is kind of loving", Lily's relation to those around her antagonises individualist and consumerist modes of living which separate society from nature. Lily's desired future disrupts the (post)apocalyptic imagination.

As she had low expectations for the future of the planet, Tilly, like others I have interviewed, explained that she tried not to think of the future too much. Struggling to imagine a better future with certainty, Tilly told me:

> "That idea of like how it could work positively, it's hard to understand. It's hard to imagine because it would be a totally different structure".

By staying with the hard to imagine, or what Tilly calls a "blurry" future, it is possible to understand Extinction Rebellion's protests as prefigurative politics – that is a performance in the present of a desired for future (see Jeffrey and Dyson, 2021). This blurry otherwise was "glimpsed" through moments of activism as Tilly explained,

> "Yeah, it's hard to imagine how that would work, but I see, I feel like I see kind of glimpses of it through activism. And that's kind of why it's so interesting. What's inspiring, often about activism are these like little glimpses. So, a little bit like I was talking about how that moment on the bridge with Extinction Rebellion were, like ohh wait, we could do things differently. Like what if actually the future could be this place where like we all occupied all the bridges in London, or like you know, doesn't have to be that, but maybe something a bit more practical and useful. But like, you know, turned all the banks into like food banks…"

Tilly is referring to Extinction Rebellion's Waterloo Bridge occupation in 2019, where almost 50 trees were placed by activists who blockaded the bridge (Taylor and Gayle, 2019). Complete with a skate ramp and yoga lessons, the occupation of Waterloo bridge for Tilly *"was just like a glimpse into, like, a different sort of reality."* Across the social sciences, the term "climate experimentation" has come to describe a particular form of prefigurative politics in which individuals and organisations have sought to prefigure futures that may avert apocalyptic climate scenarios and secure better climate outcomes (Bulkeley, 2023, Edwards and Bulkeley, 2018). Climate experimentation relies upon a pre-emptive logic and calculative rationality that seeks to govern a climate future which remains uncertain but nevertheless threatening (Edwards and Bulkeley, 2018). Whilst there is a strong governance aspect to Extinction Rebellion's politics (Robson, forthcoming), calculation and pre-emption are not the modes through

which this "different sort of reality" works. As this form of futurity ultimately escapes full comprehension, activists act more tentatively and speculatively toward the future.

Figure ten: Tilly's artwork

Futures remain "blurry" even as they are desired and enacted. This blurry surplus is present in Tilly's artwork (see figure 10), where abstract colours burst through a road. Tilly explains that the road depicts feeling stuck within the rat race of capitalism, whilst the colourful forms are an attempt to express "*this moment of an alternative world*." Important to this 'reality' for Tilly was a change in society's priorities which would see the health and well-being of the collective as of paramount importance. Anchored in the performance of protest, these principles create worlds that antagonise (post)apocalyptic straight time and its logics of transparency and legibility. They perform a desired future that unsettles straight time through "glimpses of an actually existing queer future in the present" (Muñoz, 2019, p. 61). These future worlds are not ignorant of the structures of violence that hold together the present. As others have shown (Thaler, 2024, Friberg, 2022a), and as was the case with the activists I interviewed, these imaginaries critique the structural conditions of the present whilst remaining open to a different order of things.

As these activists struggled with the complexity of imagining the future, they in fact gestured towards that which is surplus to our current ways of understanding climate crisis. Even as that which is not quite legible, these future worlds remain grounded in the changeability of worldly relations. And as social bonds fray in a capitalist system that prompts individualisation and competition, these imaginaries guide lives which attempt to live with more care towards others. Their presence and effects on the world signal how climate crisis is (re)made through alternative temporalities that surface through the struggle to imagine otherwise.

5.7 Conclusion

By drawing together work in the social sciences which is critical of depoliticising tendencies of the climate debate (Garrard, 2020, Hulme, 2019, Swyngedouw, 2010) with the work of queer theorists (Halberstam, 2005, Keeling, 2019, Muñoz, 2019), I have argued that the apocalyptic and postapocalyptic imaginaries found within Western environmental politics are typically infused with a scientific rationalism that (re)produces a temporality that straight. Straight temporalities unfold linearly and predictably as they work to naturalise and sustain Western imaginaries of climate crisis and the norms and values upon which such imaginaries rely. (Post)apocalyptic straight time risks reinforcing those systems and structures which order society – namely, racial fossil fuel capitalism (see Vergès, 2017).

In this paper, I have sought to explore how climate activists' desires for better worlds can unsettle the grasp of (post)apocalypse on the imagination of the climate's future. Specifically, I have argued that the future does not always emerge as a continuation of the present in imaginations of climate crisis. Instead, I have shown how climate futurity may arise as a *surplus* which reaches beyond the limits of imagination, causing disruptive effects for the usual stories told about the changing climate. As an affective and anticipatory surplus, the future fractures the universalist narrative of planetary crisis by insisting on temporal coincidence – on the presence of multiple and competing temporalities.

Alongside situating (post)apocalypse as a specific rather than universal form of temporality, I have argued that futures which exist in surplus confuse the straightening of time and its reliance on the division of Nature from Society. In the artworks collected for this project, an anticipation based on a sense of connectivity and embeddedness disrupted the thought-structures and logics of capitalist modernity, such as individualism, consumerism and human exceptionalism.

Even when residing as excess, climate futurity has transformative impacts on relations in the present. As a surplus which teases the imagination's limits, futurity interrupts the present through an uncertain but nevertheless performative politics. The activists I interviewed practiced relations with others based on principles and values different from those which underpin fossil fuel capitalism. Lily tries to cultivate harmony with the world around here, including those in it. While Tilly saw in Extinction Rebellion occupations as a chance to glimpse another reality – in which the health and well-being of society was prioritised.

