

**From Deathly Repetitions to Transversal
Co-dependences: Rethinking the Ecological as
Tools for Radical Re-organisation of the
Curatorial**

Thesis submitted to Goldsmiths, University of London in
fulfilment of the requirements for the degree of Doctor of
Philosophy by Miranda Pope

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8th July 2016

Resubmitted with revisions 29th Dec 2016

Declaration of originality

I, Miranda Pope, do hereby declare that ‘From Deathly Repetitions to Transversal Co-dependences: Rethinking the Ecological as Tools for Radical Re-organisation of the Curatorial’ is the original research of the undersigned, and has been authored to fulfill the purposes and objectives of this study.

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ACKNOWLEDGEMENTS

I would like to express my deep gratitude to Dr. Andrea Phillips, my principal supervisor for her patient, insightful and erudite guidance, enthusiastic encouragement, and useful critiques of this research work. I would also like to thank Dr Suhail Malik for his support and guidance in the project's early stages and Dr. Robin Mackay for his help in steering the project towards its conclusion. I am also grateful to Dr. John Cussans for his critiques and support in shaping the chapter structure. I extend my thanks and gratitude to the many artists, academics, curators, writers and members of the research community at Goldsmiths who have been so generous in their contributions to the project. Finally this research would not have happened without the support of my family, particularly Mary Pope, Michael Jacovides and Otto Jacovides.

Dedicated to my father, Patrick John Pope, 1943 – 2011.

ABSTRACT

My research addresses political problems in curatorial practices that engage with notions of ecology and issues relating to environmental concerns. Taking as case studies the RSA/ACE Arts and Ecology project from 2005-2010; Cape Farewell, and exhibition *Radical Nature: Art and Architecture for a Changing Planet 1969-2009*, I argue that these curatorial forms dissipate and reify the political acuity of artistic content, curatorial context and the constituent, non-art issues. In holding on to an idea of the artwork's autonomy, curating practice addressing issues that exist outside the flows and circuits of the art world is precluded from properly addressing the wider issues with which it seeks to connect. I call this situation the eco-critical curating paradigm.

The problem is addressed in two stages: firstly through a detailed excavation of the term ecology, and secondly through a reformatting of the curatorial. Firstly, I argue that the term ecology has reached its limits as an intellectual force. In response, I propose a move to the 'ecological', embodied in four theoretical tools that are both questions and propositions, that initiate inquiries into the socio-politics of located forms and processes of organising, making and doing.

Secondly I conduct a critique of the eco-critical curating paradigm. This results in a reformatting of the curatorial that exits the frameworks of art, a format I call the ecological-curatorial. What changes for curating is that form, organisation and production are equally situated alongside content,

coalescing around a concern, with curatorial activities emerging out of the intersections of the circumstances, interests, aims and inquiries of the collective engaged in the inquiry. Art might align with these or come into their orbit, but this happens according to the terms of each specific format of the ecological-curatorial. Art therefore does not claim any privileged space within an assemblage of the ecological-curatorial, indeed the format of the ecological-curatorial asks us to critically reappraise the relationship between art and social realities.

INTRODUCTION	10
0.1 Outline of research	10
0.2 Background to the research	12
0.3 Chapter structure.....	15
0.4 Methodology	22
CHAPTER 1: CONTEMPORARY CURATORIAL AND ARTISTIC APPROACHES THAT ENGAGE WITH THE TERM ECOLOGY AND ENVIRONMENTAL ISSUES	24
1.0 Introduction.....	24
1.1 A brief history of art, environmentalism and the term ecology.....	25
1.1.1 Key themes and engagement in the 1970s and 1980s	28
1.1.2 A brief overview of practices and projects in the 1970s and 1980s	29
1.2 The development of curatorial and artistic practices relating to the term ecology and environmentalism in the early 21st century	33
1.2.1 Contexts for development.....	33
1.2.2 Introduction to contemporary practices	36
1.2.3 Establishing what is meant by the eco-critical	38
1.2.4 The eco-critical in the curatorial context	40
1.3 Eco-critical curating case studies	43
1.3.1 Arts and Ecology: expanding the field	44
1.3.2 Radical Nature – Art and Architecture for a Changing Planet 1969-2009	53
1.3.3 Art and climate change through the lens of Cape Farewell	62
1.3.4 Case studies concluding remarks	74
1.4 Framing an eco-critical curating paradigm	75
1.4.1 Elements of the paradigm	76
1.4.2 The critical context behind the emergence of contemporary eco-critical practices	84
1.4.3 From mending social bonds to wandering radicanant – Bourriaud’s post-avant-garde artistic activism.....	86
1.4.4 A continuum of metamorphic forms - Rancière, everyday objects and artworks.....	91
1.5 The critical paradox	98
1.6 On the need for an exit from the eco-critical curating paradigm	100
CHAPTER 2: FROM ECOLOGY TO THE ECOLOGICAL	103
2.0 Introduction.....	103
2.1 The many distinctions of the term ecology	106
2.1.1 A proposal: rethinking ecology as process	108
2.1.2 A summary of the ecological.....	112
2.2 Ecology: etymology and early scientific origins	114
2.2.1 The <i>oikos</i> and the organisation of living in Ancient Greek society	114
2.2.2 Early scientific origins of the term ecology	120
2.2.3 The development of early scientific ecology.....	121
2.2.4 Ernst Haeckel and the economy of nature.....	124
2.2.5 Eugenius Warming’s plant communities.....	125
2.3 Science and ideology in the expansion of the term ecology	128
2.3.1 Arthur Tansley and the idea of the ecosystem.....	129
2.3.2 Jan Smuts and the holistic approach to scientific ecology	132
2.3.3 Frederic Clements and biotic communities.....	134
2.3.4 Articulating the shifting dynamics within the growing field of scientific ecology	136
2.4 Examining The Fundamentals of Ecology	138

2.4.1 The definition of principles by Howard T. and Eugene Odum	138
2.4.2 The ideological and scientific fragmentation of the term ecology	141
2.5 Conflicting fragments : rethinking the term ecology	144
2.5.1 A background to the philosophies of the term ecology	146
2.5.2 James Lovelock and Gaia Theory	149
2.5.3 Deep ecology	150
2.5.4 Social Ecology	152
2.6 Expanding the parameters of forms that emerge from the term ecology	154
2.6.1 Buckminster Fuller and Spaceship Earth	156
2.6.2 Gregory Bateson	160
2.7 The next move: dissipation, disorder and chaos	164
2.7.1 Moving from ecology to the ecological	167
2.7.2 Shifting the paradigm in scientific ecology	174
2.7.3 Ecology and ecosophy in the work of Felix Guattari	179
2.7.4 Severing the relationship between nature and the term ecology in Bruno Latour's work	184
2.8 Defining the ecological	188
2.8.1 The four tools of the ecological	188
2.8.2 Deploying the tools of the ecological	195
CHAPTER 3: PROBLEMATICS OF JUNCTURES BETWEEN THE TERM ECOLOGY AND CURATING PRACTICES: A CRITIQUE OF THE ECO-CRITICAL CURATING PARADIGM	199
3.0 Introduction	199
3.1 Establishing grounds for the need to reform curating in relation to the term ecology	200
3.1.1 A brief recap of the eco-critical curating paradigm	200
3.1.2 Contexts and conditions of contemporary curating practices	201
3.1.3 Transforming issues into exhibition	205
3.1.4 Rethinking structures of curating	206
3.1.5 Outlining the key questions being addressed	207
3.2 Revisiting Arts and Ecology	208
3.2.1 Arts and Ecology's engagement with Guattari's ethico-aesthetic paradigm	211
3.2.2 The 'capture' of the transversal	213
3.2.3 Encounters between imperatives and modes of communicability	215
3.2.4 Gloom and hope in <i>Black Cloud</i>	217
3.2.5 Jeremy Deller's <i>Bat House</i> : a collision of bats and property developers	219
3.2.6 The Dalston Mill	222
3.2.7 Conceptual limitations of the project	225
3.2.8 Practical limitations of the project	228
3.2.9 A summary of the problematics between the tools of the ecological and Arts and Ecology	230
3.3 Cape Farewell	231
3.3.1 General points about the project	233
3.3.2 Socialities produced through the expeditions and the 'Carbon' exhibition series	235
3.3.3 Critical limitations of the socialities produced by Cape Farewell	238
3.3.4 The parameters of Cape Farewell as seen through Bruno Latour's notion of the social	240

3.3.5 The relationship between Cape Farewell and the tools of the ecological	247
3.4 Revisiting <i>Radical Nature: Art and Architecture for a Changing Planet 1969-2009</i>	249
3.5.1 Radical and dissipative systems and <i>Radical Nature</i>	253
3.5.2 Collaboration and silence	258
3.5.3 The problematics of artists collaborating with nature	259
3.5.4 Speculative temporalities	262
3.5.5 Creativity, science and art in <i>Radical Nature</i>	265
3.5.6 Summarising the relationship between the tools of the ecological and <i>Radical Nature</i>	269
3.6 Disassembling the eco-critical curating paradigm through the tools of the ecological	270
3.6.1 Re-orienting the curatorial as processes	271
3.6.2 Curating and culture	278
CHAPTER 4: FORMS OF THE ECOLOGICAL-CURATORIAL	282
4.0 Deploying the tools of the ecological	282
4.1 Rehearsing the curatorial	286
4.2 Activating originating processes to produce forms of the ecological-curatorial	288
4.2.1 <i>Dalston Mill</i> revisited	289
4.2.2 Deconstructing <i>Dalston Mill</i>	291
4.2.3 <i>Dalston Mill</i> as eco-critical logic	293
4.3 Introducing the case studies for the ecological-curatorial	294
4.4 R-Urban	298
4.4.1 Harnessing the force of the virtual	298
4.4.2 Practices and Activities of R-Urban	300
4.4.3 Creating reciprocal forms	302
4.4.4 R-Urban and the tools of the ecological	304
4.4.5 Future aspiration	307
4.4.6 Abstracted temporalities	308
4.5. MayDay Rooms	312
4.5.1 A space of struggle and active social resource	312
4.5.2 Archival care	315
4.5.3 Embodied cultural memory	317
4.5.4 Activations	320
4.5.5 MayDay Rooms and the tools of the ecological	322
4.6 The Showroom/Communal Knowledge	325
4.6.1 Supporting the emergence of new practices	328
4.6.2 Collaborate, unlearn, reorganise	329
4.6.3 (In)visibilities	331
4.6.4 Fourth Feathers TV	333
4.6.5 A new relational specificity	336
4.7 Ultra Red	337
4.7.1 Articulating the social through curatorial interventions	337
4.7.2 Background to the collective	338
4.7.3 The protocols of listening	339
4.7.4 Three projects	341
4.7.5 Ultra Red's transversal practice	344
4.7.6 Creating new realities	346
4.8 Clarifying the ecological-curatorial	349
4.8.1 Mapping the political subject	352
4.8.2 Understanding the tools of the ecological as enunciators	354

4.8.3 Inaugurated concerns.....	357
4.8.4 The ecological-curatorial as forming planetary subjects	358
4.8.5 Refusing universalities: the production of the ecological-curatorial	361
4.8.6 Conclusion.....	362
5.1 From essay exhibition to structural action	365
5.2 The eco-critical curating paradigm and the term ecology	366
5.3 Moving from ecology to the tools of the ecological.....	368
5.4 The ecological-curatorial	371
5.5 From the ecological to the ecosophical	373
Books.....	376
Journal articles and book chapters.....	384
Films	386
APPENDICES.....	387
Appendix i: Arts and Ecology	389
Appendix ii. Radical Nature: Art and Architecture for a Changing World: 1969-2009	395
Appendix iii. Cape Farewell	402
Appendix iv. R-Urban.....	404
Appendix v. MayDay Rooms	409
Appendix vi. Communal Knowledge.....	413

INTRODUCTION

0.1 Outline of research

This research project investigates the ways in which forms and interpretations of the term ecology and issues arising out of climate change and environmentalism have been addressed through contemporary curating practice. It aims to analyse what happens at points where these realities intersect with exhibition-making practices and explores how assumptions, imperatives and complexities of these realities become distilled through the frameworks of contemporary curating. The key concern here is whether, within the context of contemporary art and curating practices, the structures and processes through which aesthetic distillation of these social realities take place undermine the realities of their circumstances outside of art, transforming them into symbolic, and essentially mute, reifications of their constituent themes.

The work is supported by three key claims. The first two relate to the relationship between art and the term ecology, and the third relates to the term ecology itself. First, this project claims that the critical potential of curating projects that directly engage with the term ecology and its interpretations and forms, as well as issues relating to climate change and environmentalism is inherently compromised. This is because the forms and conceptual parameters through which they are exhibited are already intrinsically part of the wider socio-political and cultural conditions out of which such environmental issues have arisen. The second claim follows on

from, and extends the first, arguing that to address issues arising out of forms and uses of the term ecology, and its relation to organisations of living practices and environmental issues through conventional forms of exhibition is always already politically compromised and should no longer continue.

The third claim made in this thesis is that the term ecology is conceptually ambiguous, existing in multiple, often contradictory, interpretations and forms, and this makes it extremely problematic as a category for producing curating projects that make claims for art's social agency in relation to the term. To overcome this, I propose to revisit the term ecology in order to explore what kind of political agency it might have in the context of art and curating. In doing so, I develop an alternative approach to the term by moving from ecology to the ecological, reinventing it as process, and breaking this process into four 'theses of the ecological'.

The theses of the ecological are used to develop a new curatorial approach, the 'ecological-curatorial' - practices that are constituted through the interrogation and praxic opening out of existing frameworks and structures of the curatorial itself. The ecological-curatorial is not a structure for exhibitions relating to issues that arise through the use of interpretations and forms relating to the term ecology, but rather it operates *ecologically* to discover and propose ways in which the curatorial can be rethought. The process of operating ecologically is rethought here as a continuous questioning that addresses equally the idea of curating, what constitutes

curating, what can be constituted through curating and the forms these questions might produce.

Through a number of case studies, I demonstrate how exhibitions I have experienced and investigated in depth that frame interpretations and forms of the term ecology are not able to facilitate the conditions necessary for the ecological-curatorial to operate. However, I argue that there are curatorial practices that do function according to the logics of the ecological-curatorial, and I will use these to outline how these operations take place and the implications these have for new possibilities for curatorial forms.

0.2 Background to the research

These claims have arisen as a response to the production of curated projects that, over the last 15 years, have engaged with the term ecology, environmental issues and the changing relationships between human beings and the organisation of the resources of the planet. The starting point for many of these projects has often been through summaries of ways in which artists' practices address concepts relating to the term ecology or environmental issues, resulting in a range of curatorial forms: small group shows, compendious research projects, biennial themes, or large essay exhibitions.

Critical writing on art's relationship to the term ecology and environmental issues does exist, but tends to focus on ways in which artists examine

existing circumstances and assemblages, different ways in which artists test out practices and exemplify alternative assemblages, or on the political relationship between ‘nature’ as a concept and society. By contrast, there is little evaluation or consideration of the curatorial frameworks that structure the ways in which these themes and the works are curated, nor of the curating frameworks themselves. The implications of the curatorial projects are not considered in terms of making critical interventions into the landscape of curatorial practice, nor in relation to the term ecology and environmental issues with which they engage. That is not to say however that curators have not acknowledged the contradictions between the imperatives relating to environmental issues, and the itinerant, globalised conditions of the art world and all its constituencies, however, these contradictions have often been overridden and the formats continue unquestioned, in favour of the autonomy of art as a form of discursive aesthetic production.¹

A number of key questions therefore emerge out of these conditions, and it is these that form the backbone of my inquiry in the following four chapters. Firstly, what kind of critical traction might the term ecology have in curatorial practices today and how can the term be opened up in order to intersect with these practices? The second question that arises is how can curatorial practice address the dichotomy between the wider ambitions of

¹ An example of this contradiction arises in TJ Demos’ support of these exhibitions in *The Politics of Sustainability: Contemporary Art and Ecology*, where he argues that, despite their issues surrounding their own unsustainability, exhibitions that engage with issues relating to the environment and changing relationships between humans and non-humans are necessary in order to contribute to public conversations around these issues, and as ways of producing ‘alternative forms of life based on environmental justice in a global framework’ (Demos, 2009, p.28). The problem with proposing this position rather than seeking alternatives is that in doing so it advocates the continuation of the structures that have resulted in the broad spectrum of environmental issues that exist today.

their projects in relation to say, climate change, the organisation of living conditions, or environmentalism, and the limitations presented by curatorial frameworks? How might this situation be overcome, if it is at all possible to do so? The final question that is important here is how might curatorial practice engage more critically with the term ecology and what forms of the curatorial might emerge out of this engagement?

The research begins by addressing the gap in literature exploring the critical and political implications of curatorial practice that intersects with firstly, interpretations and forms of the term ecology, and secondly relationships between humans and non-humans, the organisation of anthropogenic living systems and the earth's biosphere. Through the excavation of a number of contemporary curatorial practices, it argues that such practices and curatorial relationships require more rigorous clarification in order to fully understand how their intended agency as socio-political interventions operates, and how this relates to practices of curating themselves. After addressing this gap in the current literature, I argue that the next step in rethinking how this relationship can operate productively, is to re-examine the term ecology through a discussion of its socio-political, historical and scientific parameters, before setting out the terms under which this might work in relation to the curatorial. The tools of the ecological that are developed out of this discussion are situated, complex and functional, and are designed to act on the curatorial in order to start to rethink the terms of the curatorial itself.

0.3 Chapter structure

The opening chapter describes in detail three sets of curating practices that outline the frameworks and approaches through which issues relating to environmentalism and climate change and forms and interpretations of the term ecology have been addressed as subjects that are incorporated into the process of curating contemporary art. The case studies are the commissioning programme *Cape Farewell*, Arts Council England/RSA research programme *Arts and Ecology*, and the essay-exhibition, *Radical Nature: Art and Architecture for a Changing Planet 1969-2009 (Radical Nature)* at the Barbican Gallery London. Through the exploration of their practices, structures and formats I outline a curating paradigm that exemplifies these practices, what I call the eco-critical curating paradigm. This is followed by a discussion of the elements of this paradigm and an investigation into how these elements are rooted in the wider contexts of dominant practices within the field of curating contemporary art. This includes an exploration of the concepts and practices of relationality characterised by Nicolas Bourriaud in his theory relational aesthetics, along with a critique of the work of Jacques Rancière on artistic autonomy and the politics of aesthetics. The chapter concludes with a deliberation on the problematic tensions that emerge between these two theoretical ballasts and the wider ambitions of the projects in relation to both the realities of issues they attempt to address, and the term ecology itself.

Chapter two starts to open up the question of how the term ecology is understood and deployed in wider contexts outside of the fields of art, and

through this discussion has the aim of rethinking how the term might be reintroduced in relation to practices of curating. Beginning from the term's roots in the Ancient Greek term for the household, *okios*, the investigation traces its developments through, firstly the fields of biology and botany, then looking at its dispersal and differing political allegiances. It looks at the shift in the term's meaning with the growth of the environmental movement in the 1960s and 1970s, and its folding into green politics across Europe. The investigation then turns towards philosophical approaches to the term that have made attempts to draw out fundamental principles, such as the work of Gregory Bateson and Felix Guattari, as well as the relationship between the paradigm shift in scientific ecology and its influence in wider cultural terms, through the work of Ilya Prigogine and Isabelle Stengers. Following the excavation of the term, I propose that ecology as a designation should now be seen in historical terms, and that as a result, in order to gain any political traction it needs to be reformulated as a set of process-based, theoretical 'tools of the ecological' that might act as devices to find ways to articulate planetary subjects as distinct from the neoliberal networks of globalised capitalism. To clarify, the shift from ecology to the ecological that occurs here therefore is a move from the term ecology as characterising the nature of a system external to the term as connected and interdependent, objectifying the system, towards the ecological as being the process through which connectivities and interdependencies are critiqued, produced or uncovered.

With this outline of the tools of the ecological in mind, chapter three returns to the case studies from chapter one, dissecting each one through a theorist whose work has been integral to the development of the tools. Arts and Ecology is examined through the work of Guattari, *Radical Nature* is looked at through the work of Prigogine and Stengers, and Cape Farewell is investigated through the work of Latour, with the aim of demonstrating how the curatorial frameworks of each project foreshorten and preclude their political aims. In proposing an alternative to this eco-critical paradigm of curating, I explore the ways in which thinking through the current, eco-critical curating model with the tools of the ecological, exposes both its lack of socio-political agency and its continual collapse back into its structures of presentation and exhibition, structures that are also ultimately at odds with the ambitions of the tools of the ecological.

However, while these projects function through what we might understand as conventional structures of curating, where artistic objects, produced through various means modes are displayed by curators, experimental curatorial practices already exist as alternatives to these structures. Terry Smith argues that these changes can be understood as art becoming ‘wordly’ meaning that it is often connected to real world issues, and displayed and experience in dispersed, multiple and shifting contexts and formats. (Smith, 2012, Kindle location 345).

One exemplification of this is Jean Paul Martinon and Irit Rogoff’s work on curatorial knowledge, which is both a philosophical and practical inquiry

into what constitutes the practices and theoretical trajectories of curating, as well as a forum for types of practice. The curatorial for Martinon and Rogoff sets out to articulate a philosophy of curating precisely because as they say, curating has, amongst other things been ‘seeking novel ways of instantiating the crises of our world in other modalities, of finding other ways to engage with our current woes.’ Martinon sets out to think what the word curatorial means without necessarily entrenching it within a particular discourse, discipline, field of knowledge or ideology. (Martinon, p.4). His aim is to reveal the disarray of the term curatorial, and he argues that it cannot be singularised or totalised, and ‘that it is perfectly ok to live and work with such a warring term’ (*Ibid.*, p.4). The curatorial within this debate becomes a process of aligning and situating information, artefacts, ideas and positions within the circuits and flows of art, and as Rogoff says, becomes the staging ground of the development of an idea or an insight, and a place to speculate and draw in a new set of relations (*Ibid.*, p.45). Practices that have emerged out of this approach explore modes of curatorial engagement between and across knowledge, artworks, concepts and practices and aim to establish alternative narratives around such practices that bypass the dominant structures of display.

However, despite the shift in curatorial approaches that take place within Martinon and Rogoff’s curatorial knowledge, this approach to the curatorial still does not facilitate the necessary conditions for the ecological-curatorial to take place. This is because, despite projects taking place through many and varied forms of critical intervention that attempt to bypass and subvert

structures of art exhibition, it is primarily concerned with ways in which distribution of art and ideas can be renegotiated and engaged with, and ultimately remains within the parameters of discussions around art's display. The approach does not instigate a wider discussion around how the diverse and varied practices of curating can be put to the service of questioning other forms of cultural and socio-political organisation, where art is not the main currency.

By contrast the 'ecological-curatorial' as an alternative curatorial model developed through the logics of the tools of the ecological, is concerned with putting the structures of curating, as much as its content, at stake. With the introduction of the ecological-curatorial, the eco-critical curating paradigm falls apart as a model, as it is not able to facilitate what is necessary for the ecological-curatorial. Devoid of critical-political agency - in relation to curating practices, and interpretations and forms of the term ecology and environmental issues – the eco-critical paradigm collapses when addressed through the logics of the tools of the ecological.

The discussion around this alternative model for curating forms basis for chapter four, which explores a number of practices that can be understood as operating through the logics of the ecological-curatorial. These practices are not concerned with finding alternative ways in which the flow and distribution of art and ideas can take place, but rather they are concerned with the ways in which the structures and practices of curating itself (the organisation of ideas, concepts, information, practices, processes, archive,

education, experiment etc.) are interrogated both in and of themselves, but also in relation to aims and the socio-politicalities of the structures and flows they exist within and are built around. It asks questions about what happens if these practices operate outside of the structures of the distribution and display of art and who benefits from both existing and speculative scenarios. The tools of the ecological are therefore deployed as methods that address concerns, assemblages and situations, with the aim of speculating about possible forms, processes and spaces of practice, and it is through their articulation that the parameters of these forms, processes and spaces are produced. They are not used in the service of the production of individualised definitions of holistic interpretations of interdependent systems, but rather as tools of excavation in and around existing structures and aspirations and ways of becoming embedded within assemblages.

With this in mind, chapter four focuses on four practices that I argue present radical curatorial alternatives that can be understood through the concept of the ecological-curatorial. I will demonstrate how these practices - radical archive MayDay Rooms, urban agriculture experiment R-urban, art collective Ultra Red, and Communal Knowledge, the Showroom Gallery's public engagement programme - exemplify the functions of the tools of the ecological, exploring their modes of practice and their relationship with notions of culture.

Formats of the ecological-curatorial will be shown to operate through two key claims. The first claim is that these formats are, through the work of

Deleuze and Guattari assemblages of enunciation, where they are produced through located activities that emerge from specific sets of socio-political circumstances. They do not illustrate concerns, they produce configurations that are necessarily detached from the framework of the circulation and display of art. The second claim is that the formats of the ecological must be seen in planetary terms, and are underpinned by a discussion around what it means to attempt to produce subjects that operate in different ways in relation to dominant global networks of ideas and capital.

The question of the relationship between art and culture also comes into play here. The art commissioning research programme Cape Farewell underpins its activities with the claim that ‘Climate is culture’.² It serves as foundation and justification for their work in commissioning artworks, and organising networked projects that bring together practitioners from fields of science and the arts to address specifically issues to do with climate change. The question that arises out of this conjunction of climate and culture however, is what constitutes culture in this context? For Cape Farwell, as will be discussed in the chapter one, culture refers specifically to artistic achievements, drawing on the energies of visual artists, musicians, poets, writers, filmmakers and theatre producers amongst others as collective producers of aesthetic objects and experiences.

The thesis expands on this understanding of culture, and locates art and culture in broader terms, through an interpretation influenced by

² www.capefarewell.com

anthropology, where culture can refer to an accumulation of knowledge experiences, beliefs, values, meanings, roles, spatial and material relationships that make up and affect behaviours and cognitive constructs and ways in which groups and individuals live. As Arjun Appadurai proposes, systems of culture are always leaky, with traffic and osmosis being the norm (Appadurai, 2004, p.62).

0.4 Methodology

The project has been conducted through mixed qualitative research methods that have centred on an extensive and disparate body of texts. This has included historical literature from within the field of contemporary art and museum display; anthologies of writing on curatorial practice; anthologies of writing on art, environmentalism and the term ecology; essays from catalogues, discussions around art and environmental issues in journals and magazines; published and filmed interviews with curators, artists and scientists; documentaries about artworks and exhibitions; where possible visits to projects and exhibitions; historical literature relating to the term ecology and its development as a science; theoretical texts relating to the term ecology in fields of social science and cultural theory; philosophical texts, including the philosophy of science and philosophical approaches to the term ecology; critical writing relating to the term ecology; documentary and fiction films that have explored the effects of system shifts and different practices that engage with land and natural resources. I have also conducted interviews with scientists, curators and writers who have been engaging in fields that relate to this research.

The diversity and breadth of the material that I have drawn on in the development of this research reflects the fact that the project does not sit easily in any one field of knowledge. In seeking to explore ways in which the term ecology can be rethought as the tools of the ecological, and looking at how these tools can be instrumental in the production of radical curatorial formats I am attempting to find a language that can describe how possibilities for experimental practice can take place in direct relation to the realities of their concern. To begin, I will start by sketching out the dominant relationships structuring projects that are concerned with environmental realities, in order to clarify where the points of contention are.

CHAPTER 1: CONTEMPORARY CURATORIAL AND ARTISTIC APPROACHES THAT ENGAGE WITH THE TERM ECOLOGY AND ENVIRONMENTAL ISSUES

1.0 Introduction

Effects caused by socio-political, ethical, scientific, and environmental relationships between human and non-human actors in diverse circumstances have been addressed by artists and curators since the 1960s and 1970s. However, over the last 15 years there has been a marked proliferation of critical curatorial and artistic projects dealing with ideas relating to the term ecology and scientific, social and political aspects of human interactions with the earth's biosphere and the effects of its colonisation, apportionment and management. The focus of this thesis is based on questions about the political efficiency and potential of these curatorial practices in relation to the social realities and issues they frame, so this chapter will start with an examination of these contemporary practices and their historical, theoretical and socio-political contexts. In what follows I will outline these recent developments in artistic and curatorial practice, before describing three case studies, which I will go on to critique in chapter 3. It must be reiterated here that while this thesis is concerned with the curatorial practices that have emerged out of these concerns, and not artistic practice, in the 1960s and 1970s it was artistic practices that started to define approaches to this area. These historical practices are therefore outlined here in order to articulate the historical context.

Another point to note is that I use the term ecology in this chapter without defining it. This is because the complexities around its usage mean that providing a clear definition of the term at this point is not straightforward, and also because there is no one thing called ecology. However, I will address the term in detail in chapter two. For now this chapter is concerned with describing the ways in which forms of organisation related to the term ecology have been deployed within a curatorial and artistic context. To get around this and to exemplify the term's broad complexities I will use the rather clumsy phrase, 'the term ecology' whenever I refer to a use of the term that would otherwise be unmodified. What also becomes evident is that there are many grammatical approaches to using the term ecology – it is deployed as both noun and adjective and is often unmodified in its uses, and hence there is no one definitive reference point for the term 'ecology' that can be applied to its use in artistic and curatorial contexts. Starting from this understanding will help to demonstrate the problem both within the context of curating, and within the wider semantic problem that the term itself presents.

1.1 A brief history of art, environmentalism and the term ecology

I will begin by providing a background to the practices with which this study is concerned by looking at practices that emerged in the 1960s and early 1970s. It was in the mid 1960s that the wider environmental movement started to find its feet as a political force, and the publication of

Rachel Carson's *Silent Spring* in 1962 is often used as the marker for its inauguration. Various crises in natural settings were also being manifest through things like acid rain, air and water pollution and the effects of nuclear testing, and this was happening within the context of wider socio-political and cultural shifts. The burgeoning environmental movement was consolidated through organisations like Friends of the Earth, founded in 1969, Greenpeace, emerging out of actions between 1969 and 1971, and founded in 1972, World Earth Day, inaugurated in 1970 and - in the U.S. - the setting up of environmental and public health bodies like the Council on Environmental Quality in 1969 and the Environmental Protection Agency in 1970. In 1972, NASA published the now-famous *Blue Marble* photograph taken from Apollo 17, which showed for the first time planet Earth as a finite entity within space. This shifted perceptions of the world away from it being an infinite resource, and philosophical pathways emerged out of scientific ecology that rethought the idea of a world as a finite ecosystem that needed to be held in balance to survive. This idea was proposed in many different ways as will be seen in the following chapter, by people like James Lovelock, Arnae Naess and R. Buckminster Fuller. In 1972 the Club of Rome launched its now infamous report, *Limits to Growth* that set out a mathematical model depicting the expected pressures on the world's finite resources by its growing population, and what needed to be done to counter these. Widespread coverage around the report and the growing role that the scientific ecology found itself playing in addressing these issues contributed to the growing currency of the term ecology in popular culture.

The interweaving of the aesthetic and ideas related to environmentalism and the term ecology from the late 1960s to the late 1990s is therefore highly complex and does not lend itself easily to the production of a straightforward chronology. In the 1960s and 1970s, works that dealt with environmental issues were also the product of a period when the wider art world art itself was undergoing a transformation in formal, linguistic, processual and exhibitionary terms. With disparate forms, often produced outside the gallery space, there was never really a formalisation of it as a field, beyond its tentative inclusion within the canon of art practices known as Land Art. However, it is important to note here that while Land Art is often used as a chronological benchmark in the development of contemporary practice that deals with notions of the environment and uses of the term ecology, this is a rather simplified or even casual interpretation. It is true that Robert Smithson did start to address ideas related to the term ecology in his later work³ but the wider concerns that motivated the work of artists like Smithson, Robert Morris, and Michael Heizer did not initially begin from a position of questioning their relation to the earth's biosphere and the various environmental concerns of the period. Land Art and related environmental practices responded primarily to sets of art-historical conditions relating to Minimalism and Conceptualism, as well as addressing the position of the artwork within the gallery. In relation to this research, therefore, and the wider history of art and the environment, these early

³ See Robert Smithson's later writings including Proposal 1972 and Letter to John Dixon in *Robert Smithson: The Collected Writings*, edited by Jack Flam. 1996 University of California Press, Berkley, p. 377-379.

works serve instead as important art-historical reference points that outline wider political approaches and attitudes to nature and the land at the time.

1.1.1 Key themes and engagement in the 1970s and 1980s

Reflecting these wider environmental issues, as well as things like Buckminster Fuller's notion of 'spaceship earth' (discussed in the following chapter) and the writings of Gregory Bateson, artists like Agnes Denes, Joseph Beuys, Hans Haacke, Mierle Laderman Ukeles, Patricia Johanson, Dan Graham and Ant Farm all rehearsed critical strategies for a rethinking of the human relationship to earth and the way its resources are deployed for human existence. Environmental thought in this period was guided by the idea that nature existed as a balanced system and that things like acid rain and pollution events were destabilising an otherwise balanced system⁴. Artworks referring to environmental issues produced during this time often contained a discrete message – for example, and as will be shown, Alan Sonfist's work was a commentary on air pollution, Helen Mayer and Newton Harrison's work addressed land use, while Agnes Denes

⁴ For an overview of early works that addressed the relationships between humans, ecology and the environment see the catalogue for the exhibition *Radical Nature: Art and Architecture for a Changing Planet 1969-2009*. The exhibition was held at the Barbican Gallery in London in 2009 and is discussed in the next chapter. See also Jeffrey Kastner in *Land and Environmental Art* (London: Phaidon, 1998). For histories about the environmental movement in the 1960s see David Pepper (1984) and Joachim Radkau (2013).

commented on food production. In other cases, works were often concerned with restoring this assumed notion of ‘balance’ that between nature and social systems, for example in Hans Haacke’s *Rhine Water Purification Plant* (1972), mentioned below. In addition there remained a Romantic attachment to the idea that nature had its own fragile ontology that existed independent of human activity and that art was a way of restoring this, as can be seen through the works of, for example, Patricia Johansson and Nancy Holt, also described below. Lack of space prevents me from going into this period in great detail here but I will briefly outline some key works from the period that demonstrate some of these approaches to substantiate my argument.

1.1.2 A brief overview of practices and projects in the 1970s and 1980s

Helen Mayer and Newton Harrison were perhaps the first artists who have devoted their entire practice to the problems emerging out of the effects of human activity on the earth’s biosphere. Over the last 40 years they have developed often long term projects that have addressed problems raised by food production, pollution, agricultural processes, among many other areas. Their *Art Park Spoils Pile Reclamation* (1976-78) was one of these works to address the problem of polluted land from a longer-term perspective. Initiated in 1976 by the Art Park Foundation in New York, local communities donated truckloads of earth and compost to cover a former quarry spoils pile. The aim of the project was to regenerate the spoils pile and transform its 20-acre surface into a viable meadow with native and fruit trees. However, daunted by the contributions, the Art Park stopped the

project halfway through, so instead of 6,000 truckloads of earth being donated, the limit was 3,000. Even so, when the earth had been mixed, a meadow and trees were planted to create what is now a stable and diverse urban park that exists to this day.

Hans Haacke's critical engagement with issues relating to environmentalism and ideas around systems ecology was often symbolically realised within artworks. One of these was his 1972 work, *Rhine Water Purification Plant*, a project that commented on a specific problem of water pollution created by the Krefled sewage plant in its depositing of raw sewage into the river Rhine. Using some of this polluted river water, Haacke created a pumping system in the gallery whereby the water passed through a series of bottles that removed the pollutants. The partially purified water was then passed through a charcoal filter, entering a large Perspex basin containing goldfish, before being drained out into the garden where it would again become part of the groundwater. The fish tank was placed in front of a large landscape window in the gallery looking out over the museum's wooded surroundings, setting up a dialogue between the purified ecosystem in the gallery and the disordered ecosystem outside.

Alan Sonfist's *Time Landscape*⁵, created between 1965 and 1978, developed out of his research into the native tree and plant species that had existed in Manhattan before colonisation. Sonfist believed that it was an

⁵ Sonfist's *Time Landscape* was initiated in 1975 and emerged as part of the growing 'ecological' consciousness of the early 1970s. For more detailed information about the project see www.alansonfist.com/landscapes_time_landscape.html

important part of the heritage of the land in the city that was being forgotten. On an urban wasteland on the corner of Houston and La Guardia place in New York City, Sonfist planted native forest plants and trees and recreated the rock formations that had existed before the settlers. The project still exists in the same site today, managed by New York City Parks under a programme called *Greenstreets*⁶.

Patricia Johanson⁷ and Betty Beaumont⁸ both concentrated on the restoration of damaged ecosystems by cleaning and remodelling specific areas. Johanson's work is based on intensive research around environmentally damaged sites and seeks to bring social purpose to environmental art. Her *Fair Park Lagoon* (1981) was commissioned by the Dallas Museum of Art and designed to revitalise the nearby eponymous lagoon. The artist discovered that there had once been a thriving wetland habitat in the area and set about cleaning up the lagoon to return it to its thriving state. Removing the algae, she reintroduced native plants, fish and reptiles to recreate a balanced food chain. She also installed concrete pathways that mirrored complex patterns found in the water's plants.

Beaumont created *Ocean Landmark* in 1979-80, an underwater ecosystem on the Atlantic continental shelf 40 miles from NYC harbour. The floor of the ocean saw the installation of 17,000 coal fly-ash blocks produced from

⁶ For more information about how Sonfist' project continues see <https://www.nycgovparks.org/parks/greenstreet-mz31/history> and to http://www.alansonfist.com/landscapes_time_landscape.html (accessed 28-05-16).

⁷ www.patriciajohanson.com (accessed 29-05-16)

⁸ www.bettybeaumont.com (accessed 29-05-16)

coal waste. The coal waste - a potential pollutant - is here transformed into the source of a lush underwater garden that is a haven for fish. The work might be understood as entering everyday human realities as a source of food, as the thriving fish communities become part of a daily catch sold on the market. However, this is not a conscious interaction and importantly such a conscious intervention by an audience is not possible as the work is not available for public viewing and can be accessed by specialist marine divers for research purposes only.⁹

Revival Field (1991) by Mel Chin¹⁰ is another long-term project that aimed to recuperate a polluted ecosystem. Chin fenced off an 18m² section of the Pigs Eye landfill in Minnesota, which was contaminated with heavy metals like cadmium, and planted circular patterns of species that are known for their ability to extract heavy metal from the soil – known as ‘hyper accumulator’ plants. Set up in 1991, Chin’s project was originally an attempt to sculpt a site’s ecosystem but it transformed into an experiment looking at the potential for low-tech remediation of contaminated land.

Probably one of the best-known environmental works from this period is Agnes Denes’ work, *Wheatfield - A Confrontation* from 1982 (for image see appendix ii., fig 1). Supported by the Public Art Fund, Denes’ project involved planting a field of wheat on two acres of landfill near Wall St. in lower Manhattan (now the site of Battery Park). The field yielded 1,000

⁹ http://greenmuseum.org/content/work_index/img_id-382__prev_size-0_artist_id-37_work_id-75.html (accessed 05-06-16)

¹⁰ <http://melchin.org/oeuvre/revival-field> (accessed 05-06-16)

pounds of wheat and was a symbolic comment on where the priorities of land use lay. The harvested grain then travelled to 28 cities around the world in the International Art Show for the End of World Hunger, before being taken by people from each location and planted for the further cultivation of wheat¹¹. Nothing further about the wheat's journey was documented after it was taken for replanting.

The works described here demonstrate the kinds of process-based collaborative works that developed over the 1960s, 1970s and 1980s by artists who were concerned with relationships between human activities and the environmental concerns. They describe a commitment to long-term artistic endeavours and a move away from producing singular objects destined for gallery spaces - although most of these works will have been experienced by audiences through the presentation of documentation and artefacts in galleries.

1.2 The development of curatorial and artistic practices relating to the term ecology and environmentalism in the early 21st century

1.2.1 Contexts for development

Since the early 2000s a growing body of curatorial practices has emerged alongside artistic practices that focus on environmental concerns and the term ecology. Both curatorial and artistic practices have arisen from a revived political position that starts from concerns around the relationship

¹¹ <http://www.agnesdenesstudio.com/works7.html> (accessed 05-06-16)

between humans, non-humans and inhabited setting, and which have also questioned the philosophical construction of nature itself, and addressed the idea that ‘nature’ can today be largely thought of as inextricably formed by human activity - a period that is being characterised by land science academics as the anthropocene¹². Such works have often incorporated expanded views of ecology that include cultural systems, social systems as well as biological systems.