These relations to the future differ from those primarily analysed across work in geography which focuses on climate futures (Paprocki, 2020, Oels, 2013) - where there has mostly been a focus on the calculative and pre-emptive logics of 'anticipatory action' (Anderson, 2010) and 'climate experimentation' (Bulkeley, 2023). By conceptualising climate futurity as an affective and anticipatory surplus, I have demonstrated the presence of multiplicity within contemporary climate imaginaries. In exploring the multiple temporalities of climate crisis, I have contributed to work that illustrates the multiple nature of climate crisis itself (Bulkeley, 2019, Hulme, 2008b, Machin, 2013, O'Brien and Leichenko, 2019) and also work in geography which studies imaginations of the future more broadly (Anderson, 2017, Jeffrey and Dyson, 2021).

Furthermore, my notion of (post)apocalyptic straight time builds upon and contributes to literature that is critical of the white anxieties that animate environmental (post)apocalypse (Bettini, 2012, Mitchell and Chaudhury, 2020, Gergan et al., 2020). It

does so by situating itself within existing literature on contemporary climate movements that attempts to read such activism through a reparative lens (Friberg, 2022a, Cassegård and Thörn, 2018, Thaler, 2024). Differing from these existing accounts of contemporary climate activism, this paper locates potential for radical politics not in (post)apocalyptic thinking itself, but in those moments that disrupt its dominance. Future work by others might consider other moments which refuse and interrupt the (post)apocalyptic narrative, locating political potential beyond the narratives which typically dominant climate change discourse. It is by staying with those moments where the activists have struggled to imagine a better then and there, this paper has shown how a failure to imagine the future is not always reason to lose hope.

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Six

Conclusion

It's one of those summer days where the sun is so blinding that no matter where you look, you'll feel your eyes scrunch up. The path I take through the park is unshaded. Sweat beads on my back, while my lack of sunscreen bothers me. It's a sweltering day but it's forecast to become much hotter. What feels like oddly nice weather in fact has a sinister undertone. The Met Office has issued an extreme heat warning for much of the UK over the next two days. Number 10 has declared national emergency, CORBA meetings are underway, but the Prime Minister has been largely absent. A couple days later, the UK hits 40°C for the first time. Today's sunshine is a persistent reminder that this meeting takes place against a backdrop of political calamity and an ever warming planet.

As I make my way through the park, I am greeted by an enormous banner reading, 'climate anxiety? The remedy is action.' There's a washing line too, with t-shirts sporting Extinction Rebellion slogans and logos, one reads 'rebel', another 'disobey.' Lying on top of the scorched grass, under the washing line is a blanket with the message, "We are Extinction Rebellion. Join Us". This local Extinction Rebellion group are having a community day, where they hope to entice new 'rebels' to join the movement. It's an afternoon filled with vegan cakes and print making, which passes by without incident, but under the watchful eye of two police officers, who linger a short distance away. Another reminder, we're watching you.

As the day slips away, I catch up with other activists. Lauren approaches me to ask if she can take part in a painting interview. I describe the process to her, explaining that the idea is to make an artwork of the future together. She's keen to take part because she thinks that's what Extinction Rebellion are missing at the moment - a clear vision for the future. We need to tell people what we want, she tells me, what the world can look like.

Later I ask Chloe about another regional Extinction Rebellion group. I've heard that they're no longer meeting after a fall out around rebellion. Chloe calls Lauren over. Are you still part of the regional group? Chloe asks. Lauren explains there have been frictions over Just Stop Oil's involvement within Extinction Rebellion.

Back in April, Just Stop Oil activists sabotaged fuel distribution in South East England, with blockades at oil terminals that saw activists lock and glue themselves to tankers, tunnelling under roads and climbing onto lorries attempting to deliver fuel (for examples see Reeves, 2022; Gayle and Davies, 2022; Batchelor, 2022). These protests came at a time when the UK's cost of living crisis was sharply accelerating and as fuel prices reached a record breaking high, leading to negative stories in the newspapers and leaving the activists deeply unpopular with the general public (see also Cole, 2022; Church, 2022).

I'm told by Lauren that some Extinction Rebellion activists are concerned that the blockades will impact fuel prices, which will disproportionately affect working class people. Chloe asks, what about strikes though? Working class people withdraw their labour then? I explain that's about working class solidarity though. Just Stop Oil are mainly middle class activists, whose actions could impact the working class. Lauren is unconvinced. She's certain that these tactics are important and appropriate. She utters exasperatedly "we're not going to have a future! End of story!"

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6.1 No future?

Is the loss of the future always the end of the story? What does the world look like without *the* future? Might there be other temporalities which foster alternative narratives? Answering such questions across this thesis, I have explored the multiple timelines, futures, assumptions, relations and affects which compose the stories told by climate activists about our warming planet. I have sought to grapple with many futures, both personal and public, unknown and known, marginal and dominant through methodological experimentation. By blending creative practices (painting, drawing, collaging) with research techniques (ethnography, interviews), my speculative methodology has begun to unravel the various temporalities which compose the complexity of climate crisis. Overall, my time in Extinction Rebellion has shown that the end of *the* future signals the loss of some, but importantly not all, worlds.

Whether the future is imagined as a yet-to-come crisis or the worsening of an already existing disaster, I have argued that (post)apocalyptic thought dominates western climate activisms. In (post)apocalyptic imaginings, like those articulated by Lauren above, we stand to lose a shared, planetary future. In the end, we're told, the threat will be indiscriminate. Extinction will come for every last one of us. Throughout this thesis, I have argued that these (post)apocalyptic futures rely on what I and others (Muñoz, 2019; Keeling, 2019; Boellstorff, 2007) refer to as straight time. Straight time unfolds linearly, from past to present to future. In the spaces of climate activism, straight time assembles climate crisis as a planetary phenomenon, progressing along a universal timeline. Straight time will not allow for temporal coincidence (Boellstorff, 2007), so in (post)apocalyptic environmentalism the future is reduced to only two options: apocalypse or salvation (Davidson and Kemp, 2023).

As well as ordering the relations between past, present and future, (post)apocalyptic straight time regulates political norms also. In (post)apocalyptic environmentalism, the future which is threatened is that of the next generation's. It is a future built on heteronormative belief that we should make sacrifices today for the imaginary children

of tomorrow. It's a future which tries to securitise the fraying dominance of western modernity. So, while (post)apocalyptic thought may appear to invoke a planetary future that is universal, totalising and shared, in reality it invokes a future that is highly specific – a future that is straight, but also one that is white and middle-class. By attempting to securitise the present from climate change, those who imagine these (post)apocalyptic futures project forward the present's unevenness into the future. Environmentalism based on (post)apocalyptic thinking allows for a continuation of the conditions which have caused ecological and environmental crisis – fossil fuelled capitalism and its deeply patriarchal and racial logics.

Despite the universal and totalising character of *this* future, I have sought to show that it is in fact only one of the many futures which exist within activist imaginations of climate crisis; that there are other ways to envision worlds and futures beyond extinction scripts, existential anxieties and end-thinking; that the future is never only planetary; that the future needn't always come after the present; that climate activists, who believe that it already might be too late to halt climate change, still enact future worlds full of intimacy and care; and that ethical regimes in climate activism exist beyond attempts to save 'our only future.'

Activists reach for futures they can't quite articulate or imagine, which nevertheless have material consequences in the present. These alternative futures push against the spatiotemporal logics of our current world, emerging as an affective and anticipatory surplus. This surplus of desire for an otherwise is based on an ethos of embeddedness and interconnection. These futures then refuse a division which is central to the capitalist system which has caused the crisis in our climate - the separation of nature and society. Such futures emerge in the spaces of activism. They are a skate park on Waterloo Bridge. They are a pink boat moored in Oxford Circus. They are a community day held in a sunny park.

They are further drawn out in what José Esteban Muñoz' (2019) calls "the utopian function of art" (p.7) – ability of the arts to imagine a future otherwise. My speculative methods, which have brought together art processes (panting, drawing, collaging) with

research techniques (interviews, ethnography), have further encouraged the utopian impulses which already exist within the spaces of Extinction Rebellion activism. They have sought to stay with the difficult to imagine and the hard to articulate, recognising that worlds are built and transformed in ways which are not always comprehensible.

Acknowledging that climate crisis moves across multiple timelines and that its futures take many forms does not mean turning away from the realities of climate science. The uneven effects of climate crisis are undeniable. Those who have contributed least to the current climate and ecological crisis face the worse of its effects. My issue is not with whether climate crisis exists but how futures are reduced by the epistemological authority of the geosciences (Hulme, 2011). Overly scientific theorisations of climate futures, however, suffocate the possibility for an alternative arrangement of life. The reduction of climate crisis to only a biophysical event whose outcomes can be accurately simulated and modelled reduces the future to (post)apocalypse - as a to-come/worsening catastrophe, that we know how to advert but which we are knowingly choosing not to. It is in (post)apocalyptic thought where we lose the future.

These arguments rely upon and build from the four areas of research outlined in my introduction – critical climate studies, future geographies, climate affects, and work on activism. In the remainder of this conclusion, I outline how this thesis has contributed to each of these fields and what possible work could follow. To finish, I reflect upon what environmentalism could look like without existential anxieties.

Critical Climate Studies

This research has sought to contribute to critical climate studies an understanding of climate change's temporal complexity. Focused on scripts, narratives and imaginations, I have approached this temporal complexity through the lens of cultural geography to make the following contributions.

I have shown that there is no single form of time or space through which climate crisis exclusively functions. Like others working on climate change geographies, I have

developed a notion of climate change as multiple and relational – as that which is made of many affects, processes, relations, and dynamics (Machin, 2013; Bulkeley, 2015; Hulme, 2009). In particular, my research has shown that multiple, competing and often contradictory temporalities make and remake climate change. It is through these temporalities which climate change emerges not as a pre-existing and external biophysical problem but instead as a phenomenon that comes into being through our many attempts to know, respond to, govern and live with it (Hulme, 2008; Bulkeley, 2019; Stripple and Bulkeley, 2015). Focused on imaginations, scripts and narratives, this thesis explored the culture and social dimensions of climate temporalities. By focusing on these environmental imaginations, I show that climate crisis is not simply a scientific problem, but in fact a cultural, political and social phenomenon also (see also Yusoff and Gabrys, 2011).

I have developed a methodology that can grasp the temporal complexity of climate change. Drawing from a wealth of work within creative geography which illustrates the capability of arts method for researching futures and affects (Hawkins, 2015b; Robson, 2024; Coleman, 2017), I devised a methodology here for the purpose of exploring climate futurity. From the outset I understood climate change as deeply relational, so underlying my methodology design was a desire to account for the multiple ways in which climate futures are made (Paprocki, 2020; Baldwin, 2022). It was by utilising both traditional social scientific methods (ethnography and interviews) alongside creative processes that my method could make space for the numerous timelines through which climate change works. Every method has parameters, so any process I designed would always foreclose some relations to the future while encouraging others. Nevertheless, I thought hard about how I could challenge dominance and encourage the more marginal through the parameters of my method (Gibson-Graham, 2008; Gibson-Graham, 2014). It is by blending various creative practices, research techniques, theories and concepts from across and beyond geography that this methodology allows for multiple temporalities to exist in tension. This thesis contributes then a methodology for critical climate studies – a methodology for researching the numerous relations, affects, assumptions which make climate futures.