These shifts in approaches have coincided with wider shifts in the relationships between environmental issues, climate change and everyday realities, that include mainstream conversations about sustainable economic and everyday practices, and increased research into more energy-efficient and less environmentally harmful products, services and industrial practices. Part of this wider awareness was instigated by the increasing visibility of the work of the Nobel prize-winning UN Intergovernmental Panel on Climate Change (IPCC), which was established in 1988. Since 1990, the IPCC has periodically published comprehensive scientific reports on climate science,

¹² The anthropocene is a term that, while first deployed in the 1960s and 1980s, has more recently emerged out of geo-chemistry and geology, proposing that the current geological and environmental conditions of the planet have been shaped by the actions of humans. See Paul Crutzen in 2000. See Crutzen, P.J., Steffen, W., 2003. ‘*How Long Have we been in the Anthropocene Era?*’ in *Climatic Change*, Vol 61, Issue 3, pp251-257. However, as critics like Andreas Malm and Jason W Moore have pointed out, blaming humans per se is to let capitalism off the hook, as contemporary environmental conditions have been largely caused by resource extraction of fossil fuels, and are not a logical consequence of being human. See: http://www.jasonwmoore.com/uploads/The_Capitalocene_Part_I_June_2014.pdf; <https://www.jacobinmag.com/2015/03/anthropocene-capitalism-climate-change/> (accessed 25-05-16)

with its fifth report published in 2014¹³. These reports contain information, data, and projections on climate change that are then filtered into mainstream culture through the Media. One of its effects has been a broadening of the notion of ecology in mainstream parlance to the extent that its meaning has become entirely mutable, outside of its definition in relation to various scientific and social-scientific academic disciplines. It has become a kind of symbolic tag that can be attached to any kind of activity, product or entity that might be in some way related to some form of mitigation of environmental related issues. Being ‘ecological’ therefore has become as much a synonym for ways of finding approaches to deal with all kinds of environmental challenges caused by and within human socio-economic activity, as it is ways of thinking through alternative approaches to economic, social and political systems that reformulate human relationships with non-human co-habitants (non-human here follows Bruno Latour’s use of the term in *We Have Never Been Modern* (1991) as a way to avoid replicating a modernist hierarchy between nature and humans and the earth’s biosphere).

As ideas of what ‘sustainable’ forms of capitalism might take have emerged through corporate social responsibility programmes of global corporations, and government policies drawn up with the help of the IPCC’s reports, artistic and cultural practice has started to present more acutely critical investigations into the role of capital in relation to the ecological, that question and explore links between socio-political and environmental

¹³ See IPCC.ch (Accessed 13-03-16)

effects of capital's expansion. This proliferation of critical curatorial and artistic interpretations of the effects of human activity on the natural world since the early 2000s has developed into a sustained presence by artists and curators responding to these issues through individual artworks, themed commissions, long term projects and broad thematic exhibitions.

1.2.2 Introduction to contemporary practices

What has resulted, and what has set these projects apart from works produced in the 1960s, 1970s, 1980s and early 1990s is that they have established a broader collaborative foundation to their projects, bringing together activism, philosophy, politics and experimental practices, as well as starting to self-consciously question the role of the artist and the art institution in relation to notions of ecology, environmentalism and climate change.

Curatorial initiatives have included long-term research and commission projects like *Culture and Climate Change*, the current research collaboration between the Open University Geography Department and the School of Architecture in Sheffield University¹⁴, *Cape Farewell* (2001-)¹⁵, *Tipping Point* (2009-)¹⁶, *Platform* (1983-)¹⁷ and HKW's *Über Lebenskunst* (2009-2012)¹⁸, and at the same venue *The Anthropocene Project* (2013-2014)¹⁹.

¹⁴ www.cultureandclimatechange.co.uk (accessed 28-05-16)

¹⁵ www.capefarewell.com (accessed 28-05-16)

¹⁶ www.tippingpoint.org.uk (accessed 28-05-16)

¹⁷ www.platformlondon.org (accessed 28-05-16)

¹⁸ ueber-lebenskunst.org (accessed 28-05-16)

Thematic exhibitions include large-scale themed shows like the 8th Sharjah Biennial²⁰ in 2007, entitled *Still Life – Art, Ecology and the Politics of Change; Beyond Green: Towards a Sustainable Art* at the Smart Museum of Art in Chicago in 2005 which explored relationships between art and sustainable design; *Greenwashing: Environment Perils, Promises and Perplexities* in Turin in 2008; *Green Platform—Art, Ecology, Sustainability*, at the Palazzo Strozzi in Florence in 2009; *Weather Report* curated by Lucy Lippard at the Boulder Museum of Contemporary Art in 2007; a festival of environmental issues and climate change in Delhi, *48°C; Ecomedia* at the Edith-Russ Haus für Medienkunst in 2007; Tue Greenfort's curated archive on co-species evolution, *The Worldly House* at Documenta 13 in 2012; *The Spirit of Utopia* at Whitechapel Gallery in London, *The Whole Earth* at Haus den Kulturen der Welt (HKW) and *EXPO:1* at MoMA PS1, all in 2013, and *Rights of Nature* at Nottingham Contemporary in 2015.

In terms of artistic practice that relates to these issues, examples include firstly artists like Mark Dion, Tue Greenfort, Lara Almarçegui and Henrik Håkansson, who explore relationships between activism, the institution and the classification of nature. Secondly, Tomás Saraceno and Simon Starling who excavate ways of transposing natural forms into architectonic structures, with multiple or varying functions through chains of dependence between objects for Starling, and between actors for Saraceno. Thirdly, Ursula Biemann, Amy Balkin, Superflex and N55 who have been part of a

¹⁹ www.hkw.de/en/programm/projekte/2014/anthropozoen_2013_2014.php (accessed 28-05-16)

²⁰ www.sharjahart.org/biennial/sharjah-biennial-8/welcome (accessed 28-05-16)

movement of collective activism pursuing location-specific processual responses to socio-environmental situations, in the form of artworks and research based projects. Finally, artists like Rachel Mayeri and Brandon Ballangée have focused on non-human actors and their agency between themselves and between species, with Mayeri making artworks for chimpanzees, and Ballangée focusing on insects and amphibians.

1.2.3 Establishing what is meant by the eco-critical

I am calling this curating and artistic practice ‘eco-critical’. It is eco-critical because it incorporates commentary, critique and analysis that address the conditions of current situations that can be described using the term ecology, or environmental issues. As I have described, the practices are broad and embroiled in varying definitions of the term ecology and the broad spectrum of scientific and socio-political activities connected to its use. Such artworks might address issues relating to matters of human relationships with the earth’s resources or climate, the notion of nature, and the apportion, management and colonisation of resources that humans and non-humans require to sustain a living. Eco-critical practices often use non-art practices or collaborate with actors from disciplines related to climate science, the organisation of human and non-human societies, and non-art forms of representation such as for example science, geography, physics, biology, architecture, engineering, documentary filmmaking and journalism.

Practices might be process-driven, activist, concerned with creating an object for display, or objects for use and display, or objects just for use.

Projects can be temporal, temporary, and entropic or have a permanence that intends to outlive numerous generations. What they all have in common is that they treat the artwork as a place of freedom to work fluidly across disciplines, and to mimic and incorporate practices from other fields of work. To this end, artists might perform the work of scientists, ecologists, biologists, social geographers, novelists, secret agents, farmers, and many other forms of labour in the work they produce, without becoming absolutely engaged with the politics of these fields.

The use of the term eco-critical comes from the field of eco-criticism that exists within literary theory and cultural studies. As a field of theory, eco-criticism has its origins in literary theory where it is used to describe any work of literature that critically engages with the notions of environment, ecology and nature. In literature and film it tends to focus on representations of nature and environmental issues within film and literature, and critiques narratives of human connectivity to notions of nature and wilderness²¹. While the curating and artistic practices I am calling eco-critical focus more specifically on the political agencies that structure and alter relationships between entities and environments, and the resulting modalities of human and non-human existence within environments, they are also concerned with uses of the term ecology in relation to wider concepts of nature as wilderness and resource, notions of environment and ways in which they both intersect with human activity. This might also extend to global issues

²¹ See Willoquet-Maricondi, P., 2010. *Framing the World: Explorations in Ecocriticism and Film*. Charlottesville: University of Virginia Press, and Cubitt, S., Monani, S., Rust, S., (eds), 2013. *Ecocinema Theory and Practice*. London: Routledge

of environmental justice, and take up modes of activism as central to a practice.

Artworks and curatorial practices therefore become defined as eco-critical as a result of their constitution through such critical strategic approaches to relationships between organisms, entities, spaces, natures and environments, and agencies and effects of these relationships. These configurations might also start to address wider complex political and social tensions that maintain the relationships or set of relationships under question.

1.2.4 The eco-critical in the curatorial context

However, this critical shift needs to also be seen within a context of a wider political turn in practices of art production and display since the 1990s, which emerged out of the rise in contemporary critical art practice in the United States and Europe. In this shift, art practice has moved towards political, collective and communitarian working, often in collaboration with people from outside the sphere of art, and the aesthetic possibilities of what constitutes an artwork and where it can be experienced have expanded. At the same time, wider critical political notions of environment, land territory, space, place and the social developed by thinkers like Giles Deleuze and Felix Guattari, Doreen Massey, David Harvey, Saskia Sassen, Richard Sennett, Zygmunt Bauman and Bruno Latour have also been an influence on critical artistic and curatorial approaches within this area.

As far as the geographical reach of this evaluation here goes, my research is international. However, artistic and curatorial practices and exhibitions that have so far considered these issues have been largely based in Europe and the U.S., with some exceptions in Asia and Middle East. Some of the most substantial approaches have been based in the U.K., however and it is three U.K.-based projects that I will discuss here: Arts and Ecology, the RSA/ACE research project from 2005-09, commissioning project Cape Farewell, *Radical Nature – Art and Architecture for a Changing Planet – 1969-2009* at Barbican Gallery, London in 2009 and curated by Francesco Manacorda. In what follows I will provide detailed descriptions of the projects and their activities, which will lead to, at the end of the chapter, an outline of a curatorial paradigm that emerges as a common framework of the practices, processes and ideas that are deployed.

In the noughties, a cluster of ambitious exhibitions and initiatives emerged that started to frame their practices within a curatorial narrative supported by the much broader critical interpretation of the notion of ecology outlined by Felix Guattari's *The Three Ecologies* the text of which is examined more closely in the following chapter. In bringing together this wider interpretation of the term ecology within the realm of art, these curatorial projects reflected broader possibilities of the term that had been explored in philosophical terms by Bateson, Guattari and to a certain extent Bruno Latour in the *Politics of Nature: How to Bring Science into Democracy* (2004) - although it is Guattari's work that has been most prominent.

It is important to note that there is not a wide body of extended critical or theoretical writing in this area yet. Critical questions around the field are mostly taken up in extended essays in exhibition catalogues and projects, and while there are a number of texts that focus on the relationship between art and the environment and new approaches to the landscape, the relationship between aesthetics and ecology has been less rigorously considered as a field of critical enquiry. Linda Weintraub has made a notable contribution in her book, *To Life! Eco Art in Pursuit of a Sustainable Planet* (2012), which was the first international and historical survey of artists dealing with global environmental challenges and this was joined in 2015 by Malcolm Miles' *Eco-Aesthetics: Art, Literature and Architecture in a Period of Climate Change* (2014). However, while Weintraub refers to the term ecology and ecocentrism in the text and Miles examines the conceptual complexities of the relationships between ecology and aesthetics, neither offer a wider critical appraisal of the ideological intricacies of the terms themselves.

Notable for their sustained engagement with questions of art and ecology in their practice are curators Maja and Reuben Fowkes, who through their Translocal Institute have focussed on art, ecology and sustainability with a particular interest in Eastern European art for over a decade²². In addition, the artist Shelley Sacks, who is head of the Social Sculpture Research Unit at Oxford Brookes University in the UK, has also had a long engagement with questions of sustainability and aesthetics of interconnectedness,

²² www.translocal.org (accessed 28-05-16)

influenced by Joseph Beuys, who was her teacher. Sacks also works with German writer, researcher and lecturer Hildegard Kurt, whose work focuses on relationships between the question of what constitutes art and sustainability and who is influenced by Ernst F. Schumacher's *Small is Beautiful* (1993) and Erich Fromm's *To Have or To Be* (2005). Art historian T.J. Demos is also a key critic in the field, providing a critical framing of an approach to eco-aesthetics as editor of *Third Text* (27:1), which looked at art and politics relating to the term ecology, as well as co-curating *Rights of Nature* at Nottingham Contemporary in 2015. He is currently head of the Centre for Creative Ecologies at University of California Santa Cruz²³.

1.3 Eco-critical curating case studies

The curatorial projects described here are the ACE/RSA research project, Arts and Ecology (2005-2010); *Radical Nature: Art and Architecture for a Changing Planet 1969-2009* in London's Barbican Gallery in 2009, and the commission and expedition programme Cape Farewell (2003-present). They have been selected because they have consolidated and shifted existing practices, and each can be characterised by a clear set of curatorial principles. Each project can be seen as a hub where curatorial practices and concepts have been tested out.

²³ <https://creativeecologies.ucsc.edu> (accessed 13-03-16)

1.3.1 Arts and Ecology: expanding the field

Arts and Ecology was a diverse long-term project launched in 2005 to try to develop a dialogue between artists and non-artists specifically around concerns related to climate change. While simultaneously questioning the problem of instrumentality within art, central to the project was an interrogation into the role of artists as ‘messengers’ of issues around climate change, and the project was highly engaged, but also came across as messy, contradictory and tub-thumping.

The project was initiated by the RSA, a liberal think tank that aims to find ways to make society more just, and to mend ‘broken social bonds’²⁴. Organising research projects, events and social actions that deal with contemporary matters of social, cultural and economic concern, it was founded on the belief that cultural and creative activity has a key part to play in these concerns. It is made up of a global network of Fellows who contribute to the intellectual life of the organisation and who include government and civil service figures and leaders from the Third and cultural sector.

The RSA set up the project as a response to the challenges of climate change as they were being played out in the first few years of the 21st century. Partnering with ACE, the project set out to build a long-term network of cultural producers and to act ‘as a catalyst for the insights, imagination and inspirations of artists in response to the unprecedented

²⁴ The RSA, 2008, *Who we are* [online]. Available at: <http://www.thersa.org/about-us/who-we-are> (Accessed: 09-01-16)

environmental challenges of our time, with a focus on their human impact'.²⁵ At its conceptual heart was a broad notion of ecology, which it defined as going:

beyond the normal biological definition of ecology as the relationships between living things....with the emphasis...on the philosophical concept of ecological systems; specifically '*The Three Ecologies*' as set out by Félix Guattari [who perceived] environmental change as negatively impacting on human life in three interrelated ways – the environmental biosphere, social relations and human subjectivity'.²⁶

The aims of the project were to find novel and critical strategies artists were using to address issues related to climate change and to explore future strategies of living, in order to promote ideas for dealing with these issues in the wider world. To do this, the project worked with a range of artists and organisations that explored ideas relating to ecology in a number of different ways. This included artists who were already consciously dealing with notions of ecology, like Tue Greenfort and Heather and Ivan Morison; artists who were engaged in activist practices such as Heath Bunting and Kayle Brandon; artists and architects engaged in investigating strategies for living, such as Marjetica Potrc, Tomás Saraceno and Nils Norman; artists whose work had engaged with wider socio-political issues, including Allora and Calzadilla, Jeremy Deller and Alfredo Jaar; other arts organisations who

²⁵ <https://www.thersa.org/action-and-research/rsa-projects/design/arts-and-ecology> (accessed 20-05-16)

²⁶ <https://www.thersa.org/action-and-research/rsa-projects/design/arts-and-ecology/about> (accessed 20-05-16)

were exploring similar issues like People's Palace Productions in London, and Khoj International Artists Association in Delhi, along with an international cohort of experts, policy makers, environmentalists and activists.

1.3.1.1 Key projects and activities of Arts and Ecology

One of the challenges that Arts and Ecology faced was the problem of trying to encapsulate a clear definition of what ecology was – the already ambiguous boundaries of ecology made it hard to clearly define the object of their research. As Michaela Crimmin says in her introduction to *Land, Art: A Cultural Ecology Handbook*: '[w]e found that any lines drawn were immediately transgressed' (Crimmin, 2006, p.17). The project was launched with a symposium in April 2005 that set out some theoretical boundaries and where the central ideas of Felix Guattari's *The Three Ecologies* were outlined in detail. Professor Gary Genosko delivered a keynote on the text, discussing how Guattari's ethico-aesthetic paradigm is central to his idea of how human and non-human organisation can be reconfigured. Other speakers included artists, cultural producers, curators and policy-makers including Jane Trowell from Platform, artists Allora and Calzadilla, Nils Norman, Alfredo Jaar, Kayle Brandon and Heath Bunting, writer Jan Verwoert, cultural producer Claire Cumberlidge from the General Public Agency, the then government chief advisor on climate change, Sir David King, and Sir Nicholas Serota, director of the Tate. While not dwelling on theory, they demonstrated in some way the complexities of Guattari's paradigm, through their diverse backgrounds.

The second launch event, 'Towards an Eco-cinema' was curated by Mark Nash and held at the Watershed in Bristol in September 2005, and looked at notions of ecology and cinema. This was concerned with ways in which environmental effects of social and economic networks have been explored in film. It featured screenings of Herbert Sauper's 2004 film, *Darwin's Nightmare* and artist Andrey Zdravic's *Riverglass: A River Ballet in Four Seasons*, from 1997. Other Arts and Ecology conference events continued this multi-disciplinary approach, bringing together multiple strands of practice in dialogue. No Way Back, in December 2006, launched their publication, *Land, Art: A Cultural Ecology Handbook*, edited by Max Andrews. It featured a broad panel that included artist Jeremy Deller, then Labour culture minister David Lammy MP, artists Heather and Ivan Morison, curator Ralph Rugoff, artists Tue Greenfort, Marjetica Potrc, Tomás Saraceno, writer Ruth Padel, then Arts Council England Chief Executive Peter Hewitt, China's delegate at the UN climate change talks, Professor Zou Li, and Chairman of the Soil Association, Craig Sams. Running over two days, the event included sessions on 'land, art and ecological thinking', 'social ecosystems' and a talk by Jeremy Deller about his Arts and Ecology commission, the *Bat House* in the London Wetland Centre.

1.3.1.2 Arts and Ecology commissions and collaborations

Deller's project was a key Arts and Ecology commission (For images, see appendix i., figs 1 & 2). It was an extension of his work that he did with the Bat enthusiasts in Texas for his 2004 film *Memory Bucket* and was inspired

by the work they did to create bat habitats. In response to the fact that the habitat of bats in the UK is under threat, Deller's project was to instigate an open competition to design a home for bats that roost in the London Wetland Centre. The structure had to be purpose-built, with specialised features that provided a safe roosting, breeding and hibernating space for bats, as well as allowing visitors to engage with the bats and learn about them. The competition had four categories: professionals, students, the general public and school students, with the winning design being produced by two fourth-year students from the Architectural Association, Jorgen Tandberg and Yo Murata. The judging panel including leading figures from architecture and bat conservation groups. The winning design was a series of laser cut wood panels that look like flattened gnarled tree trunks surrounded by a concrete frame, which provided an aesthetic and functional habitat. According to Kevin Peberdy from the Wildfowl and Wetlands Trust who run the Wetland Centre where the project is located, the design was chosen because it was made with bats in mind, rather than being a scaled-down human environment. Constructed in 2008, the budget for the project was provided by Berkley Homes.²⁷

Other artist commissions included Heather and Ivan Morison's the *Black Cloud* pavilion (for images, see appendix i., fig. 3). Located in Bristol's Victoria Park, and produced in collaboration with the public art-commissioning organisation, Situations, the pavilion was created from

²⁷ www.berkleygroup.co.uk/press-releases/2009/architect-designed-bat-house (accessed 28-05-16)

scorched timber. It took its name from a novel by Sir Fred Hoyle about a giant cloud that threatened to block out sunlight and end life on earth. The timber was scorched using a Japanese technique that protects it from the elements, and it was built communally, using traditional Amish principles of construction. From a distance it looked like a monstrous black insect, and the darkness of its imposing presence was reflected in the artists' own narrative for the pavilion. Their narrative proposed that the pavilion was a shelter from the unrelenting sun of a future scorched world, and it existed like some kind of architectural folly from an imagination of the future. During its four-month residency in the park, it hosted programmed events including discussions and music jams, local community activities and a one-day festival.

Setting up partnerships and collaborations was also central to the project. A number of commissions were set up in association with various international organisations. Artist David Cotterell returned for a second time to Afghanistan to explore issues relating to sustainability as part of a residency at the Turquoise Mountain Foundation in Kabul. He had previously spent time there as a resident artist observing the work of the Joint Forces Medical Group at Camp Bastion in Helmand Province.

A ZKM partnership assisted in the production of Dirk Fleischmann's commission in the artificial world, Second Life (SL). Entitled *Second Life Island* Fleischmann's avatar Flex Dix took up residence on ZKM Island in SL. Here he announced that the project was designed to highlight carbon

emissions from internet use on the virtual world and that the project was aiming to offset the carbon emissions from ZKM's internet usage by planting trees in an existing carbon sequestration project. Thousands of trees were then planted in the Philippines as part of a project called *My Forest Farm*²⁸ that outlived his Arts and Ecology residency. The residency became in effect a funding stream for the subsequent project.

In India, Heath Bunting and Kayle Brandon undertook a residency in Khoj International Artists Association in Delhi as part of Khoj's Eco-Art residency programme in 2007, which was set up to explore the relationship between ecology and economy in the changing city. Bunting created *The Daily News*, a free newspaper given out on busy streets that was devoted to documenting the life and role of animals in Delhi. The pair also developed a phase of their project, *Food for Free* (for images see appendix i., figs. 4 & 5), which between 2003 and 2013 documented the locations of edible plants around the city of Bristol. The project mapped out the locations of the plants and in Delhi, a map was embroidered onto a scarf, which could then be worn or displayed.²⁹

Arts and Ecology also partnered with People's Palace Projects on their project Amazonia, which was carried out in collaboration with the Young Vic and various Brazilian organisations. It created a dialogue on climate change between artists and young people in the U.K. and the Amazon

²⁸ www.myforestfarm.com/art.html (accessed 19-05-16)

²⁹ http://duo.irational.org/food_for_free/material_maps/ (accessed 13-03-14)

region of Brazil. The project organised workshops in dance, community performance, as well as discussions around the future of the rainforest. It also presented a seminar in collaboration with the RSA in London exploring the legacy of Chico Mendes, the environmental campaigner, rubber tapper and trade union leader who fought to preserve the Amazon rainforest and advocated for human rights for its inhabitants. The project concluded with an award in Mendes' name, the Young Vic/People's Palace Projects Special Prize, which was launched at the Festival of the League of Quadrilhas in Rio Branco. Quadrilhas are a particular type of square dance, and the prize was awarded to the group that produced the best dance that dealt with issues related to the environment or Mendes' life and work.

One of the project's most significant collaborations was in the commissions for the exhibition, *Radical Nature: Art and Architecture for a Changing Planet 1969-2009*. Some of the commissions were reconstructions of earlier works, such as Newton and Helen Mayer Harrison's Full Farm from 1974. This was originally designed to show sustainable systems for food production in the early 1970s and intended to eventually provide a complete spectrum of food requirements. It was composed of a number of portable propagation units, strategically placed in the Barbican Centre, that were home to a range of fruit and vegetables growing under grow lights. Another commission that referenced an iconic Land Art project was the French architecture collective EXYZT's restaging of Agnes Denes' *Wheatfield – A Confrontation*, 1982 as *Dalston Mill*, discussed later (for images see appendix ii., figs. 6-8).

1.3.1.3 Summary of activities

In keeping with the project's pedagogical ambitions, director Michaela Crimmin made many international connections for Arts and Ecology and travelled globally with artists who were involved in the project. She took part in the UNESCO/UNEP 4th International Conference on Environmental Education that was hosted by the Centre for Environmental Education (CEE) in Ahmedabad, and the Susan Benn of Performing Arts Lab (PAL). Here she ran a workshop entitled Art, Design and Ecology—The Role of Artists and Designers in Creative Environmental Education for Sustainable Development. She was joined by Kayle Brandon who was on the Eco-Art residency at Khoj, in Delhi at the time, along with a number of other artists including Jeremy Deller and Ravi Agarwal. There were two main outcomes of this workshop: a report of recommendations that acted as guidelines for future artists and designers involved in UNESCO, and an invitation to work in a school in Ahmedabad to devise theatre on climate change with young people.

This broad view of the projects activities and initiatives can be summarised as a set of ideas that were looking for critical artistic responses to problems related to the management of the earth's resources and the relationships that govern such management with the aim of increasing audience engagement. Even with the breadth and diversity of the work the project embraced, it bore out a straightforward interpretation of Guattari's expanded ecology. Through their support of artistic practice that set out to initiate interventions

in existing socio-political and geographical circumstances, they attempted to ‘nurture’ approaches to an interpretation of his ethico-aesthetic paradigm and deploy these approaches within the project’s curating framework as proposals relating to issues to do with the environment and the term ecology - as the project statement says: ‘From the beginning, Arts & Ecology set out to encourage artists to engage with the implications of ecological change, but did not set an agenda that artists’ might feel coerced into addressing’.³⁰

This statement marks the project as a structure for promoting a specific kind of work that is self-consciously responding to an international emergency, but without questioning the methods through which this is carried out. In this way it becomes more concerned with exposing specific types of artistic activity than exploring the constitution of the term ecology as such within a wider strategy.

1.3.2 Radical Nature – Art and Architecture for a Changing Planet 1969-2009

The next case study describes an instance of an exhibition that is engaged with ideas and issues relating to the Earth’s biosphere and the term ecology. I will look at the elements that made up the 2009 exhibition in the Barbican Gallery in London, *Radical Nature – Art and Architecture for a Changing Planet 1969-2009 (Radical Nature)*. A wide-reaching, themed exhibition, *Radical Nature* was presented a few years after Arts and Ecology was

³⁰ <https://www.thersa.org/action-and-research/rsa-projects/design/arts-and-ecology/about> (accessed 28-05-16)

initiated, and responded to a growing field of critical practice in the area, which was no doubt down to some of Arts and Ecology's endeavours.

Curated by Francesco Manacorda and presented at the spacious Barbican Gallery *Radical Nature* was a large-scale group exhibition. It was produced at a time when climate change had become part of mainstream culture, as well as becoming part of the national curriculum for UK school students. These factors, and the fact that it was in the gallery of the Barbican Centre, an important multi-arts venue in central London, demonstrated its ambition to be part of a popular discussion on environmental issues, and this was corroborated by the inclusion of a catalogue forward by eminent British environmentalist Jonathon Porritt.

Radical Nature was important because it was the first to bring works that related to the term ecology and issues of the environment from the early 1970s alongside contemporary practice in an attempt to trace a historical trajectory. Featuring the work of 25 artists, the exhibition included a mixture of existing works and new commissions, as well as off-site projects and an events programme. As mentioned above the commissions and events were undertaken in collaboration with Arts and Ecology.

Manacorda's curatorial orbit focused around the debunking of the philosophical and cultural binary opposition of nature and culture. It rehearsed a now common line of thought proposing that since evidence has emerged that the effects of industrialization and capitalism on the earth's

biosphere have in many cases been negative it might be helpful to rethink this binary. He refers to the influence of cybernetic theory and activism on artistic activity both in the seventies and today and attempts to trace paths of connection to show different ways in which artists critically responded to the environmental crisis, and how they have articulated the implication of human activity as totalising in its effects on the earth's biosphere. The catalogue includes an essay by TJ Demos who thematises approaches that artists have, and have had, to nature and ecology, from the amelioratory, restorative, and cybernetic-influenced endeavours of artists in the early seventies, to more critical, political and dialogic strategies of artists today.

Demos' essay marked out some interesting and important contradictions and problems associated with the convergence of art and ecology. He points to the problems that artists face when proposing ecological practices suggesting that when they attempt to set up local sustainable practices they are always already set up to fail within what he calls, 'a globally unsustainable system of ecologies' (Demos, 2009, p. 28).³¹ He also endorses a continued necessity of artists to practice in this area, arguing that artists have an important role to play in testing out ecological propositions within the context of art, although he doesn't say what these ecological propositions might be. He concludes by suggesting that art can play a key

³¹ Demos, T. J. "The Politics of Sustainability: Contemporary Art and Ecology." In *Radical Nature: Art and Architecture for a Changing Planet 1969–2009*, published in conjunction with the exhibition of the same name, shown at the Barbican Art Gallery, edited by Francesco Manacorda, p.28. London: Barbican Art Gallery, 2009. <http://www.environmentandsociety.org/node/3417>.

role in a wider public dialogue around the question of how humans can start to inhabit the earth in an sustainable way: ‘To contribute to the on-going public engagement with the politics of sustainability, to advance creative propositions for alternative forms of life based on environmental justice in a global framework, and to do so until such art exhibitions can somehow meet the requirements of a just sustainability - these are the imperatives for a contemporary environmental art ’(Ibid., p.28).

Demos’ confidence in the ability of art to take on this role is played out through the work in the exhibition. Of the 25 artists participating, there are six new commissions, including one off-site. Other works were all pre-existing objects or documentations of projects. A programme of talks supplemented the exhibition, including a conversation about artist David Buckland’s Cape Farewell project (described as a case study later in this chapter), discussions with various architects about strategies for alternative living, future-proofing the city and the question of recycling in building materials, along with discussions about everyday living in relation to food consumption and the use of land local to large conurbations for food production.

1.3.2.1 *Radical Nature* artworks and themes

A broad range of contemporary practices, traditions and trajectories were curated with works from the late sixties and early seventies. Most of these works appeared in the form of documentation. Works featured included Joseph Beuys’ 1977 work that was part of Documenta VI, Honey Pump at

the Workplace, in which two tons of honey was pumped through a series of tubes laid in gallery and powered by a motor lubricated with margarine; a number of Hans Haacke's key works from the seventies; Robert Smithson's *Spiral Jetty* (1970) (for image see appendix ii., fig 2), and Mierle Laderman Ukeles' *Sanitation Touch* (1984); Buckminster Fuller's influential film *Modeling the Universe* from 1976; Ant Farm's *Dolphin Embassy* (1977) and the *Radical Software* magazine (1970-1974). Documentation of Agnes Dene's 1982 *Wheatfield: A Confrontation* was presented in the gallery, while outside the gallery on a disused plot of land in East London, the French architecture collective EXYZT set up *Dalston Mill*, mentioned above. Newton and Helen Mayer Harrison were invited to restage their 1974 urban farming survival series, *Full Farm: Survival Piece #6* around the gallery, setting up large planters in which various edible crops were cultivated (for image see appendix ii., fig. 3). Many of the contemporary artists included in the exhibition had already participated in art and ecology-related exhibitions, such as Tue Greenfort, Henrik Håkansson, Lara Almercegui, CLUI, Mark Dion, Tomas Saraceno and Simon Starling.

The exhibition did not follow the theorisation in Demos' essay; rather it worked to unpick multiple facets of the complexities and contradictions within the nature/culture binary. The key themes that the participating artists addressed were the physical and psychological connections that humans have with the land and nature, functionalities of living systems, and the human relationship with non-human species. The works tended to be

metaphorical, allegorical, or narrative based and could be perceived as being organized through four conceptual tropes.

The first of these could be called detached nature, and was demonstrated through artworks that were formed from organic matter that had been transplanted to the gallery where its cultivation continued during the exhibition. Another trope that emerged focused on the relationship between nature, space and the social, which can be understood as the ways in which groups of actors politically engage with manifestations of what we understand as nature within space. The artworks that contributed to this trope tended to be experience based – either inside or outside the gallery. A third trope could be understood as a dialogue between art and notions of land and emerged through a series of works that were situated in, or related to specific landscapes. A fourth trope could be seen emerging from a cluster of artworks that dealt with systems ecology, and which were often based on an assumption that a system formed along ‘natural’ principles (like a geodesic dome) would eventually be self-perpetuating.

The trope of detached nature could be perceived through a number of key works: Mark Dion’s *Wilderness Unit* (2006), a project which reiterates the mobility that humans have integrated into what we know as ‘natural’ entities; Simon Starling’s *Island for Weeds* (2003) - a trailer overgrowing with rhododendrons, a commentary on their detrimental impact in the Scottish highlands following their import from Southern Spain; Helen and Mayer Harrison’s urban *farming planters that formed a restaging of their*

project from the seventies, Full Farm (1974), and Henrik Håkansson's Fallen Forest (2006), which was a section of potted rainforest lying on its side, kept alive within the gallery (for image see appendix ii., fig. 4). Each work addressed different aspects of ways in which human beings engage with ecologies of nature. The overall effect in the gallery was that the presence of nature actually stood in for human detachment from nature, rather than a critique of our detachment from nature.

Notions of nature as a locus for both social activity and an impulse for constructing architectural space came through in a number of projects. These works all invited the participation of exhibition visitors in some way. Heather and Ivan Morrison's *I am so sorry. Goodbye (2008)* comprised two geodesic domes in which a strict tea ritual was performed. The domes were reminiscent of the structures built by utopian communities on the west coast of the US in the early seventies, and in so doing also maintained an element of modernist futurism, but tinged with a contemporary hindsight of failure. In the domes, participants were served hibiscus tea by a guardian who was restricted to only using the words 'I', 'am', 'so', 'sorry' and 'goodbye', a kind of cryptic messenger between a past world and one that was dreamed of perhaps.

Creating a social space where consumption and production took place on the same site, EXYZT's restaging of Agnes Denes' *Wheatfield-A Confrontation (1982)* added a social dimension to Denes' original project. Tomas Saraceno's structures, on the other hand, present a more demanding

scenario. His constructions are designed to be situated in the air, and in a similar way to Heather and Ivan Morrison's, are developed through processes of biomimicry. In many of his projects, visitors can navigate his structures in exhibition settings and they are designed so that individual actors each have to consider how actions within a space connect with, and affect other actors, but in *Radical Nature* a non-navigable model was presented.

Another theme that appeared was the notion of land. It appeared in many guises and was probably the most fragmented and inconsistent trope throughout the exhibition. The reified entropic sublime of Robert Smithson's *Spiral Jetty* (1970) is set against the psychological landscape of the film *BogmanPalmJaguar* (2007) by Luke Fowler, the rigorous research practice carried out by Centre for Land Use Interpretation (CLUI), and the spaces of 'political potential' demarcated by Lara Almarcegui in *Guide to the Wastelands of Lea Valley: 12 Empty Spaces Await the London Olympics* (2009). In all of these projects, apart from Smithson's, land becomes explicitly detached from the notion of nature to demonstrate its implication in a wider complex of social, political and economic factors.

While CLUI exposes the political workings that have apportioned and reapportioned land throughout the US, Almarcegui is concerned with how the entropic de-composition of a site becomes part of a hidden process, a way of nature invading the city. This is in contrast to Smithson for whom the process of entropy was central to the formal fulfilment of his work.

Luke Fowler also opens up a distinct set of the questions around notions of human perception and normativity in relation to nature and the possible (universal) shifts that might begin to rethink human relationships to nature. What is also interesting about the inclusion of Smithson and Fowler here is that it expands the parameters of the exhibition to explore Guattari's notion of a psychological 'ecosophy' proposed as one of this three ecologies. Nature becomes both psychological and entropic material.

The final trope that can be discerned throughout the show is what might be called systems ecology. This is where relationships between humans, non-humans and environments are identified as reciprocal interconnected systems, balanced, disturbed, disrupted or otherwise. Traced through works by Richard Buckminster Fuller, Radical Software, Hans Haacke, Ant Farm, Tue Greenfort, Joseph Beuys and Wolf Hibertz, this trope is predicated on notions inherited from cybernetic theory that all entities are both connected and reciprocal. They exist as part of an on-going feedback system of cause and effect. This is probably one of the most common responses to thinking the notion of ecology, and Buckminster Fuller's notion of 'spaceship earth' – discussed in the following chapter - was one of the most influential ideas within the environmental movement of the early seventies.

Radical Nature's breadth and complexity, along with its engagement with earlier works marked it out as an assemblage that aimed to address the wider art historical complexities of the field. This contrasted with the work of Arts and Ecology that focused on the scientific and socio-political issues

at stake and the work of contemporary artists in addressing this. In doing so, the exhibition broadened the aesthetic references within the field and made important conceptual connections between works. I would argue that the exhibition represented a turning point where exhibitions moved away from general references to the term ecology, instead focusing on more specific concerns, and this was one of the last major recent exhibitions that attempted to consciously articulate a narrative that directly connected art with notions emerging from the term ecology as such. It is also interesting to note that very soon after this exhibition, the RSA closed the Arts and Ecology project and shifted their focus onto the question of citizenship in *Citizen Power*, a project in Peterborough that launched in 2010.

1.3.3 Art and climate change through the lens of Cape Farewell

The final case study I will describe, Cape Farewell, shifts the focus away from broad-based programmes and revolves around a more practical and instrumental aims. More explicitly pedagogical than either of the two projects already discussed, this commission and exhibition programme starts from a very straightforward premise – that cultural production can educate the wider public around climate change.

While not offering any similar theoretical underpinning, Cape Farewell starts from a similar basis as Arts and Ecology in the way it fosters partnerships between artists and non-artists around issues relating to climate change. Set up in 2001 by artist David Buckland, Cape Farewell is a broad art-commissioning programme that sets out to address and raise awareness

of issues around climate change and ideas related to term ecology and ecological awareness, with offices in the UK and Canada. Buckland inaugurated the project as a direct response to what he saw as the need to communicate climate change more widely and he believes that artists have the power and agency to, as he puts it, ‘evolve and amplify a creative language’³² to successfully achieve this. He continues: ‘we bring creatives, scientists and informers together to stimulate a cultural narrative that will engage and inspire a sustainable and vibrant future society. Using creativity to innovate, we engage artists for their ability to evolve and amplify a creative language, communicating on a human scale the urgency of the global climate challenge’.³³ As far as theoretical underpinning goes, it does not engage critically in current discourses around landscape, art and politics, or shifts in artistic practices, and tends to work in a rhetorical manner, and this is demonstrated in the video of the launch event for Cape Farewell North America, where its North American director, David Miller references Marshall McLuhan’s comment from *Understanding Media* (Routledge, 2001) about art being a distant early warning to tell the old culture what is about to happen, saying that today artists are the distant early warning line for the consequences of climate change.³⁴ It has a wide and diverse set of projects, but is arguably best known for its expeditions that form the backbone of, and catalyst for, all its activities, and these will be the main focus of this discussion.

³² <http://www.capefarewell.com/about.html> (accessed 28-05-16)

³³ <http://www.capefarewell.com/about.html> (accessed 28-05-16)

³⁴ <http://www.capefarewell.com/explore/video.html> - See video: *Climate is Culture* at 0.02 (accessed 31-05-16)

While many other artists (for example Pierre Huyghe, Simon Faithfull, Aleksandra Mir, London Fieldworks) have gone to the Polar Regions on art-related expeditions, Cape Farewell is the longest running art organisation to have made polar expeditions the focal point of their programme. With their own expedition ship, a 100-year-old schooner *Nooderlicht* (Northern Light), Cape Farewell has conducted over 10 expeditions since 2003 (for images see appendix iii., figs. 1, 3, 4). The conceptual motivation behind the expeditions is for artists to sail with the scientists to be in the places where climate change is being researched and where the science is being carried out. As David Buckland says about the meeting of scientists and artists on the expeditions ‘you put the scientific guys who’ve told us we’ve got a problem along with the artist guys...and go, come on now, we’ve got to really figure out what is the future, what is the inspiration going forward.’³⁵

As well as the Arctic, Cape Farewell expeditions have journeyed to the Andean rainforests in Peru, and in 2010 embarked on *Sea Change*, a four-year project in the Scottish Western Isles. *Sea Change* has brought together artists, scientists and Scottish cultural organisations in a knowledge exchange programme, and included a month-long expedition around the islands. In addition, two of their expeditions have been solely for young people interested in art and climate science. Whatever their destination, the expeditions are not an undirected free flow of ideas exchange between artists and scientists. They are directed by the research of the scientists. The

³⁵ See <http://www.capefarewell.com/about.html> at 7’16” (accessed 21-06-16)

fieldwork that the artist produces is therefore a specific response to a set of scientific concerns that is already central to each expedition.

Cape Farewell takes a broad group of cultural producers on each expedition, made up of artists, writers, musicians, dancers, and theatre producers. Participants have included Ryuichi Sakamoto, Heather Ackroyd and Dan Harvey, Laurie Anderson, Amy Balkin, Sophie Calle, Beth Derbyshire, Siobhan Davis, Gary Hume, Jude Kelly, Lucy and Jorge Orta, Rachel Whiteread, Antony Gormley, Vikram Seth, Lemn Sissay, Ian McEwan, Yann Martel and Martha Wainwright. Some of these—for example Lucy and Jorge Orta, and Amy Balkin—are already known for engaging in environmental concerns in their work, however many are not. On the other hand, all the scientists—who include oceanographers, biologists, geophysicists and environmental scientists—are engaged in research related to climate change in some way.