Through this methodology I have been able to both locate - *and more importantly challenge* - the dominance of the biosciences in imaginations of the climate's future. Others working on critical approaches to climate change have illustrated that scientific knowledge dominates climate politics – and unduly influences understandings of what exactly climate change is (Hulme, 2011; Castree, 2015; O'Brien, 2010). Building on this work, I have shown that these scientific framings of climate crisis rely on particular forms of time and invoke certain forms of futurity. More specifically, I have argued that notions of climate change as a biophysical problem relies upon straight times and produces (post)apocalyptic futures. While they are particularly dominant imaginaries, I have demonstrated that these temporalities and futures are one of a number which circulate within discussions of climate change.

By recognising that multiple temporalities compose climate change, this thesis undoes the authority of the climate sciences over imaginations of the climate's future (Hulme, 2011; Castree, 2015). No longer are climate futures simply that which is simulated by complex climate modelling systems (Hulme, 2011). No longer does climate change simply move along a linear and predictable timeline drawn from the geosciences. No longer are climate futures reduced to either apocalypse or salvation (Davidson and Kemp, 2023). Instead, climate change instead is held in place by numerous temporalities imagined by many actors, through multiple means and to different ends. All of which blur any division of nature from society which geoscientific imaginations seek to uphold.

These contributions add to emerging debates in which cultural geographers have begun to examine the dominant narratives that inform notions of climate change (Anderson, 2023; Symons and Garlick, 2020). Despite the many contributions cultural geographers have made to the study of nature and society, there remains much less research by cultural geographers on climate change than our disciplinary counterparts. Bulkeley (2019) argues that "what is required is a greater engagement with the ways in which climate change comes into being, and what in turn it creates, entangles, undoes and removes with it" (p.11). Adding to this call, I argue what is needed is greater engagement with the ways that climate change comes into being as a social and

cultural issue. Future work by cultural geographers could further explore how climate change comes to be shaped through the material and affective relations made in cultural worlds. Such work could help us better understand how climate change is shaped through collective moods and imaginations.

Future Geographies

Alongside the above contributions to critical climate studies, this thesis responds to repeated calls for geographers to develop research on how individuals imagine and perform counter-futures (Cox, 2024; Anderson, 2010; Jeffrey and Dyson, 2021). By focusing the felt presence of climate futures, this research seeks to build upon and add to work in future geographies.

I contribute to this field an understanding of how futures are scripted. Research on futures within geography mostly focuses on how powerful institutions govern futures which could threaten the status quo of liberal democracies (Anderson, 2010; Erickson, 2020; Oels, 2005; Paprocki, 2019). By focusing on the imaginations of Extinction Rebellion activists, this thesis considers the mechanisms through which individuals perform futures. In *'Before it's too late: The Extinction Script, Multi-Species Reproductive Futurism and Extinction Rebellion'*, I argue that 'the extinction script' is a dominant mechanism through which climate futures are composed. The extinction script operates through the belief that you must act now, do so urgently or we will all die. Underpinned by straight times, the extinction script implores the already threatened subject to action by configuring the future as white, heterosexual and middle-class. While this paper focused on the extinction script, I argue that there are many climate scripts circulating within the spaces of climate activism and climate change. These climate scripts can show us how the future is made present and point to how climate change is governed by various actors across many spaces. Through my concept of climate scripts, this thesis then offers a novel mechanism through which activists perform the climate's many futures.

This thesis explores the different forms relations take towards climate futures. By analysing the practices and logics of anticipatory action and climate experimentation, geographers have thoroughly explored how institutions attempt to foreclose unruly futures to varying degrees through climate governance (Neale, 2016; Bulkeley, 2023; Oels, 2011; Rickards et al., 2014). In existing geographical work on climate futures, the primary relations which are investigated are anticipation, experimentation and foreclosure (Edwards and Bulkeley, 2018; Anderson, 2010). This thesis aims to complement this present work by considering a different set of relations to the future – those full of chance, risk, indeterminacy and possibility.

In particular, I have explored how queerness troubling or antagonistic disposition can provoke indeterminate futures and surprising entanglements of temporal relations (Keeling, 2019). For example, in *'Straight time in the (Post)Apocalypse: Imagining Climate Futures with Speculative Methods'*, I show how futures arise as an anticipatory and affective surplus. Stretching beyond the capacities of imagination, it is form of futurity that invokes interconnection and embeddedness rather than capture and control. By drawing on queer temporalities, this thesis broadens geographical understandings of temporal relations, showing that surprising relations exist within the imagination of climate futures.

This thesis attends to the ways in which sexual politics inform climate futures. Drawing on queer theories, this thesis complements existing research which powerfully illustrates how climate crisis is shaped by race (Baldwin and Erickson, 2020; Yusoff, 2018; Davis and Todd, 2017). Despite the intersectional nature of politics, geographers are yet to thoroughly explore how sexuality and sexualisation also inform climate change (for an exception see Clark and Yusoff, 2018). In this thesis, I have aimed to address this absence of research by focusing on how heteronormativity moves through the temporalities of climate crisis. More specifically, I propose that planetary imaginaries and earthly futures are connected to - and in fact police - the intimacies which take place between bodies. I show that the threatened future of humanity is intimately connected to how climate change threatens the promise of a better future for the western, nuclear family. Through my focus on queer temporalities, I contribute an

understanding of how heteronormativity composes futures in our climate changed world. This is not a case of either/or. Just like all forms of difference, sexuality and race are inseparable, each comes to be made through the articulation of the other. Focused upon how differences compose climate futures, my approach therefore stresses the inseparability of sexuality from the making of other categories of difference, such as race and class.