1.3.3.1 Artworks and practices produced out of the expeditions

The participating artists engage with the expedition in different ways and there is no condition to make a work directly as a result, although most do. In terms of what artists do while they are actually on the expedition itself, their activities vary. Antony Gormley worked with architect Peter Clegg to produce an artwork called Three Made Places, where they created three different ice structures that represented different inscriptions of the body in ice—through body mass, the mind and the minimum space needed for shelter. Dan Harvey and Heather Ackroyd produced Ice Lens, a lens carved

from a section of a glacial iceberg frozen in the sea. Musician KT Tunstall wrote songs, theatre director Jude Kelly directed *Paradise Lost* in the ship's mess; Sophie Calle buried her late mother's jewels in a glacier, accompanied by Martha Wainwright singing *Diamonds are a Girl's Best Friend*; musician Ryuichi Sakamoto recorded sounds, and Rachel Whiteread walked. Most of the participants use the trips as fieldwork for an exhibition, for data-gathering or conducting visual experiments.³⁶ Some of them use it to produce a related work, and for others like Rachel Whiteread, the experience would find its expression in shifts in her thinking that occurred following her return, as she said in an interview in the *Guardian*: 'I had no intention of making work there. I wanted to take a more meditative approach to try to experience the place as quietly as possible...Now I just have to wait for everything I saw and felt to leach into my work.'³⁷ It is interesting to note that soon after returning from her 2005 expedition, Whiteread produced her Unilever commission in the Tate Modern's Turbine Hall, Embankment, a labyrinthine structure with a glacial appearance that was constructed from 14000 ice-white coloured casts of the inside of cardboard boxes.

Conversely, one artwork that directly referenced the experience of being on the 2010 expedition to the High Arctic was by Matt Clark from United Visual Artists. He worked with Cape Farewell to produce *High Arctic* at the

³⁶ To read more about the artists' activities and blog posts from some of the expeditions go to: <http://www.capefarewell.com/diskobay/> (accessed 13-03-16).

³⁷ Whiteread, R. 2005. *I feel like an astronaut*, *The Guardian* 16 March 2005 [online]. Available at: <http://www.theguardian.com/artanddesign/2005/mar/16/art1> [Accessed 22-01-14]

National Maritime Museum in Greenwich in 2011-12. The exhibition imagined the Arctic in 2100, when its landscape had shifted irrevocably from the white icy expanse of today and asked visitors to imagine how we would tell the history of a land that no longer exists using data and imagery taken from his trip. Visitors were invited to walk through a 3D interactive landscape with a UV torch that enabled them to see where glaciers are predicted to have melted by 2100. The installation was accompanied by a soundtrack of a commissioned poem by Nick Drake that used the format of the BBC's Shipping forecast to deliver a portentous elegy for a landscape that will eventually be changed beyond recognition.³⁸

1.3.3.2 Art as fieldwork; fieldwork as art

Cape Farewell is founded on a number of key premises. Central to its operations is the importance of travel and fieldwork to artists, and the role of travel and exploration to relatively little known and little-inhabited places as a starting point for artistic investigation. Secondly, the organisation believes in the role of artists as communicators of events and occurrences in ways that can engender a wider understanding of important and difficult situations. Finally, it is founded on a set of interdisciplinary dialogues between artists and cultural producers, and scientists. Cape Farewell's projects are led by the science, although projects themselves are a dialogue between artists and scientists.

³⁸ For a walk-through of the exhibition please see <http://www.uva.co.uk/work/high-arctic>

The work that Cape Farewell does, as will be discussed in chapter three, exemplifies many of the problems arising around engagements between art and environmental issues, and the role of artists and curatorial strategies within this field. While the strategy of field trips and expeditions is not a new one in the field of artistic production, in a Cape Farewell expedition it is founded on a number of assumptions. Firstly, that travelling to an ecologically ‘unstable’ site to experience climate change is the best way to inspire artists to understand the environmental, biospheric and ecological challenges that face human populations around the world today. Secondly, it also assumes that in doing so alongside scientists, artists are better placed than scientists to communicate these challenges to wider audiences and to help engender shifts in patterns of behaviour in these audiences. Thirdly, it also assumes that journeying to these destinations is enough for artists to be considered to be engaging with climate change as a real problem. David Buckland sums all these up when he says:

If you’re coming at a challenge that we’ve got to think about evolving another structure for existence, that means a shift and if you get a shift, you will always find artists in that place, because that’s their territory. They like it when it’s unstable and exciting going forward. They [should] be here [in the Arctic], this is their central place to be.’³⁹

³⁹ <http://www.capefarewell.com/explore/video.html> See video: *The Story So Far* at 7:00

Cape Farewell's expeditions are focused on expansive, evocative sites where human habitation is minimal, but where long-term effects of human activity are becoming discernable. They are also sites that in the past might have conventionally been called sublime, and were reified in painting, photography and film as soon as technology enabled relatively safe human passage to these spaces. These evocative locations that are suddenly and briefly occupied by artists, and their subsequent images become dialogic canvases for climate change.

1.3.3.3 Curating Cape Farewell

One of the largest outcomes of these expeditions has been the UNFOLD exhibition, a large touring show featuring 25 of the artists, writers and musicians who have taken part in one or more of the Cape Farewell journeys to the Arctic or the Amazon. Amongst its participants are Amy Balkin, David Buckland, Ian McEwan, Robyn Hitchcock and KT Tunstall, Lucy and Jorge Orta, Lemn Sissay, Heather Ackroyd and Dan Harvey and Marije de Haas. In the exhibition, Amy Balkin presented a 38-minute film of a reading-aloud of the Intergovernmental Panel on Climate Change report, *Climate Change 2007: Synthesis Report for Policy Makers*; David Buckland showed documentation of his 'ice graffiti' — where phrases such as 'white sale' and 'discounting the future' were projected onto the surface of icebergs. Clare Twomey presented *Specimen (2009)*, a series of naturalist flower heads made from unfired clay. This rendered them incredibly fragile and the effect of this was that they crumbled easily into dust, reflecting the disintegration of the Arctic ice. Tracey Rowledge exhibited her Arctic

Drawings (2008) series that she'd made during her time on the 2008 Disko Bay expedition. For these, she suspended a felt-tip pen from a pendulum during the voyage to capture the movement of the sea.

The exhibition has toured globally, to eight venues at the time of writing, including Centre for Contemporary Art in Beijing (2013), Parsons New School in New York City (2011), University for Applied Arts in Vienna (2010) and Newcastle University (2010) in the UK, each with a related programme of events. The scale of these events differs from venue to venue, but as an example when the exhibition was at the New School in NYC, it included conversations and panels, two symposia, launch events and a continuous radio broadcast throughout the exhibition. The panels and conversations generated dialogues that looked at the production of the exhibition itself, and issues related to the future of New York. Issues to do with rising water levels are a particular challenge facing the city as climatic changes start to manifest themselves and these were addressed in a specific symposium. Other focuses were on biodiversity in the Himalayas, issues around real estate and risk in New York City, and a debate on the dual roles of climate change and activism.

Cape Farewell also curates an on-going series of exhibitions titled Carbon. These are smaller than UNFOLD and feature newly commissioned work. To date there have been three: Carbon 12 and Carbon 13, and Carbon 14 (for image see appendix iii., fig. 2). Carbon 12 took place at the Espace Fondation EDF in Paris in 2012. It featured the work of Lucy and Jorge

Orta, Heiko and Helen Hansen (HeHe), David Buckland, Erika Blumenfeld and Annie Catrell, all of who had worked with scientists to realise their works. Artist David Buckland worked with biological oceanographer Dr Debra Igleisias-Rodriguez to explore the social and environmental significance of chalk and the coccolithophore deposits from which it is formed. Their work constituted images of human cells, embryos, fetuses and infants embedded in chalk shards. Lucy and Jorge Orta developed a collaborative relationship with the Environmental Change Institute while participating in the Cape Farewell expedition, Amazonia. For Carbon 12 they presented a number of works from their time in the Amazon jungle. The first work was part of an ongoing series of documentation of flora from around the world, either as highly detailed photographs taken with a macro lens, or as textile renditions of the flowers themselves. Secondly they produced a visual diary of the expedition and finally there was a series of reproductions of fossils from Amazonia rendered in Limoges porcelain and decorated with delicately painted images of flora and fauna from the area where the fossils were found. Erika Blumenfeld worked with marine biologist Dr Michael Latz to explore the phenomenon of bioluminescence and its role as an indicator of the health of the oceans. The works on display in the exhibition constituted a series of digital prints documenting bioluminescent phytoplankton in the ocean.

Carbon 13 took place between 31 August 2012 and 3 February 2013, and was presented in collaboration with Ballroom Marfa in Texas. It featured a number of new commissions by Cape Farewell artists including Antony

Gormley, Cynthia Hopkins and Amy Balkin and coincided with the Marfa Dialogues biennial symposium that included conversations around climate change and sustainability. In the exhibition, Amy Balkin inaugurated her now on-going project, *A People's Archive of Sinking and Melting*. The project invites contributions of items and related stories from people who are living in places that are threatened with disappearance due to climate change. The effect is an archive of things that the contributors have presented as evidence for lands in flux.⁴⁰ In *The Ecocide Trial*, The Supreme Court, 30 September 2011, Ackroyd and Harvey documented a mock trial in the UK based on a real account of a major environmental disaster. Cynthia Hopkins presented *This Clement World*, a musical theatrical performance that presented itself as a live documentary film set in and out of the Arctic. The work explored what we need to do now to maintain a liveable climate for future generations. David Buckland presented an internal combustion engine as a ready-made and Antony Gormley presented *BODY XX11*, a large-scale work on paper made with carbon and casein depicting an abstract human figure.

One of the most interesting outcomes of Cape Farewell's work revolves around the way in which the idea of the expedition can be expanded to encompass a wider dialogue on the production of art and its relationship to exhibition. At the heart of the definition of the word expedition are the

⁴⁰ *A People's Archive of Sinking and Melting* collects material from people living in places that may disappear through socio-political, economic, geological and climatic reasons. It has received contributions from across the world and there are no restrictions on the type of material that can be added. It is both a physical archive and online and can be found at www.sinkingandmelting.tumblr.com (accessed 19-01-14).

notions of journeying and exploration with a particular purpose, and Cape Farewell has taken these ideas as starting points for many of their recent non-travel based projects and investigations. Their projects are often long term, either residencies, or investigations. These projects include a long-term on-going collaboration with the Eden Project in Cornwall, England, titled The Slow Art Programme, where Cape Farewell expedition artists have been given the space to develop new projects at a pace that suits them, rather than towards an exhibition deadline. This focuses on giving artist the space to develop works outside of the constraints of an exhibition programme. The presence of the artist is integrated back into the Eden Project's existing programme as and when it is appropriate for the artist. Recent participants in this programme include artists Heather Ackroyd and Dan Harvey, Freya Morgan and Michèle Noach.⁴¹

Another outcome of Cape Farewell's expeditionary practice is the integration of localised expeditionary practices within educational institutions around the UK as part of a pedagogic project, ShortCourse UK. In addition, it has also started to develop projects where the expedition is not its central backbone. In Swansea, South Wales, the Tidal Lagoon Project investigated the relationship between power generators and the surrounding community. Calling itself a 'creative inquiry,' the project is a response to a proposal by a company called Tidal Lagoon Swansea Bay Ltd to build a new 250 MW power plant that aims to offer zero-carbon electricity for 120 years. The project includes an 'urban expedition' around the area and asks

⁴¹ <http://www.capefarewell.com/art/past-projects/eden.html> (accessed 26-05-16)

artists, students and school children for help in imagining what the power plant might look like.

1.3.4 Case studies concluding remarks

Cape Farewell is interesting here because it has the most instrumental practice in terms of its wider overall aims. By this I mean to say that it takes a conventional pedagogical position and proceeds by facilitating direct or indirect artistic interpretation of scientific knowledge for wider distribution. The emphasis here is placed on giving artists privileged access to knowledge that they can ‘absorb’ into their practice. This focus raises a lot of important questions about how artists engage with scientific issues and also about what it means for artists (and curators) to ‘care’ about climate change and to translate that into artworks for public audiences. The project therefore also includes at its heart an assumption that because everybody – i.e., an abstract notion of a general public - should care about climate change they should listen to what these artists are saying because they care about climate change too.

This is not meant to mitigate the artistic effects of Cape Farewell, rather it is emphasised here to help highlight one of its central ideas. This notion of artistic care for ecological issues, and the presentation of the work as a response to a crisis idea, is not limited to Cape Farewell however and emerges - in different forms - as a key principle that frames all three of the case studies here. With this starting point it now becomes possible to outline

a paradigm that emerges from curatorial practices that address notions of ecology, the environment and climate change.

1.4 Framing an eco-critical curating paradigm

The three projects described above reveal a number of commonalities in their structures, motivations and framings of ideas relating to the term ecology. At their heart is a desire to expand critical debate around this area and to explore the complex interweaving of realities related to climate and environmental issues. These realities are framed by debates around urgency, behavioural amendments, forms of reconciliation and disparities between various global communities. Underlying these debates is a kind of ‘universal’ ethical imperative that calls for necessary, immediate action to address the environmental and climate related concerns that are outlined within the IPCC reports on climate change.

Whether explicitly expressed or not, these ideas are all caught up in the curatorial practices discussed here. The practices also nurture an overall idea of art, artists and curators as carers for the environment, and carers for systems of living, and aim to outline ways in which these can be negotiated within the context of the changing circumstances of the Earth’s biosphere. A paradigm can be seen to emerge and I am calling this the eco-critical curating paradigm. The starting point for the formation of the paradigm begins with an underlying assumption within all these projects that art is both socially useful and able to work with, and alongside, many different fields of knowledge simultaneously. The paradigm as a whole is constituted

through five intersecting ideas, which I will now describe in the following section. In outlining this paradigm, the aim is to contextualise the perspectives and ideals that frame the practices described above. These concepts have been identified because of their bearing on the boundaries of these practices, and their relationship to the wider claims within which the artistic practices are framed. I will briefly explain the overall paradigm, before looking at each principle separately, demonstrating how they both operate within the paradigm itself, and play out in the curatorial practices outlined here.

1.4.1 Elements of the paradigm

In its broadest terms the eco-critical curatorial paradigm can be understood as the instigation of sets of physical and intellectual relationships between artworks and actors from within and outside fields of art, and the physical and non-physical contexts in which they are set or play out, in order to consider issues relating to ways in which the socio-politics of human societies relate to the physical and social effects (both real and projected) of environmental and climate-related issues. The relationships incorporate and acknowledge that such sets of circumstances and situations (social and environmental) are formed at junctures of multiple disciplines, communities and objects, and through the interaction of actors from these. The relation between the paradigm and the term ecology plays out through the projects' concerns relating to imperatives that consider how human activity has impacted on the wider global biosphere and what kind of human activities can remediate this. These acts are recognised as being communal by nature

and are not acknowledged as individual pursuits, artistic or otherwise. The projects described here all incorporate networks of individuals and groups from multiple backgrounds with artworks often presented in discursive frameworks.

Within these networks, ties are between curators, artists, non-artists and non-humans but the eco-critical paradigm always begins from human activities and signifies actions taken by curators, artists and non-artists (but still human actors) to set up connections across practices that result in the presentation of eco-critical ideas framed within an aesthetic context. This results in new organisations of knowledge, new forms of collective practice and in some cases aims to lead to new subjectivation of knowledge within communities played out through artistic and exhibitionary parameters. In what follows I will outline each of the theoretical supports that can be discerned within the paradigm, and in so doing will help to clarify its socio-political and operating framework.

Support 1: The artist and curator as carer

The idea of care as having a concern for the wellbeing of situations or entities in the world is one of the key imperatives that serves to underpin the three projects outlined above. All of the projects start from a point of responding to socio-political and environmental problematics that are seen to be emerging through sets of uncertain or unexpected social and environmental worldly circumstances. Implicated within the projects here therefore is an assumption that the motivations behind their artistic and

curatorial practices are affective, visceral responses to difficult or unjust situations, which here are situations relating to environmental issues and ways in which human living situations are organised.

The relationships between motivations for care and art and curating practices are highly complex however, and many questions are raised about the socio-political positioning of the projects. These questions include issues around who is deciding what is cared for, why and when as well as questions about the kind of reciprocity that might be set up between modes of caring and carers, and what forms of agency are expected through these modes of caring. Care here can therefore be defined in a number of ways. Firstly it defines an activist context in the sense of caring about and paying attention to some thing in an attempt to mitigate against wider detrimental socio-environmental effects caused by ways in which human activities interact with their settings and conditions. Secondly, through the practices of the curatorial, the notion of care becomes doubled here in that ‘to curate’ shares its etymological root with ‘to care’ and ‘to cure’. The curator both cares for the exhibition and its related participants, shows care for ways in which humans and non-humans co-exist – now and in future - within the Earth’s biosphere, and shows care for how these issues have been addressed by artists. There is also another notion of care being expressed here and this is in the sense of artistic practices providing care for environments and related socio-political assemblages.

One of the criticisms of this theoretical support within the eco-critical curating paradigm – and this will be discussed in chapter three - is the question of modes and practices of care are not written into the structures of the project but remain within the symbolic realm and therefore subject to being lost as aesthetic ethnographies, rather than active contingencies.

Support 2: Building networks as support systems

While forming networks across disciplines and fields of knowledge has become an important strategy within contemporary artistic and curatorial practice, the production of networks within eco-critical curatorial paradigm and practices outlined above also connects equally to the network- and systems-based origins of the term ecology itself. Formations of scientific ecology in early to mid 20th century were influenced by cybernetic theory⁴² and, as will be seen in the following chapter, the diverse perspectives encompassed by fields of knowledge defined using the term ecology mean that it is very difficult to discuss ideas relating to the term ecology, nature and notions of environment without taking multiple positions into account. Making connections with practitioners from other fields and opening dialogues between multiple practitioners is a key aspect of the eco-critical curatorial paradigm.

Network-building was extensively deployed in Arts and Ecology, with the project itself set up as a network. While there were, and still are, many other

⁴² See Odum, E., 1971. *The Fundamentals of Ecology*. 3rd Ed. Philadelphia: W.B. Saunders, and Arnold, D., 2014. *Traditions of Systems Theory: Major Figures and Contemporary Developments*. Oxford: Routledge for an introduction to the links between ecology and cybernetics.

projects addressing notions of the environment and climate change, Arts and Ecology set its ambition to be at the centre of this. The hub of this network was their website which, as well as featuring Arts and Ecology projects and events, also collated information, commentary and knowledge about many other related activities, both nationally and internationally. Their commissions, events and research projects all brought artists into contact with other fields of knowledge.

Likewise, Cape Farewell has also founded itself through the creation of a network of scientists, environmentalists, artists and other cultural producers. The expeditions themselves become hubs of a sort that connect to the project's other hubs – research centres in the Arctic, galleries, and cultural and scientific institutions in the UK and North America.

Both these examples contrast with the exhibition, *Radical Nature*. In the first place, there are structural differences between the research-based practices of Arts and Ecology and Cape Farewell and exhibition structure of *Radical Nature* that means that a different kind of network is instigated. However, *Radical Nature* might best be understood as its own hub, bringing together a diverse network of producers, artists and related practitioners for the exhibition and potential future collaborations.

Support 3: Formed out of multi-disciplinary and collaborative practices

Arts and Ecology, Cape Farewell and *Radical Nature* all start from the premise that the imperatives associated with manifold issues related to the

term ecology and environmentalism need to be addressed through multiple conversations between diverse practitioners that take on many forms. This is in the first instance related to the fact that all these projects are concerned with investigating fields of knowledge that are outside the field of art, with data recorded and analysed through many different knowledge forms, including areas of biology, physics, geography and the social sciences. Furthermore, disciplines that use the term ecology to categorise themselves are equally located in many different academic departments and alongside many different areas of knowledge production and receive input from many different actors and knowledges.

What differs in the projects is the positions of the artists in relation to the non artists. In Cape Farewell, for example, projects are driven by research of the scientists, not the artists, with artists invited to engage directly with this research or use it as a springboard for their own research.

In both *Radical Nature* and Arts and Ecology, by contrast, the research fields and commissions are led by the artist and curators, a situation that produces collaborations between artists and non-artists in some cases, such as in the symposia of Arts and Ecology, or Jeremy Deller's Bat House project, but there is no prescription framework within which such collaborations take place.

Support 4: Eco-critical curatorial practices are pedagogically driven and involved in the production of knowledge

When issues relating to environmentalism or another specific field of knowledge are used as the basis for a research project, commission or exhibition, then there is always a pedagogical element. This is because the issues discussed always relate to areas outside the frame of art and hence are introduced to their audience through the codes and systems of representation and display that form the parameters of artistic and curatorial production. In the case of issues relating to the term ecology and environmentalism, they are recognised as sets of circumstances that can be understood as being what Spivak suggests, displaced ‘into planetarity’ where they are defined in relation to planetary concerns, that are separated from the ‘whole’ of globalised capitalism. At the same time, projects are founded on the potential for the depiction of continued possibilities for alternative configurations of existing assemblages, returned to the audience through the art system, and its wider socio-economic connection to the market.