Considering these contributions, what could be the next steps for geographers interested in climate futurity? Much more work is needed to better understand how sexual politics shape the conditions which have led to climate crisis and the responses which emerge within these conditions. My research has examined how sexual politics infuse only one climate movement however sexual politics circulate in many other sites and spaces of climate (in)action. Others then may wish to examine the iteration of extinction scripts elsewhere; or locate entirely different climate scripts concerned with different futures; or even devise entirely new mechanisms through which individuals perform futures. Or, as I have done here, further work could explore further mechanisms through which individuals, rather than institutions, perform futures. Other forms of futurity and types of relations will exist beyond those I have discussed here, meaning more work is required to better understand the role of sexuality in the temporal orders of climate change.

Climate affects

In addition to the research fields discussed above, I have made a number of contributions to emerging research in the social sciences on climate affects. In particular, I have examined how climate futures come to be made affectively present in the spaces of climate activism through the following contributions.

This thesis shows that future climate scenarios are often experienced through a strength of feeling. Affects such as hope, fear, and urgency all surface through and within the futures imagined by climate activists. These feelings are far from neutral. Instead, I have shown that they are shaped by the forces of heteronormativity, whiteness and class.

Fears about the end of the world reflect attempts to securitise the fraying dominance of Western modernity. They signal the threatened promise of an always better tomorrow – or what others have called a crisis of meaning unique to late-stage capitalism. It is through these affective registers that the unevenness of the present is projected forward into the future.

I have shown that the affective presence of activist futures can also challenge hegemony in the present. Activists desire and anticipate futures without fully understanding of what could be. The nature of futurity means it can reach beyond the limits of the imagination – as an anticipatory and affective surplus, which animates intervention in the present. Whether futures are radical or further cement the existing arrangement of things, my thesis illustrates that climate futures are produced, shaped, undone, and mediated through affective experiences.

I have explored how the affective complexity of climate crisis comes to be regulated. In this thesis, I have argued that activists attempt to mobilise others to their cause by scripting futures. However, in scripting futures activists also regulate the affective complexity of climate crisis. The extinction script, for example, works through the affective registers of fear and urgency, but also, and importantly, hope that catastrophe can be averted. By drawing such affects, the extinction script sketches a path between discourses and action. Existential anxieties are channelled through climate scripts into campaigning practices which seek to draw others into the fight against the fossil fuel industry. Climate scripts illustrate how affect is foundational to activists' attempts to mobilise others.

I have explored how affects become normalised through in the enactment of environmentalism, including in mine and other activists' performances of activism. Guided by queer theory's interest in improper feelings and unacceptable attachments (Seymour, 2018), I have sought to locate and explore how climate activism takes place through a range of affects, both expected and unexpected. I have queried the disjuncture between my response to climate change and that of the other activists. Asking, why do I not feel how I ought to feel about climate change? And, by following

my lack of existential anxieties, I have been able to explore how climate activists are expected to perform certain emotional responses to the future climate scenarios, such as fear, despair, hope, anxiety. And, that in fact, other emotional registers swirl in climate activists' imaginations of the future, such as uncertainty, ambiguity and ambivalence. My research then considers how affects, relations and futures are normalised in the spaces of western environmentalism.

How might future research on climate affects build on these four contributions? Much of the existing work on affect presupposes that strong emotions are aligned with political agency. More work is required to examine how the politics of climate change take place through quieter feelings, inappropriate attachments and inabilities to imagine things otherwise. These types of affects present methodological problems. How do you research that which can't be imagined? Will research participants admit to improper feelings? How can research projects stay with (dis)attachments? By examining such questions, researchers may begin to unpick the relationship between normalisation, affect and climate change.

Research on activism

Finally, this thesis contributes to research found across the social sciences on scholar-activism, including research which focuses specifically on recent climate movements. I contribute then both to work which explores activism and the challenge of researching activists.

By approaching (post)apocalyptic environmentalism through the lens of queer theories, I have been able to consider how sexual politics infuse the temporalities found within contemporary climate movements. Until now, an understanding of how sexuality animates climate activisms has been mostly missing from research which explores the temporalities of (post)apocalyptic activism. In this thesis, I show that (post)apocalyptic thought is moulded by sexual politics, illustrating that (post)apocalyptic articulations of climate breakdown are tied up in the policing of sexual intimacies and the articulation of heteronormative fears.

In this thesis, I caution against articulations of (post)apocalyptic environmentalisms, arguing that activisms which use such imaginaries risk reinforcing the conditions which have given rise to the crisis in our climate. Drawing from an overly scientific understanding of climate crisis, (post)apocalyptic imaginaries project forward the dominance of western modernity into the future. This approach differs from many writing on (post)apocalyptic climate movements, who largely approached (post)apocalyptic imaginaries through a reparative lens (for examples see Cassegård and Thörn, 2018; Friberg, 2022). These authors propose that (post)apocalyptic activism is critical of the present while remaining open to the world being otherwise. However, I have located the potential for climate activism elsewhere. The hope for a better world lies in articulations of the future which scramble, unsettle and disrupt the grip of (post)apocalypse on our imaginations. The potential for radical politics rests in those forms of activism which do not rely on straight times and universalist narratives.

By working closely with climate activists to produce this research, I have also developed modes of enquiry suitable for the nature of academic-activism. Like research by other feminist geographers which shows that detached research is a fiction (Rose, 1993, 1997), this thesis emphasises the impossibility of removed research. Critical writing found throughout the social sciences and humanities however still tends to adopt cool and distanced writing styles (Felski, 2015). Although I have been trained by the university system to write in such a manner myself, it became impossible to embrace this tone of critical thought for the entirety of this project. The nature of academic-activism largely refuses the distance necessary for suspicious forms of writing. For me, discomfort arose when turning a critical eye towards those I had spent a lot of time with while collecting my research. And, while I have used more suspicious and paranoid writing in some places, I have woven this style of writing into other more reparative forms. The result was an ambivalent mode of enquiry, that sought to entwine various affective registers, carefully select objects of critique and strategically incorporate research materials.

However, the development of such forms of critique has often left me at odds with what is expected by environmental researchers. While other activists felt certainty, dread and anxiety about climate crisis, I was often left feeling ambiguous and uncertain. Recognising this disjuncture, I have explored how my ambivalent critique operates as a certain performance of bad environmentalism (Seymour, 2018). The expectation on environmentalists to perform certain affects further complicates the unique challenges that scholar-activism already presents. Rather than lessen the discomfort I felt when trying to write and think critically about activists, I chose to stay with and pour over my uneasy feelings. I have illustrated that academic-activism offers a unique space to develop careful and thoughtful modes of enquiry – even if that does require sometimes being a bit of a bad environmentalist.

Within research on activism, how might others build on these contributions? While there are many different activist organisations within western environmental politics, my focus in this thesis has been on Extinction Rebellion. The claims which I make here then are limited by their empirical grounding in this particular climate group. Future research could search for the presence of (post)apocalyptic straight time, climate scripts, surplus futures and performances of environmentalism further afield. Further research on these temporalities, mechanisms and performances could outline how the context they are found in uniquely shapes the form each takes.

Furthermore, the claims which I make here about sexuality, heteronormativity, whiteness and class are applicable to the imagination of climate futures in the west. My work, like others focused on recent environmental movements, is particular western in its focus. As processes such as the United Nations Climate Change Summit show us, the western world already occupies too much space in discussions and debates about climate change. There are important activist movements in other areas of the world, whose voices could be amplified or their movements aided through careful academic research.

6.2 Final thoughts? Environmentalism without end-thinking

I have felt often a fraud when it comes to my environmental activism. From the outset of this project, I felt as if I lacked a disposition necessary to be a proper environmentalist – that is a deep-seated anxiety about the planet's future. The loss of the future unifies and coordinates Extinction Rebellion's activism. It is a fear shared by most environmentalists across the western world. It is not however a fear which has animated this research.

I want to be clear. I am worried about the turbulence an ever-warming planet brings, the racial structures and logics which make this world deeply unfair and violent, the systems which plunder natural resources, and the type of society which reduces nature to a resource. All of these things are reasons to feel deeply worried about the injustices which exist across our worlds. I often feel that the world seems a very heavy place. I am however sceptical about existential anxieties, end-thinking and extinction scripts which frame such injustices are an issue in/of the future, rather than the present (see also Huysmans, 2023).

Existential anxieties seek to animate those who have a stake in saving 'the' future. They animate a belief that we all have a promised future to lose. They speak to those who believed that the future would be better than the present. They are the death rattle of a progressivist politics, which has only ever worked for some not all. Such existential anxieties seem a hard sell to those whose worlds have been - and continue to be - devastated by the incessant reach of racial capitalism (Todd, 2016).

End-thinking seeks to securitise the systems and structures which have given rise to the crisis in our climate. Existential anxieties are a fantasy of late liberal governance, they tend to the fraying social order of liberal democracy. When the scientific rationality of the natural sciences comes to unduly influence how we imagine the planet's future, the

future is remade in the image of the western world. Straight time extends the processes of colonialisation into the future.

What could environmentalism without existential anxiety look like? It's a difficult question which I do not claim to have all the answers. Following in the footsteps of other geographers, I have begun the important task of developing theories for climate change which do not concede the future to the epistemological authority of the natural sciences (Hulme, 2011; Castree, 2015). Like others (Brown, 2021; Muñoz, 2019; Keeling, 2019), I have sought to locate those futures which unsettle the existential anxiety of straight time. But much more work remains to be done. Such a task requires leaning into, and not away from, the performative and prefigurative nature of knowledge production. It involves recognising that research is actually always intervention. And, finally, it involves not shying away from our capacities as researchers to participate in building better worlds.