But what are the forms of pedagogical engagement that take place within these projects, and how are their narratives woven through and around the curatorial practices? Cape Farewell has a very strong imperative to ‘spread the word’ about climate change through cultural production, which is to a certain extent unnecessary as climate change and its affects are not short of media coverage and formal education support. *Arts and Ecology* and *Radical Nature* on the other hand explore issues around the relationship between humans and ‘nature’ and more complex philosophical and practical shifts that have taken, and are taking place through critical thought and production. Although these are still produced within the context of

deployments of the term ecology and environmental issues and are implicitly connected to a need to address these issues at this time. Perhaps one of the problems that occurs here is part of what Irit Rogoff calls the epistemological crisis in curating, where the focus needs to move away from which knowledge goes ‘into the work of curating but would insist on a new set of relationships between those knowledges’ (2013, p. 45)

Support 5: Promoting artistic socio-political agency beyond the institution

The notion of the artist and the artwork as having political agency outside of the artwork itself, and how the aesthetic integrity of the artwork is maintained or relinquished through its social engagement are the subject of a debate whose complexities far outweigh the space of this thesis. In whatever way an artwork’s agency operates, and at whatever level, the projects here all rely on the assumption that the artworks and artists have an inherent role that can contribute to the shifting and reshaping of social experience. Art in this field therefore becomes bound up in a wider set of concerns that relate to global critical activities that have implications at the level of the local, national and transnational. In this context the art is always connected to a specific concrete issues. However, uses of the term ecology, issues relating to climate change and its various biospheric effects are underpinned by a motivation to address these concerns, to work towards an end, and this also means that all art related to any of these issues is intricately linked with this teleology. Despite this, such a situation creates a network of ambiguities around the meaning of the already contested and

ideologically instituted term ecology and when used in the context of artistic and curating practices this produces further complexities, compounding the problem rather than unpicking it.

These five supports – the artist and curator as carer; the building of networks and collaborative platforms and practices, and the development of pedagogical and relationships with the subject matter and the audience - that underpin the eco-critical curating paradigm can be understood as a set of practices that aim to explore the intersections of art, culture and the environment. They examine the ways in which cultural practitioners can critically address concerns that relate to issues emerging out of current environmental concerns. These cultural practices are therefore driven by concerns that lie outside their immediate field of practice, but which are brought together within these cultural parameters through the formation of networks and collaborations before being returned to the social and political realities through both pedagogical and non-institutional means (not necessarily exclusive). The eco-critical curating paradigm is therefore a model of practice that starts from the possibilities for artistic and cultural response to a set of situations and concerns, and explores the ways in which these responses can be disseminated into surrounding worlds.

1.4.2 The critical context behind the emergence of contemporary eco-critical practices

The paradigm outlined above establishes the framework for eco-critical curating. What it immediately reveals is a tension between its ambition to

instigate conversations and activities around issues and situations relating to the term ecology and environmentalism, and the structures and parameters of the modes of display. This will be addressed in chapter three, but what needs to be established next is the critical theoretical background that has supported the production of these curating practices and the model within which they are produced. This will help to clarify the wider critical-political framework within which these practices take place.

Changes in the relationships built between artistic practices, aesthetics and politics since the 1990s have been manifested in a number of ways. For example, the production of art has been characterised by a move away from a focus on individual agency as artists producing discrete objects, towards art-making as a more open, processual, collective activity where authorship is obscured and the artwork has porous aesthetic and socio-political boundaries. In addition, a conceptual shift has occurred in the ways in which the term politics is thought in relation to contemporary art, and this is a shift that moves away from the idea of political artworks being produced political messages towards an idea of art producing a politics. These shifts have been largely theorised through the work of writer and curator Nicolas Bourriaud, and philosopher Jacques Rancière, and the following section will outline their approaches in relation to the eco-critical paradigm.

1.4.3 From mending social bonds to wandering radlicant – Bourriaud’s post-avant-garde artistic activism

The term relational aesthetics was developed by Nicolas Bourriaud in a series of essays eventually published in a book of the same name in 1998. Bourriaud used the term to specifically describe artworks that have emerged out of discursive sets of circumstances, as a result of collaboration and engagement with other parties, or through production with on-going audience involvement. The artwork is ‘produced’ therefore at the point at which the relationships converge, and becomes what he called a ‘social interstice’ (Bourriaud, 1998, p.16). By this, Bourriaud is proposing that the art exhibition exists as a space in between the dominant structures of everyday life, and that as a result it creates a free space with rhythms that contrast to these dominant structures, an ‘arena of exchange’ (Ibid., p.17).

Bourriaud argues that these conditions have been manifest in many different art practices and forms, but what they have in common is the fact that they are produced through social interactions, between the artist and the gallery goer, between the artwork and the viewer, between the artwork and those who participate in the situations set up by the artwork. They do not present distant, discrete objects within a gallery setting. Bourriaud’s ideas were developed as a response to the work of a particular group of artists whose work was prominent at the time, and which included Rirkrit Tirivanija, Liam Gillick, Vanessa Beecroft, Philippe Parreno, Pierre Huyge, Aleksander Mir, Jens Hanning and Felix Gonzalez Torres. Examples of work include Tirivanija’s *Pad Thai* (1990), where the artist cooked meals

for gallery visitors; Philippe Parreno and Pierre Huyge's *No Ghost, Just a Shell* (1999-2002), where they acquired copyright of a Manga figure, Annlee, before offering the figure to artists free of charge for their own stories in a collective project of story-telling; Jens Hanning's *Travel Agency* (1997) in Chouakri gallery in Berlin which sold actual airline tickets that purchasers could choose to keep as artworks, or use for their original intended purpose and relinquish their art status; Aleksandra Mir's *Cinema for the Unemployed: Hollywood Disaster Movies* (1998), which screened disaster movies during the day for unemployed residents in Copenhagen, and Liam Gillick's various conference platforms and discussion spaces (1996-1999).⁴³

Bourriaud's ideas are influenced by Althusser's notion of the materialism of the encounter, in which he argues that unstable social bonds can describe spaces where radical new social forms can emerge.⁴⁴ Bourriaud has developed this idea to argue that it is artists and artworks that initiate possibilities for these new social bonds to be formed. In this sense Bourriaud's argument hinges on the idea that artists are providing a service, 'filling cracks in the social bond' (Bourriaud, 1998, p.36), and through their actions they are creating conditions where the 'relational fabric' can be 'patiently re-stitched' (Ibid, p.36).

⁴³ See: <http://www.liamgillick.info/home/work/1987-1999> (accessed 19-06-16)

⁴⁴ See Althusser, L., 2006. *Philosophy of the Encounter: Later Writing, 1978-87*. London: Verso

This idea of the artist as moving between cracks in society was expanded in Bourriaud's later work, *The Radicant* (2009). Here he outlined the concept of the altermodern as the fluid, borderless plan of 'intercultural connections' (Bourriaud, 2009, p.40) that characterised the mobility of artists, curators and thinkers, equating the figure of the artist with the idea of the 'exile...tourist and urban wanderer' (Ibid., p.49) moving across territories and constantly putting down roots, constituting a 'laboratory of identities' (Ibid, p.51). As he says, 'there is no single origin, but rather successive, simultaneous or alternating acts of enrooting' (Ibid, p.51).

However, this rather romanticised notion of the radicant presents problems because it does not address the socio-political relationship between his idea of the artist nomad and the realities of the itinerant, globalised migration, that is an inherent part of the globalised capitalist economy, and which is forced upon groups and individuals across the world through economic necessity. Indeed Bourriaud goes further to suggest that the precarity of this itinerant reality is the main property of contemporary art, where it is 'given to reality by the action of the artwork' (Bourriaud, 2009, p.96), a startling proposition when precarity is the damaging contemporary material condition of so many workers, including those that work in the art world. Furthermore, the idea of the nomadic artist rendering society's bonds precarious, or as he later says, 'carrying the torch for the notion of change' (Ibid, p.99) reifies the idea of this precarity within the frameworks of art, creating an idealised notion of precarity, which has no bearing on the precarious realities that exist outside the field of art.

1.4.3.1 Broadening the question of relationality

It is important to note here that Bourriaud's work has provided a valuable contribution to a wider discussion around the question of the relational and how it is understood in terms of ways in which artists and artistic practices function within globalised economies and the networks within which art is embroiled. But a number of questions arise here: how is he understanding the relational? What are the different ways it can be thought? And more importantly in the context of this research, what are the ways in which it connects to the term ecology? This is key since in the chapters that follow, the question of relationality emerges as central to the intricate web of connectedness that is explored as forms of ecological organisation. It is also central to ways in which the term ecology is deployed, as will be examined in the following chapters. In terms of the context of art, the notion of relational aesthetics presents a number of problems, many of which have been widely debated by theorists like Claire Bishop and Grant Kester. Here I will briefly comment on the limitations of relationality within his schema.⁴⁵

⁴⁵ See: Bishop, C., 2006. Antagonism and Relational Aesthetics. *October* 110, pp. 51-59. Kester, G., 2004. *Conversation Pieces: Community and Conversation Pieces in Modern Art*. Oakland: University of California Press. Jackson, S., 2011, *Social Works: Performing Art, Supporting Publics*. Oxford: Routledge

It is important to briefly note and consider here the different ways Bourriaud thinks the relational. Firstly, Bourriaud uses the term as a way of characterising what we might call ‘productive connectivities’. These relationships emerge from an apparently mutual intersection between entry points of a structure composed by the artist and interlocutors, invited or otherwise. In this form the sum of the relational ‘event’ produces a quantitative effect that is largely designed to be positive, or ameliorative in terms of its status as being produced through a form of sociality. Relationality in this context therefore is connected to a set of parameters produced by the artist through which people can enter at pre-determined points. The interlocutors and by extension their socio-political situations therefore become implicated within the scenario to which they have engaged, but also furthermore the artwork is co-implicated and becomes inherently related to the outside of the gallery. The problem with Bourriaud’s thesis here therefore is revealed because this inherent co-implication is denied in his schema, or the wider socio-political implications of the practices he is concerned with only have a relational structure within the context of the gallery or site of exhibition. Here relationality becomes embodied in a series of static moments that produce artworks, while the relationalities of their wider socio-political relationships are ignored. By contrast, I will argue through the concept of the ecological-curatorial that the relationalities between entities and settings are in constant processes of change.

1.4.4 A continuum of metamorphic forms - Rancière, everyday objects and artworks

The work of Jacques Rancière, by contrast, has a different bearing on reality and hence a different relationship with art. It deals directly with the relationship between social realities and art, making political claims for art. While artistic and curatorial practice that deals with the terms ecology and environmentalism easily develop and move beyond Bourriaud's claims for art's agency because he is not concerned with wider actual realities outside the field of art, Rancière's ideas are a more complex proposition. This is because they seem to offer a way of understanding how the connectivities between art and politics can have agency in both contexts. The following section will outline the framework of his concerns.

Jacques Rancière's texts *Aesthetic of Politics* (2006) and *Dissensus* (2010) have both outlined approaches to art and politics that preserve the boundaries of the work of art for itself, while at the same time seeming to allow the work to be understood as a political intervention. His notion of the 'aesthetic regime of art' has been a key influence in articulating a theoretical framework for contemporary art, and has altered the modes in which art and aesthetics are understood as discrete yet connected fields of experience. In his schema artworks become political and aesthetic interventions at the same time. This shift is particularly important to understand in relation to the eco-critical practices I have outlined here because, as I have shown, such works are always already embedded in wider questions relating to socio-political realities and forms of knowledge that are outside art worlds.

However the key point to make here is that Rancière's work removes the divide between social reality and the work of art, while at the same time setting up a specific sovereign sphere of aesthetics. So the work of art becomes a form of aesthetic reality in its own right, and at the same time not separated from reality.

In demarcating aesthetics as a specific field of experience, separate from other forms of knowledge, the artwork then becomes based on the fact that it has two fields of experience. The first is the aesthetic, inside the field of art, the second is the social, which lies outside the direct field of the art world of which it is already part. Founded on the tensions that arise out of the contradiction between the aesthetic and the social functions of art and the politicality of how these tensions operate, Rancière's work takes his starting point from Schiller's notion of the aesthetic state from *On the Aesthetic Education of Man*. Here Schiller argues that aesthetics is a state separate from reason and morality and articulates an account of aesthetics that is a mode of experience in and of itself, and at the same time part of the wider linguistic, visual and theoretical fields that it references. Rancière's claims for art's political agency therefore are based on a radically equalised political perception that dismantles divisions within the artwork and in social reality. From this position, aesthetic assemblages can create political interventions through the contradiction between a parallel existence within its own sphere of experience and in the wider sphere of life. This potentiality is presented through Rancière's notion of the 'distribution of the sensible', which is 'the system of self-evident facts of sense perception that

simultaneously discloses the existence of something in common and the delimitations that define the respective parts and positions within it' (Rancière, 2006, p.12). The contradiction between aesthetics and experience therefore is borne out by the seemingly 'double presence' of the artwork as both a product of its own singular sphere of experience and a product of what we might call 'everyday life'.

1.4.4.1 The continuous autonomy of art

Art for Rancière remains autonomous as art while simultaneously intervening in life to produce a form of politics. It is held in a continuously oscillating state of tension between the art world and the outside-art world. As he says in *Dissensus*, '[t]his fact has given renewed impetus to the idea that art's vocation is actually to step outside itself, to accomplish an intervention in the real world. These two opposed trends then result in a form of schizophrenic movement, a shuttling back and forth between the museum and its outside, between art and its social practice' (Rancière, 2010, p. 145).

Rancière outlines what he calls regimes of visibility by which to understand art as a set of historical forms. A regime of visibility is 'at once what renders the arts autonomous and also what links this autonomy to a general order of occupations and ways of doing and making' (Ibid., p.22). There are three key regimes of visibility in Rancière's account. The earliest of these, the ethical regime is defined by Plato's *Republic*, where art is not identified as art as such, but rather falls under the question of whether an image or

sculpture can truthfully reproduce the accepted social order and therefore be suitable for distribution. The second regime of visibility is the representative regime, where a sculpture or painting is judged according to criteria based on what can substantiate art, and the conditions according to which it can be executed. Rancière suggests that their distribution is according to the principles of verisimilitude, appropriateness or correspondence, criteria for distinguishing between and comparing the arts (Ibid., p.22). In the representative regime, the arts fall within regimes of classification by their production methods resulting in accepted ways of doing, making, seeing and judging (Ibid., p.22).

This is contrasted with the third regime of the arts, and the one under which most art is produced today, what he calls the aesthetic regime. Aesthetics doesn't refer to judgments of taste or sensibility, and the aesthetic regime is not a movement in art, or an art historical period, but rather it becomes a way of identifying modes of framing the sensible and the possible forms that the sensible can take as defined through his notion of the distribution of the sensible - a way of understanding and taking part in arrangements and modes of perception. It can be seen as a way of understanding how what is perceived is divided up. Within the aesthetic regime, there is no hierarchy within the sensible of what can be visible; instead there is an equality between what can be represented. Art then becomes part of a regime of visibility in which 'artistic phenomena are identified by their adherence to a specific regime of the sensible, which is extricated from its ordinary connection and is inhabited by a heterogeneous power, the power of a form

of thought that has become foreign to itself: a product identical with something not produced, knowledge transformed into non-knowledge' (Ibid., p.23).

The existing system of the distribution of the sensible is what Rancière calls the 'police' - as he says: 'the police is not a social function, but a symbolic constitution of the social.' It is politics that can serve to disrupt the police: 'Politics, before all else is an intervention in the visible and the sayable' (Rancière, 2010, p.36). He then transfers the possibilities of disturbing the distribution of the sensible onto critical art. Like politics, art has the potential to engender dissensus - 'a conflict between sensory presentation and a way of making sense of it, or between several sensory regimes' (Ibid., p.138). In this way art becomes a critical tool that, along with politics 'each define a form of dissensus, a dissensual reconfiguration of the sensible. If there is such a thing as an aesthetics of politics it lies in a reconfiguration of the distribution of the common through political processes of subjectification' (Ibid., p.139). And he continues, 'this intertwining frames a new fabric of common experience, a new scenery of the visible and a new dramaturgy of the intelligible' (Ibid., p.141).

1.4.4.2 Rancière and the political

The notion of politics or the political is central to the aesthetic regime, and it is not possible to disconnect the two as Rancière considers an aesthetic intervention to be also a political intervention on existing 'modes of visibility operative in the political domain' (Rancière, 2006, p.82). For

Rancière, politics is not politics in the sense of it being a movement or set of ideas, but rather it is the grounds by which an intervention is made in the existing regime of visibility that conflicts with the established order, instigating dissensus. Politics becomes an action that can only be enacted by a specific subject on an existing order and is concerned with specific relationships that subjects have with the order of things. As he says: ‘the difference specific to politics - that which makes it possible to think its subject is given a name defined by a partaking both in a form of action and in the possibility of corresponding to this action.’(Rancière, 2010, p.28). If there is something specific to politics for Rancière, it is ‘the existence of a subject defined by its participation in contraries. Politics is a paradoxical form of action’ (Ibid., p.29), in which actors must assume equality and the equal right to act in the sensible as that which is already visible. The effect of this is to delineate two spaces within which, through a process of oscillation, the artwork can exist at the same time. So art’s singular autonomy is maintained, and at the same time ‘the identity of its forms’ are the ‘forms that life uses to shape itself’ (Rancière, 2006, p.24).

1.4.4.3 The double ontology

Rancière’s theory presents an apparently radical position that opens up possibilities for what artistic and curatorial practice can do in relation to wider realities. A key problem here however is that it has been incorporated into the wider art world and to a large extent has become the standard mode of artistic practice that addresses concerns that lie both inside and beyond the boundaries of artistic contexts. As a result a number of problems emerge

that contribute to wider issues relating to art and the term ecology that are being dealt with in this thesis.

As both equally social and artistic objects, these projects, and artistic products such as Jeremy Deller's *Bat House* (2009), Helen Mayer and Newton Harrison's *Full Farm* (1974), XZYST's *Dalston Mill* (2009) seem to play out Rancière's idea of an assumed equality between the artwork and the social realities they connect to. It exists equally within the context of art and the social context, operating in parallel as two separate fields, apparently creating a space in which social engagement can exist productively alongside the artwork. The artistic and curatorial practices exist simultaneously in the aesthetic realm and the social realm, where according to Rancière, they oscillate between the two in a perpetual suspended contradiction. There is both an aesthetic proposition and one related to a broader set of concerns. In this way Rancière's work seems to allow for the possibility of a functioning 'double ontological' status of artistic and curatorial practice. The aesthetic becomes a sphere of separate experience ring-fenced from other fields of experience, but at the same time allies itself with almost any field of experience outside of its boundaries through the artwork.

However a problem arises that calls into question this apparent seamless movement between social and artistic reality. This occurs through the fact that art's ability to exist either in or between two spheres of experience at once is always ultimately founded on the boundaries of the art itself. The

artwork is always already sovereign because the injunctions from the artist that mandate its existence relate only to the artwork and not to the social context. Therefore the artwork's movement between the two states of being can only occur in relation to the art world that enables it to exist in the first place. The indeterminacy of art, the fact that it can be constructed out of any medium and through any method also means that the art object always has to be firstly sanctioned as such before and above anything else. So while there appears to be a 'double ontology', the reality is that if the work is going to be taken seriously from an art historical perspective, the object's ontology as art is always the first and only ontology of the artwork.

By giving aesthetics its own separate field of experience, Rancière both reveals and hides the limitations of an artwork's political agency. The figure of the artist, the unpredictable subject whose work momentarily intervenes in the everyday is only qualified as art by being returned back to the very system of art from which it might be trying to remove itself. The artwork becomes, in effect, trapped between art institutions, commercial realities and the everyday, and its precarious existence as art is absolutely dependent on maintaining this necessary entrapment. A double bind therefore occurs and restricts the possibilities of the political potential of the artwork, undermining its claim to have a double ontology that is free from constraint.

1.5 The critical paradox

Both Bourriaud's and Rancière's theories exist within an equally dichotomous position. Their work supports the status quo, but does so

through terms that suggest possibilities for exit. In Rancière's work, this comes to the fore through the apparent free space that aesthetics as a field of experience seems to offer. It is 'free' in the sense that it is both unhindered by ideological constraints and the bureaucratic politics that might characterise other fields of experience in some form but at the same time the artwork's freedom therefore, is not as free as it may at first seem, as this freedom is produced under a highly specific set of conditions. Those conditions are the conditions of the art system, which has its own social, political and economic networks that produce an international, global system with its own codes, regulations, protocols and economy. Therefore, despite the art world seeming to offer a 'neutral' territory within which artists can critically explore the political configuration of entities from an eco-critical perspective, this space only becomes free because the art world is founded on a necessity to remove itself from the conditions within which these ecological issues are produced. The assumed freedom within the space of the artwork appears to be a space exempt from specific socio-political pressures or dynamics, but in reality, in order to maintain that freedom, they need to remain grounded within the art world.