Seven

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Eight

Appendix one

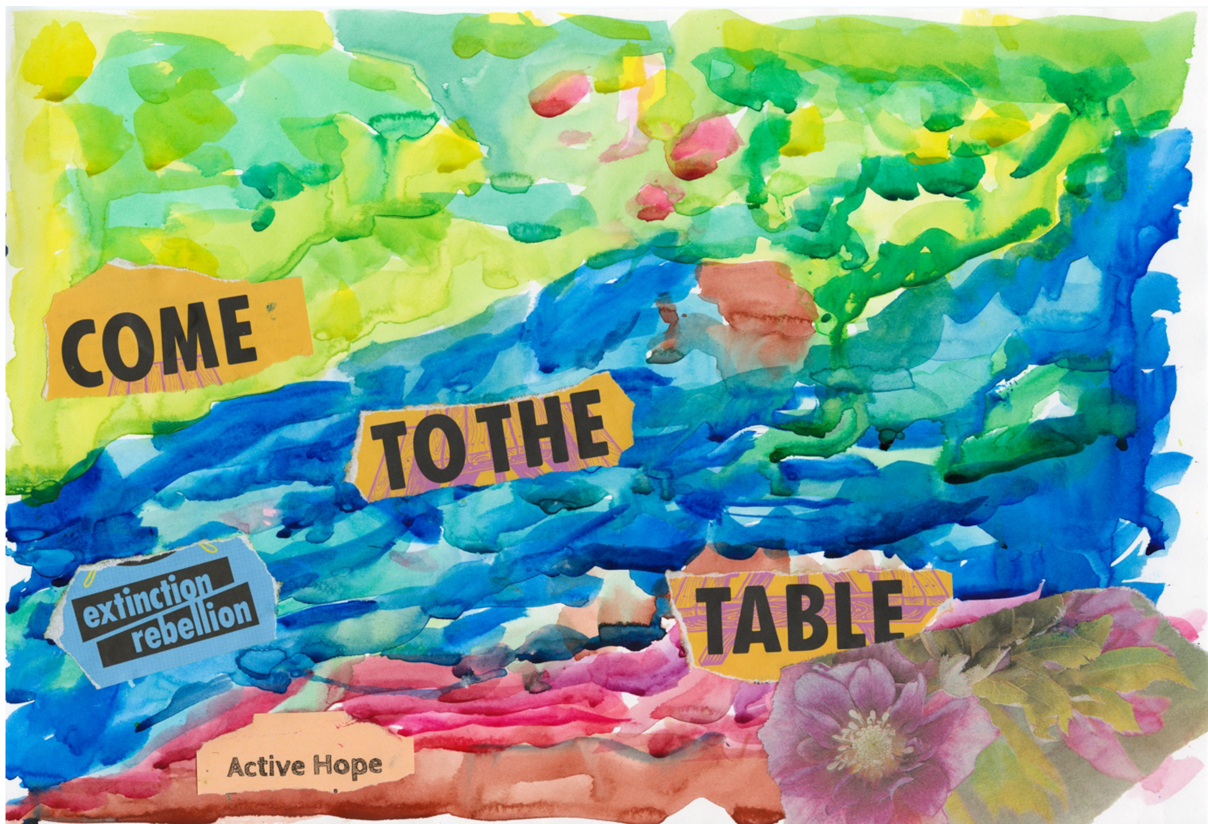
<u>Interview Guide</u>

1. Tell me about your object?
2. Imagine the future what does it look like?
3. When is your future?
4. Who is in your future?
5. Who gets to decide what the future looks like?
6. Now imagine the future you wish to bring into being. How do we measure the success of this future? Do we?
7. When is this future?
8. Who is in this future?
9. When will this future be?
10. Is this future possible?
11. How will we know when we have this future?
12. On extinction, what does extinction mean to you?
13. Who's extinction matters?
14. What about harms in the present?
15. Are their futures already lost? (Follow up with if needed, in relation to animals? Earth?)

Nine

Appendix two

Artworks made in the speculative interviews (In order of appearance: Neve, Tilly, Becky, Tasha, Will, Robyn, Jen, Lily, Dawn, Chloe, Trudy, Florrie, Sam, Gemma, Eamon, Sean, Harry, John, Jess and Lauren).



LOOK
UP
SHOW
UP
SIT
DOWN

Let there be love
this Valentine's Day with beautiful
p24 & 28

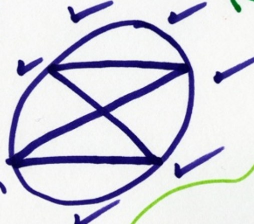
STANDING ON THE SHOULDERS OF GIANTS

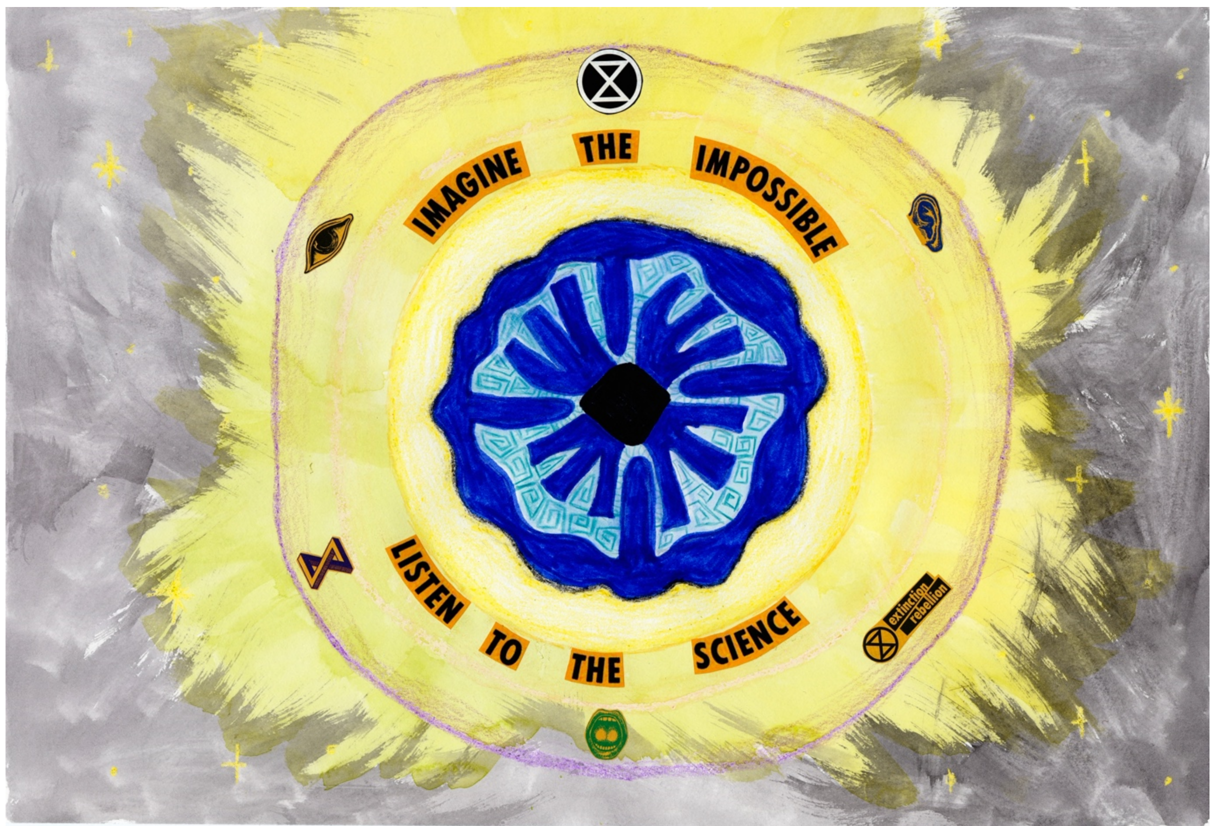
WE NEED TRUTH, NOT GREENWASH!
WE ARE RUNNING OUT OF TIME

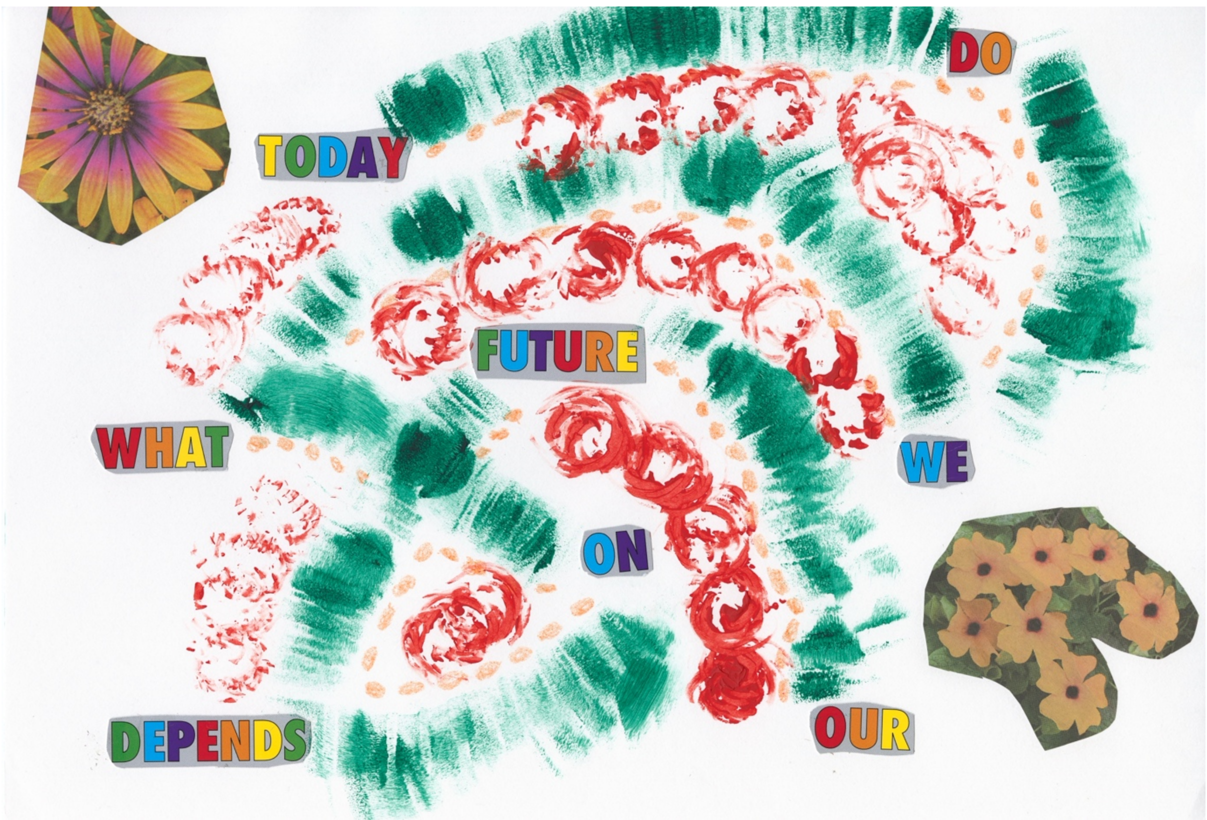
EARTH VIGI

We STILL know
we're killing
EVERYTHING

1980's
We knew
in Ireland




IMAGINE THE IMPOSSIBLE
LISTEN TO THE SCIENCE
extinction rebellion


DO
TODAY
FUTURE
WHAT
WE
ON
DEPENDS
OUR

CAPITALISM
STOP
PLEASE DO NOT RESIST.
?
We show respect to everyone - to each other, the general public and to the government and police.
WHICH SIDE ARE YOU?
WHO ARE WE?
The Insulate Britain mob
SKOLSTREJK FÖR KLIMATET
LIFE OR DEATH?
PLANET OR PROFIT?
BLUE ORIGIN
CLIMATE FAILURE IS KILLING CHILDREN
J. BEZOS
BLUE ORIGIN

XR

44%
of UK wealth owned by richest 10%
9%
of UK wealth owned by poorest 50%
must lift ban on
proves
ING FOR FEW NOT THE MANY
CAPITALISM'S
Come meet us, join in resistance
extinction rebellion
ACTION
YEAR IN REVIEW
CLIMATE
The Larsen C ice shelf break has sparked groundbreaking research
MORE THAN 90% OF THE WORLD'S CHILDREN BREATHE TOXIC AIR EVERY DAY

YOU HAVE
THE POWER
mirror.co.uk
GARDEN
615955

FEAR

Fuck Off

Get a Jod

HOPE community

FEAR LIES Protection

PALO SANTO

GREENWASH:

Be Brave

Speak your mind

Tell the truth

Raise your voice

No More Blah Blah Blah

is Picasso

LOVE
ISLAND
BROKE
THE
Sun
41°
ON SUNDAY
Your children
deserve a
habitable
planet.
extinction
rebellion
It's time
to act.
HOLS
FROM
£9.50
SEE PAGE 20