In the same vein, alongside these politico-aesthetic boundaries are the political and socio-economic connectivities and complexities that govern and legislate the circulation of capital within the art world, and its means of production, what we understand as the work's relationalities. In Bourriaud's terms the relational is confined to the artwork itself, but this situation arises out of relationalities that extend beyond its immediate setting. Things like

finance and funding are generated through an often bewildering profusion of economic connections, with a wide range of sources both in and outside the immediate field of art. Art is therefore inherently related to the dominant structures of economic, socio-political and environmental flows and circuits.

It is possible to take these wider socio-political relationships into account if we think of relationality in other terms, for example through those of Jean Luc Nancy's notion of being that he discusses in *Being Singular Plural* (2000), which proposes that being is never simply being, but is always being with. In this way relationality becomes understood as the complexes of relations through which subjects exist and are constituted, and the tension between the perceived sovereignty of being and awareness of the constantly shifting relationships that are activated by agencies and entry points within humans and non-humans. But at the same time, in Nancy's terms, the relational has an ethical constituency, in that the act of being with is equally an act of division whose proximity is underscored by terms of political engagement. Relationality is therefore something that is always paradoxical and can never be fully realised in Nancy's schema, and this plays back into the limitations of Bourriaud's approach.

1.6 On the need for an exit from the eco-critical curating paradigm

The eco-critical curatorial projects described above are characterised by tangled strands of thought that reveal problematic and often contradictory ways of being that result in political ineffectuality. Furthermore, the relationships between the wider social, political and environmental

imperatives that they outline, and the practices of artistic production and display performs a problematic and unsettling assemblage that is caught between the reification of the particular visual and critical economy that circulates around the term ecology and an imperative to explore possibilities for overcoming the situations that make up this economy.

To clarify further, while an activist-artistic practice can generate rich and intricate works dealing with a myriad of socio-political complexities, as well as making meaningful contributions to communities and worlds outside art, the inherent political complexities that constitute the boundaries of the art world itself impose invisible limits on the work produced and displayed. An activist or socially-engaged art practice (such as those that can be allied with the eco-critical curating paradigm) that seeks to question issues relating to science, politics, issues relating to deployments of the term ecology and the human/non-human relationship is always already bound up in the problematics of the art world's own internal political contradictions, and constrained by the politics of subjectivity and spectatorship, and the anthropocentrism of knowledge production. Filtered through the structures of the art world, deployments of the term ecology happen in relation to the artwork itself, not directly in relation to its primary concern, and hence the ability of the work to operate critically in relation to the term is distorted. Artworks become emblematic of a particular typology relating to representations of the economy connected to the term ecology as played out by and through varied agencies and actors, as well as being caught up in the politics of representation and formats of display. The effect of this is that the

artwork is always already precluded from being able to address the issues it might be concerned with fully, and, whether it is material, processual or temporal it becomes a symbolic action that is confined by a specific symbolic realm.

The task therefore is to examine possible curatorial strategies that enable an exit from the eco-critical curating paradigm. To start this process, it is necessary to begin by temporarily leaving the realm of art altogether in order to engage in a detailed examination of the term ecology, unpicking its socio-political, environmental and cultural constituencies and discussing the wider problematics presented by the term. Doing this will, on re-entry into the art world in chapter three, enable a more complex understanding of the problems and inconsistencies instigated through the deployment of the term ecology and through the treatment of environmental issues in relation to art and curating, and the eco-critical curating paradigm, kick-starting a process that can more clearly address the ways in which the term can be understood in relation to artistic and curatorial practices.

CHAPTER 2: FROM ECOLOGY TO THE ECOLOGICAL

2.0 Introduction

Chapter one described how curators and artists have in recent years been exploring the use of expanded socio-political approaches to concepts of the term ecology and environmental issues related to anthropogenic climate change. Given the term ecology's wider contexts as a mechanism that frames a number of diverse scientific, sociological and philosophical fields of knowledge, I am interested in how these curating practices firstly critically engage with the term's trajectories and meanings, and secondly, whether there are any kind of critical possibilities in relation to the term that might yet exist in relation to curatorial practices.

This seemingly straightforward question is complicated by the complexities of the diverse strands of thought that traverse both scientific and non-scientific forms of knowledge that exist under the term ecology. While these result in apparently fluid junctures between and across multiple forms of socio-political organisation related to the term, both the ideological complexity of the term's construction, along with its commonplace utility in direct relation to specific environmental problems means that any possibility for the term to achieve any kind of critical efficaciousness in curatorial contexts, analytical precision and wider contextual consideration are required. Overlooking this risks reducing the term's role to that of defining content, resulting in politically ineffectual projects that feed back into existing assumptions around the term and the contexts in which they were

produced. Any possible political claims for art and curatorial practice in relation to the term ecology can only therefore be properly evaluated if we clarify the wider use of the term here.

To address this problem and open up a space in which wider implications of the term can be explored in relation to curatorial practice, this chapter will take a close look at the term's history, as well as the scientific and philosophical mutations that have taken place in Western thought since the term's early use. It is important to note that this investigation does not dwell on non-Western approaches to the term, largely because they are not widely deployed in the curating projects I am exploring. I will however, make reference to the relationship between non-Western approaches to ecology later in this chapter in relation to the field known as environmental justice. I will look at the broader conceptual and epistemological strands of thought embedded in the term to develop an understanding of its scientific and conceptual complexities.

The first part of this chapter will therefore take the form of a historical survey of the term ecology in itself, exploring its meanings and deployments and the varieties of forms of knowledge that it embodies. Doing so will help to distill the complexities that coalesce around the term, and give a stronger ground to help evaluate the political claims of the curatorial projects I have outlined in chapter one. It will highlight the philosophical premises that underpin its development both in the field of science and elsewhere. While the term's beginnings are rooted in fields of science like botany and

biology, ecology as a science operates by analysing and understanding the organisation of existing configurations of natural mechanics - as a kind of marshal or steward for data from biology, and later computer science, physics and chemistry. Hence what emerges is the fact that scientific ecology seems to be a form of knowledge concerned with how existing scientific data operates in contexts outside of the laboratory. What also emerges however, are instances where the effects of the organisation of the data were evaluated according to certain ideological and philosophical assumptions, and hence it becomes clear that the term ecology is ideologically instituted at all forms of its development. The second part of the chapter explores the term's wider conceptual and philosophical evolution outside of scientific fields. It will also look at the ways in which the term has been used cannibalistically by actors in relation to other forms of knowledge, configuring idealised, convoluted, dispersed and often conflicting world-views. It is important to note that this chapter is not attempting a complete historical account of the way that the term has been deployed since its inception, rather, the aim here is to open up some of the contexts behind different ways in which the term ecology has been deployed in relation to contemporary curatorial practice.

What will become clear through this investigation is that firstly, the term ecology is perpetually contested and has become overburdened with assumptions relating to notions of balance, systems, and equilibrium, (Forsythe, 2003, p.6). Secondly - outside of its connections to biology, the term's dispersal across many forms of knowledge production and activities -

including fields of geography, sociology, anthropology and computer science, environmental activism (both anti-capitalist and less radical), mainstream culture in relation to the climate change, as well as corporate and neo-liberal approaches to managing planetary resources - reiterates the fragility of its boundaries, and highlights the ongoing complexities of the contested social and political realities out of which these versions of ecology emerge.

2.1 The many distinctions of term ecology

The multifarious nature of the term ecology is clearly illustrated in Carolyn Marchant's Critical Theory reader, *Ecology* (1994), which collates a range of texts relating to ideas of ecology from a philosophical and theoretical perspective. Rather than offering a coherent definition of the term ecology as such, she presents the book's texts as praxes that 'extended the critique of the domination of nature and human beings by industrial capitalism begun by Marx, Engels and the Frankfurt Theorists' (Marchant, 1994, p.6). A wide spectrum of approaches therefore comes under this umbrella, and while some of these will be explored in more detail later, to illustrate the diversity of concerns that the term ecology covers it is worth listing some of the book's chapter headings here: eco-feminism, deep ecology, socialist ecology, systems theory, post-modern science, spiritual ecology, eco-social feminism, environmental justice. With no one definition of ecology in the book, the texts are characterised by what she calls a 'postmodern ecological world view...based on interconnectedness, process, and open

systems...[and]...on the impossibility of completely predicting the behaviour of the natural world' (*Ibid.*, p.19).

The writer and geographer Tim Forsythe offers another facet to the complexities of understanding notions of ecology. In *Critical Political Ecology* (2003), he defines the term through its scientific origins as a branch of biology:

'Ecology therefore was a new science aiming to illustrate the connectiveness of humans and other species. Yet the achievement of ecology, by definition depended simultaneously upon the development of a new scientific approach highlighting a level of 'community' beyond simple individuals, and also the establishment of a new political agenda questioning the destructiveness of human behavior.' (Forsythe, 2003, p.5).

Within projects reviewed as part of this research, the term's historical interpretation mostly starts from acknowledgement of its relationship to the ancient Greek term *oikos*, meaning 'the household', alongside its use by the environmental movement that developed in the 1960s and 1970s following, among other things, the publication of Rachel Carson's *Silent Spring* (1962). However, the result of this is that the broader complexities of the term's scientific and cultural history prior to *Silent Spring* and the intricacies of its dispersal are largely unacknowledged within wider artistic and curatorial practices that have engaged with the term, and its instability

as a term and field(s) of study is not properly taken into account within these art world contexts. In discussing this instability and the scientific, conceptual and philosophical complexities that intertwine around the term, it is important to underline here that these exist precisely because the term contains many residues of previous strands of its development, when socio-political and ideological factors were in play in determining how the term was employed.

2.1.1 A proposal: rethinking ecology as process

In his book *The Age of Ecology* (2013), a consideration of the history of ecology since the mid-20th century, Joachin Radkau argues that it is impossible to trace a singular line in the history of the term as its scientific origins are so far removed from what it stood for in the late 20th and early 21st centuries (Radkau, 2014, p.10). My investigation reiterates this argument, showing how the varied practices that came under the category defined by the term ecology in the 1950s and 1960s make it impossible to create a precise definition that encompasses the breadth of the term's practices and many configurations. Rather, theorists or philosophers who engage with the concepts emerging out of the term ecology have produced singular discourses relating to philosophical implications that have been drawn out of the term. By this I mean that concepts such as deep ecology, social ecology or eco-feminism outline specific theoretical approaches to the experience of connectivities between actors (human and non-) and their settings. These ecological discourses might overlap, conflict, develop or

support each other, but there is no prior singular theoretical framing that comes out of the term ‘ecology’ to which they can all be traced back.

If this is the case, however, rather than adding to the many existing forms of knowledge that comes under the term ecology, the task here is to identify what constitutes the difference between forms, and examine the ways in which they unfold and the conditions under which this takes place. In understanding this, it is helpful to draw a parallel with Claude Lefort’s work on the nature of democracy. In his essay *The Question of Democracy*, (1988) he discusses what happens when forms of knowledge are objectified, arguing that the consequence of this objectification ‘is the positioning of a subject capable of performing intellectual operation which owes nothing to its involvement in social life’ (1988, p.12). For Lefort, what is ignored here is the fact that ‘any system of thought that is bound up with any form of social life is grappling with a subject matter which contains within it its own interpretation and whose meaning is a constituent element of its nature’ (*Ibid.*, p.12). The neutrality ascribed to an object of knowledge, for Lefort therefore means that it is abstracted from the contradictions, ethics and tensions that are embedded in its production and returns to a ‘staged’ space where its underlying nature of existence goes unquestioned.

Lefort is referring here to political science and its relation to political theory, but I propose that forms of knowledge that emerge out of the term ecology need to be thought of in a similar way. In this chapter therefore I argue that many forms of knowledge that come under the term ecology must

be understood as ideological objectifications of different approaches to connectivities and relationships between various social, political, scientific, spatial and temporal facts, bearing in mind here that facts exist within specific contexts. What must be drawn out therefore are the philosophical supports that underpin the ways in which these forms are constructed in the first place.

The aim of this operation is to move away from the use of the term ecology as object of knowledge, towards the notion of the *ecological* as embodying processes of doing and making. In doing so, the focus shifts to the specific conditions under which processes of the ecological take place, and what happens, rather than on representing objects or replicating existing forms as a form of knowledge related to the term ecology. In this scenario the ecological as a term is used to denominate processual organisational modes of existing socio-political configurations and their implications, as well as processes for unfolding possible alternatives. The configurations the ecological engages with do not come from specific forms that already relate to the term ecology, instead they highlight the conditions under which social, political, environmental and scientific assemblages are produced, and do not refer to any stable 'ecological' object as such. The ecological becomes differentiated from the term ecology through the fact that, while the term ecology articulates systemic structures and their settings that relate to a predefined field of knowledge coming out of the term ecology, the shift to the ecological that will be outlined here is concerned with the

development of processes that examine and organize assemblages that relate to all fields of knowledge.

Recasting the ecological as process in this way does not aim to define a singular approach. In this chapter I will explore how the term exists through a set of ‘tools’ or ‘methods’ that break out of the existing domains that have been delineated by the term ecology. I will develop these out of wider philosophical approaches that have emerged out of more recent engagements with the term by Gregory Bateson, Felix Guattari, Ilya Prigogine and Isabel Stengers, and Bruno Latour. It will also touch on recent approaches to related ideas that engage with the wider implications of multiple temporalities, agencies and ontologies that exist beyond the boundaries of the human. The tools of the ecological are predicated on the basis that there is not one particular category of social, or scientific relations that can be defined as the ecological, but rather that they instigate processes of examining connectivities and interdependences in relation to specific socio-political assemblages. This differs from Barry Commoner’s first law of ecology outlined in *The Closing Circle: Nature, Man and Technology* where he states that ‘everything is connected to everything else’ (1971, p. 16). In this thesis, by contrast the ecological is not simply concerned with a generalised notion of connectivity, but rather is an active process of the excavation of specific connectivities as ways of radically reformatting and rethinking existing assemblages.

In recasting the ecological as process, the aim is to shift the focus away from specific discrete forms and focus on forms produced through multiple processes that occur at active intersections in organism-environment assemblages. What is important here is the conditions and activities through which assemblages are produced, how and for whom they are produced, and what conditions and activities can produce alternative assemblages.

2.1.2 A summary of the ecological

The idea of the ecological can therefore be seen as critically attempting to give form - however momentarily - to effects of flows and circuits between entities within assemblages. The tools of the ecological aim to explore alternatives and to look at the implications that these might have on existing boundaries of the knowable and conditions of living.

These tools of the ecological are therefore inherently collective because they come from multiple positions – both biotic and abiotic, human and non-human – and do not reside in, or emerge from, any one individual. Assemblages articulated through the tools of the ecological therefore are characterised by practical and epistemological interdisciplinarity, malleability and inherent contingency. They draw on scientific and non-scientific knowledge to explore scientific, socio-political and environmental effects that arise or become available at any one time in relation to an entity and its setting within an assemblage.

Composed of fragile, open systems, the boundaries of the assemblages that evolve are precarious, and must therefore always be open to the possibility of being other than what they are. Each assemblage might be viewed as instigated by multiple, often divergent, goals—as opposed to teleological—instigated by design. By continually forcing open their boundaries, investigators are always already implicated in the assemblages they are investigating and vice versa.

The chapter will also argue that the ecological might be understood as constituting processes that are planetary, as opposed to global, with processes that unfold outside the processes of capitalism. The term ecology is often used to characterise efforts deployed to find ways to shift processes of capitalism to make them more efficient and more sustainable. By contrast, as I will aim to show in this chapter, the activities practiced ecologically have the potential to intervene in the gaps within capitalism, to bring to light facts and knowledge that have been forgotten, ignored, repressed or overwritten, and to create visibility for the assemblages of which they are part.

In what follows I will begin by identifying key points that bring out conceptual understandings of the term ecology. This focuses largely on the Western tradition, including the origins of the term in ancient Greek society, its development in natural sciences in the 19th century, early 20th century scientific ecology, the implications of politics and ecology in the US in the mid-twentieth century, and the term's expansion into other fields of

knowledge in the 1960s, 1970s and after. This exploration is not meant to be tracing a single historical argument about the development of the term, but is rather concerned with highlighting points.

This will be followed by a section that explores the work of Gregory Bateson, Felix Guattari, and Bruno Latour, all of whom have explored the term as abstracted forms of thought, without returning it to an object. The final section of the chapter will outline the four tools of the ecological as theoretical devices for future experiments in organising relationships and dependencies between humans, non-humans and settings, that do not feed back into, or are not easily recouped by dominant economic and socio-political structures.

2.2 Ecology: etymology and early scientific origins

2.2.1 The *oikos* and the organisation of living in Ancient Greek society

In this first section, I will look at the etymological roots of the term ecology. The first reason for this is to draw out broader implications beyond the literal translation of ecology as ‘study of the household’ and the term’s relationship to the concept of nature, and the second is to start a process of laying foundations for the framing principles.

Before I continue, I will briefly comment on the use of the term nature in this thesis. My understanding of the term begins with Aristotle’s definition of nature, known as *physis*, where he said that ‘[it] is a principle or cause of being moved and of being at rest in that to which it belongs primarily in

virtue of itself and not accidentally (1961, 192b p.23). By this Aristotle is suggesting that the natural constitutes entities that have their own, self-determined agency. However the term in Western European thought is bound up in a complex of propositions that emerged as a response to industrialisation, resulting in a widespread assumption of the term representing unfettered landscape, wilderness, flora and fauna, biology and conservation.

Such ideas emerged as a contrast to the industrialisation and technologisation of human social organization, which as Bruno Latour has explored in *We Have Never Been Modern* (1991), creates a political split where human society exists as a direct opposition to nature. As will be explored below, because of its roots in scientific biology, deployment of the ecology is in one way still associated with conservation and wilderness preservation, co-existing with social and political interpretations of the term. In recent years writers including Latour and Timothy Morton⁴⁶ have argued that a functional and contemporary understanding of the term ecology can only happen if the term ecology is uncoupled from any association with nature.

⁴⁶ See: Morton, T., 2007. *Ecology without Nature*. Cambridge MA: Harvard University Press. Also see: Morton, T., 2010. *The Ecological Thought*, Cambridge MA: Harvard University Press. While Timothy Morton has written a number of books about the term ecology and its relation to nature, I am not deploying or referring to his work in this thesis because he is largely concerned with developing a number of sovereign concepts deploying the term ecology, namely, 'dark ecology' and 'the mesh' which are pre-organised forms of the term defined by a set of specific set of parameters.

Etymologically, ecology shares the same root as economy through the ancient Greek work for household, *oikos*. It is important to note here that *oikos* does not inherently refer to a notion of nature as such. Nature was therefore something separate from the *oikos*, which was a human-centred mode of organizing the practices of everyday living within society. As Lisa C. Nevett points out in *House and Society in the Ancient Greek World*, references to the *oikos* are restricted in the evidence that exists from Ancient Greece, and what does exist generally refers to the Athenian *oikos*. (Nevett, 1999, p.9).

Conventional academic accounts of the *oikos* describe it as including not just the members of the family, but as N.R.E. Fisher in *Social Values in Classical Athens* states ‘the whole physical and economic unit, the property, slaves and the religious unit extending back to include ancestors, the tombs and cults’ (Fisher, 1976, p.5). In this way the relations between the property, the family, inheritance were all inextricably linked. Furthermore, as Jennifer Gibbon points out in *Athenian Society*, the Athenian *oikos* ‘based its wealth and permanence on family property held over many generations and on a close-knit and ...complicated kinship structure’ (Gibbon, 1998, p.158). In terms of its economic sustainability, the *oikos* aimed to be self-supporting (*Ibid.*, p.158). Gibbon points out that ‘socially and politically no *oikos* was an island, nor would it have wished to be. All or almost all Athenian citizens would also belong to one of the primarily religious associations known as *phratriai*’ (*Ibid.*, p.158). Economic success of the *oikos* would have usually been supported through farming and management

of the land that was included in the *oikos*, a role carried out by its male head. He would also have participated in the public life of the *polis* and engaged with the complex social activities to maintain Athenian democracy. (Nevett, 1999, p.13).

But Nevett also points out that the lack of textual evidence leaves many questions unanswered in relation to the *oikos*, not least in terms of its structures and how they played out across the cities in Ancient Greece. In an attempt to fill in some of these gaps she examines archeological evidence from various sites across Greece, mapping house layouts and artefacts uncovered around the sites. Her findings revealed a number of different home layouts and objects suggesting that rather than a static or dominant form of *oikos*, there ‘was a shared concept.....involving common patterns of social relationships and behavioural models, including a desire to regulate contact between members of the household and outsiders, which was spread throughout the geographical area’ (*Ibid.* p.155). She continues: ‘The archeological material also demonstrates that a single static model of the Greek *oikos* as has often been used in the past can only offer a gross oversimplification of a complex institution which seems to have developed rapidly in response to external factors’ (*Ibid.* p.174).

Common assumptions of the *oikos* have often put it in opposition to the *polis* (*Ibid.* p.4), as well as in a gendered opposition where the *oikos* is seen to be a female environment, whereas the *polis* is the male environment. The picture is rather more nuanced as the *oikos* was also the place where

symposia took place. (*Ibid.* p.15). Nevett's research has also shown that gender segregation was not perhaps as rigid, and shows that in some houses 'the use of space depended on the nature of personal and status relationships' (Nevett, 2005, p.162).

The key picture that emerges from this research therefore is of the *oikos* in Ancient Greece as being socially and politically fluid and in a process of continual renegotiation. This serves as a backdrop against which existing concepts around the notion of ecology are explored here, both in terms of how the term ecology has emerged and evolved, and how these ideas have further percolated into its assumptions and multiple uses, including in the art context. What becomes clear however is that while the term ecology shares its roots with the term *oikos*, this is a pairing not without problems.

One of the things that should be noted in this account of the *oikos* in Ancient Greece is the relationship between the concept of the household within the term *oikos* and of the concept of household within the term ecology. As I have described above, Nevett and others have demonstrated that the household in Ancient Greece was a set of organisational structures instituted through socio-economic, political and environmental activities and structures and which also shifted in relation to changes in circumstances⁴⁷. As Fisher (1976) points out, the head of the *oikos* has to protect himself and his *oikos* from the disgrace and shame that may be incurred by military or economic failure, by rape or seduction of his women,

⁴⁷ See Xenophon's *Oeconomicus* and *The Politics* by Aristotle for accounts of the relationship between architecture and the household to climate.

by failure to protect his *philoí*⁴⁸ –The *oikos* then should be thought of as a socio-political collective construct, maintained through activities of doing, making and exchange, and that equally could be transformed, into something other than what it is through the introduction of new activities - either enforced from outside, or from the head of the *oikos*.

In its origins therefore, the term *oikos* represents forms of organization constructed in relation to their geographic and political locations. It is also important to note that *oiki* existed in different forms in different parts of Greece at the time, so as a socio-political structure was in a state of ongoing re-arrangement according to the social and power relationships of the time. This has theoretical implications for an understanding of the term ecology in that its relationality becomes a central feature both as a term or idea and its forms of knowledge. What becomes clear is the fact that there can be no one *oikos* and it might be useful to note here that it can be no coincidence that the term ecology has an equally mutable constitution in that there is no singular form that arises out of the term – every form of the term is an organisation of specific sets of circumstances and from specific socio-political positions. In fact what emerges through this chapter is that while there is no one singular definition of the term ecology, if the term has any underlying proposition, it is that it is concerned with organisation of activities that test out, actualise, or propose systems of relationships.

⁴⁸ *Philoí* was a word used to describe people who belonged to an *oikos* – both kin and non kin, the term has its etymological root in the word friend.

2.2.2 Early scientific origins of the term ecology

While the *oikos* does not survive in practice beyond Ancient Greek society as a specific organising term for forms of collective living, the term evolves historically in various forms with its most significant legacy settled in the term economy – which translates as ‘management of the household’ from the Ancient Greek. The term ecology is a relatively recent creation, invented by Ernst Haeckel in the late 19th century to define the scientific study of how plant species organized themselves in relation to their environments. Developing out of Haeckel’s work around the economy of nature, the term represented a shift away from a focus on the organising principles within nature that were developed by Carolus Linneaus and towards an exploration of how interactions took place and the ‘worlds’ that were formed by such activities, and will be discussed in the following section. The underlying question that starts to emerge is whether there are any fundamental principles that might be understood as permeating all the configurations of the term ecology.

Bearing this in mind I continue by looking at how the term’s characterisations shift with the emergence of differentiated knowledges. I will look at the organisation of nature into communities and their relationships within specific environments, the early investigations into ways in which human activities affected settings and the nonhuman entities dependent on them, and philosophical and theoretical approaches relating to relationships and systems of organising humans, non humans and the socio-

political, scientific and historical circumstances within which they are situated.

What emerges is a problematic idea that social (i.e. human) systems of living and ‘natural’ systems of living can be interchanged. And in fact, as will be shown, in the development of scientific ecology, the dynamics of the inter-relationships of organisms were often described in human social terms (‘plant communities’, ‘struggle’ ‘economy of nature’ etc.). This was important for the evolution of scientific ecology and its eventual fragmentation, and plants and animals became objectified into systemic and bounded relationships to which they did not conform. This following section will look at how the foundations of the scientific ecology were laid, before demonstrating how science cannibalised other fields of knowledge to the extent that today it hovers around the borders of an increasing number of forms of knowledge, through an overlapping series of shifting practices and theories. As a result, I will argue, the term ecology is left disorientated and lacking in any content of its own.

2.2.3 The development of early scientific ecology

Scientific ecology emerged out of the science of botany. Before the term ecology was introduced by Ernst Haeckel, concerns that became incorporated into the science of ecology, i.e. the organisation of nature, had been investigated by the Swedish botanist, Carolus Linnaeus (also known as Carl von Linné). He was interested in ways in which nature was arranged, and in 1735 published the *System Naturae*, a key text in the development of

modern taxonomy.⁴⁹ In 1751 Linnaeus also expanded his view of the relationships between the environment of Earth, and the entities and phenomena that inhabit it in *The Economy of Nature*.⁵⁰ The essay considers the geobiological interactions of nature, with Linnaeus suggesting that movements of nature took place in a confined planetary sphere, and ran in cycles. He proposed that a limited number of templates framed all natural phenomena, and these are replicated across all areas – here he includes phenomena like the weather, as well as water, air, plants and animals. The templates take on a pattern of reproduction, development and destruction, which are continuous and unchanging, and renewed over time.

This portrait of Earth, its environment, phenomena and inhabitants was framed by Linnaeus' belief that this was a divine economy. Its reasons for existing were provided by God, who held the ultimate jurisdiction over nature and assigned processes and requirements to all of the planet's inhabitants. There was a hierarchy and holism in Linnaeus' schema, with, as Donald Worster summarises: '[a]ll of animate nature...thus bound together in common interest.' (Worster, 2011, Kindle location 711). Humans occupied the top level, with their role being, Linnaeus argued, to use the non-human species to their best advantage. In concluding the essay, Linnaeus declared his belief that 'all things are made for the sake of man' (*Ibid.*, location 734).

⁴⁹ Linnaeus, C, 1735. *System Naturae*. Leiden: Lugduni Batavorum

⁵⁰ *The Economy of Nature*, [Transl. of *Oeconomia naturae*], London: Benjamin Stillingfleet, p. 40. The two theses were published in 1751 and 1761; English translations appeared quickly, most notable of which was this one produced by the natural history translator and publisher Benjamin Stillingfleet, in 1775. It is the one read by Darwin.

As Daston and Galison point out in *Objectivity* (2007), Linnaeus was working at a time before the idea of objectivity had become the driving principle behind the production of science, and the standard by which he worked was ‘truth-to-nature’ (Daston and Galison, 2007, p.58). This was a principle whereby the sciences were aiming to reveal a (natural) reality ‘accessible only with difficulty’, which could only be revealed through the minds and bodies of the naturalists (*Ibid.*, p.58). The practices of naturalists at the time could be understood as ‘enhanced’ observation – ways of viewing, analyzing and finding a ‘typical’ example of a species. This did not mean searching for a particular specimen of a species, but rather it meant creating a scientific illustration of a specimen by merging particular features from a number of specimens to create an idealized version (*Ibid.*, p.59). The scientist was very much a mediator here (*Ibid.*, p.59), working in a ‘divine’ order whose work ‘aspired to generality,...that transcended species....to reflect a never seen, but nonetheless real plant archetype: the restored image” (*Ibid.*, p.60). Linnaeus therefore established a way of framing systems of biological organisation and processes as idealised teleological sequences. What emerges – and continues in the development of the science of ecology - is that the desire for order and process of organising entities set out to produce stable assemblages. These systems and their dependent relationships also become markers for understanding wider positionings of entities. While the divine order of nature was challenged in the following century, this search for idealised and absolute relationships between organisms and their settings continued to underpin the development of

ecology as a science by Ernst Haeckel and Eugenius Warming as shall be seen in the following section.

2.2.4 Ernst Haeckel and the economy of nature

German Zoologist Ernst Haeckel introduced the term ecology as a way of promoting Darwin's theory of evolution in his *Generelle Morphologie der Organismen* (1866), but did not elaborate on or theorise it to any great extent.⁵¹ Haeckel started from a position of organising and restructuring biological sciences, introducing new terms into the field, many of which are still in use today, such as phylum, ontogeny, phylogeny. His book aimed to introduce descent theory into systems of classification that ordered animals and plants, and in his own words to 'found a 'natural system' on the basis of genealogy;...to construct hypothetical pedigrees for the various species of organisms' (Stauffer, 1957, p.139). Ecology was not introduced as a fundamental concept in the book, rather it was a part of biology as one aspect of the relationships between organisms and environment. (*Ibid.*, p.140).

The idea of ecology was deployed as an organising principle of the living conditions of botanic organisms, i.e. plants, invoking the notion of Earth as their household (Worster, 2011, Kindle location 3000). Ecology was the study of the systems into which they were organised. Towards the end of volume two of the *Generelle Morphologie*, Haeckel outlined ecology as:

⁵¹ See Worster, 2011, Kindle location 3000; also Stauffer, R. (1957) 'Haeckel, Darwin, Ecology' *The Quarterly Review of Biology*, Vol. 32, no. 2, June 1957, pp. 138-144.

‘the whole science of the relations of organisms to the environment, including in the broad sense, all the conditions of existence. These are partly organic, partly inorganic in nature; both as we have shown are of the greatest significance for the form of organisms for they force them to become adapted’ (Stauffer, 1957, p.140-141).

The key point that Haeckel was making related to the importance of role that the organic and inorganic relationships have in the formation and transformation of organisms. Haeckel refined his definition of the term ecology in later editions of the book, eventually stating that it was ‘the body of knowledge concerning the economy of nature’ (*Ibid.*, p.142).

As Worster points out biologists ignored the term ecology at first in favour of the phrase ‘the economy of nature’ (Worster, 2011, Kindle location 101), so Haeckel’s use of the term was more a way of characterising and naming concepts of organism relations from the *Origin of Species*, than a development of a field of science. However, Haeckel’s accounts of ecology started to associate the term ecology with an idea that configurations of biological entities form specific ‘worlds’ engendered through dynamics of interrelations within a specific area. (*Ibid.*, Kindle location 3200)

2.2.5 Eugenius Warming’s plant communities

The notion of community was introduced into the term ecology by Danish botanist Eugenius Warming. In 1895 he produced the first textbook on plant

ecology, *Plantesamfund*, based on his lectures on plant geography at Copenhagen university. Translated into English in 1909, its full title was *The Oecology of Plants – an Introduction to the Study of Plant Communities*. Warming developed a number of highly influential theories around the development of groupings of plants in specific areas, and what he called the ‘struggle’ for the occupation of environments by different species of plants.

Warming’s research examined how wider factors within the habitat of plant species, such as soil, climate, humidity, other animals, etc. affected the ways that plants grew and developed. This was later expanded to address questions of how relations between plants and animals interacted with each other over a specific geographic area. He aimed to discover ‘which species [were] commonly associated together’, (Warming, 1909, p.2) and to explore the demands the economies of plants made on their environment and how they adapted to these different demands. He called these economies plant communities, and they were defined as organisms that share a ‘common existence’. (Worster, 2011, Kindle location 3307). Warming suggested that each community needed to be dealt with as a separate entity while at the same time acknowledging the difficulty of this. He says: ‘Everywhere and increasingly a struggle is taking place not only within the several plant communities but also between them so that each of these is continually striving to invade the territory of others’ (Warming, 1909, p.348). However this struggle between organisms was seen as productive and interdependent, dominated by what he called ‘monarch species’. It was part of a progression

towards a final stage of development (*Ibid.*, p.364), where communities ‘grouped around the most suitable stations’ (*Ibid.*, p.356) and followed patterns of succession through three stages of development: initial, transitional and final communities (*Ibid.*, p.356)

Warming’s research was highly influential in both Europe and the U.S. and provided the beginnings of a set of tangible principles and practices within which natural scientists expanded the frameworks of their investigations. But what is key here is that as scientific ecology developed it became central to the increased exploitation of the biotic entities within the colonial territories, and early scientific ecology and colonial politics became inextricably linked, as I will explore later. There are two key consequences of this. Firstly in interweaving the science of ecology with concepts of human organisation, these concepts became naturalised as fixed entities. Secondly, by defining plant communities in terms of specific stages of linear development, concepts of temporality and teleology were introduced into the term ecology. While the forms in which these ideas appeared in Warming’s work would later be discredited, ideas of community and temporality continue to be invoked and critiqued through contemporary uses of the term ecology, and these are central in relation to the move I will make from the term ecology to the ecological. These concepts are also important to help understand how scientific ecology evolved into broader and broader fields of knowledge and the next section will start to unpick how this process took place.

2.3 Science and ideology in the expansion of the term ecology

In the early 20th Century three main interpretations of the science of ecology emerged. All began in botany, but their boundaries expanded to incorporate other diverse forms of knowledge, including anthropology, sociology, physics, chemistry, philosophy and psychology, and the processes, means and ends of these transitions are key to understanding the mutability of the term ecology today. This development of scientific ecology after Haeckel's and Warming's definitions of what it might encompass is complicated and ideological, but can be viewed through the work of three key scientists: Arthur Tansley, Jan Smuts and Frederic Clements. This section will explore the role that their work played in this process, how scientific ecology developed as ideological responses to its socio-political contexts and how transitions between the forms of knowledge took place. It will start to become more evident that the term ecology lacks essential content, but rather is set up as scientific *interpretations* of specific assemblages through the study of interrelationships of the elements within each assemblage. What also becomes clear is that the studies of the assemblages and their relationships were always ideologically driven and that rather than being a field of knowledge in itself, the term presented a set of tools through which spatio-temporal interpretations of sets of biological and social circumstances were produced for socio-political ends.

The investigation here will start by examining Tansley's notion of the ecosystem – the idea that entities form discrete systems within their geo-biological settings that through time, work towards achieving equilibrium

within themselves. His notion of equilibrium had a socially ameliorative and philanthropic motivation and opened up the field for a questioning of what a system in a state of equilibrium might be, and whether this is a socially useful concept.

2.3.1 Arthur Tansley and the idea of the ecosystem

Tansley was an English botanist who became a leading scientific ecologist, with his most notable contribution to the field being the introduction of the concept of the ‘ecosystem’. Influenced by Warming’s *Ecology of Plants*, Tansley’s early contribution to scientific ecology in the UK began with field expeditions and as an organizer of scientific ecology-related activities through associations like the Cambridge Ecology Club and the International Ecological Survey of the UK in 1911. (Anker, 2001, p.17).

Tansley’s career is interesting because it took a detour in the early 1920s when, after being passed over for an appointment at Oxford, he shifted his focus onto psychology. This had a profound effect on the development of his ideas on ecology. During this period away from botany, Tansley went to study psychoanalysis with Sigmund Freud in Vienna and in 1920 wrote an introduction to psychoanalysis called *The New Psychology and its Relation to Everyday Life*. (*Ibid.*, p23) Here, using his knowledge of systems of cause and effect in botany as a model, he argued that the mind is a dynamic interchange of energy stimulated by outside and inside forces, but always striving for equilibrium. This text signalled a beginning of what Anker calls, in *Imperial Ecology*, his critical review of the connection between scientific

ecology and colonialism, 'naturalising the human mind' (*Ibid.*, p.29), with the process inaugurating an assumption of parallel and synergistic models between botanical phenomena and psychological phenomena.

Following Freud's model, Tansley argued that the mind was composed of stimulus-response mechanisms, with discharges of energy aiming to balance its emotional state. (*Ibid.*, p.24). He proposed that when injustice is felt emotionally, a system of compensatory stimuli aim to rebalance the mind. These two ideas - the movement of energy through stimuli and response and the pursuance of equilibrium within the system - would later be transferred to become central features of the ecosystem concept when Tansley returned to botany. However as Anker points out, these psychological analogies were based entirely on speculation, and yet Tansley freely naturalized them in relation to botany, developing his ecological theories through hypothetical concepts from social psychology.

One of the reasons that scientific ecology flourished in the early 20th century was because of its importance in understanding how resources in the colonies could be used by governments. To this end, Tansley was the main researcher in many surveys undertaken across the colonies, all of which were largely focused on land and resource management. Such surveys set out to find the most economical, efficient and sustainable use of the resources of the states and according to Anker were based on the 'basic idea that natural vegetation cannot be utilized for human purposes, without the guidance of socially responsible science (*Ibid.*, p.35).

Science's social responsibility, and ecology in particular, was central to Tansley's most famous 1935 text, *The Use and Abuse of Vegetational Concepts*, in which he introduced his concept of the ecosystem. Influenced by physics and psychology, the ecosystem was a way for Tansley to analyse how stimuli-response interactions operated across society, the mind and natural realm. Tansley's left-leaning thinking proposed that studying the behavior of organisms within an ecosystem was a way of adjusting imbalances within society and organisms and their environments (*Ibid.*, p.154).

The ideological underpinnings in the development of the term ecology are most clear during this period. As the science developed both in the US and Europe to service the use of the resources of the land for human ends, contrasting theoretical approaches emerged that were each suited to particular sets of environmental circumstances. However at the same time, Tansley's work demonstrates a number of imperatives that can be seen to be instigators for activities that form scientific ecology. The key imperative here was for social and biological amelioration and this was to be achieved through a system finding its equilibrium. However misguided this idea of the ecosystem transferring energy in such a way that eventually an ideal balance would be achieved was, it remained central to many forms of scientific and non-scientific ecology.

2.3.2 Jan Smuts and the holistic approach to scientific ecology

The Use and Abuse of Vegetational Concepts was written in response to the work of military leader and botanist Jan Smuts and the scientists who were supporting Smuts' concept of ecological holism in South Africa. A lawyer by training, Smuts was most well-known as a statesman who created the unified state of South Africa. His philosophy, 'holism' formed the basis of an approach to both the management of land, resources and people, and underpinned the political system that would eventually lead to Apartheid in South Africa. The notion of holism has maintained some sort of presence within many uses of the term ecology by thinkers and scientists, and is a common assumption in mainstream notions of ecology today and requires careful critical questioning in relation to developing a notion of what constitutes the ecological here.

Holism derived from Smuts' belief that the origins of social laws were rooted in the 'natural'⁵² laws of science, and these were governed by a principle of 'gradualism'. Gradualism held the notion that human evolution should be the guiding standard by which human rights were achieved. (Anker, 2001, p.41). However, for Smuts, human evolution also translated into the process of humans distancing themselves from their biological realm, towards advanced law and 'civilised' society.

Smuts' theory of holism opened up the parameters of gradualism by embracing the idea that external energy within nature and the physical world

⁵² Note that I am using the term 'natural' here in an idiomatic way to express the political split between 'social laws'.

was interconnected with the internal energy of ‘mind and spirit’, (*Ibid.*, p.46) and that they should be seen as indivisible parts of a ‘whole’. Key here was not how energies of nature and ‘human nature’ interacted in the most harmonious way, but who was best placed to be able to understand how such a harmonious situation was achieved, and in Smut’s racist schema, the people who were best able to do this were what he called the ‘advanced’ civilisations, which in South Africa amounted to the governing white communities.⁵³

Smuts was also a keen amateur botanist and highly respected for his knowledge of savanna grass, regularly publishing scientific papers on the subject⁵⁴. In 1927 he published a book that reiterated his Darwinistic approach to evolution, *Holism and Evolution*,⁵⁵ but which also located the science of ecology as a way of recognizing the interdependence of organisms within the whole. Holism was, for Smuts, a way of understanding the ‘inner driving force’ behind the whole, a whole that was both physical and psychical, an eco-philosophy that both served to expand the boundaries of ecology beyond botany and towards the organization and interdependence of humans within social, political and environmental structures. What is revealed through Smuts’ ecology is the rampant ideological flexibility of the emerging science of ecology that takes place. It

⁵³ See: Smuts, J.C. 1944. *Towards a Better World*. New York: World book Company

⁵⁴ See Beukes, P. 1996. *Smuts the Botanist: the Cape Flora and the Grasses of Africa*, Capetown : Human & Rousseau,

⁵⁵ Smuts, J.C., 1927. *Holism and Evolution*. London: Macmillan.
Available at: <https://archive.org/details/holismandevoluti032439mbp> (accessed 25-03-16)

also introduces origins of philosophical ideas connecting to the term ecology that focused on holistic approaches to relationships between organisms, humans and their environments that re-emerge in philosophies of ecology later in the 20th century, and which continually raise questions around both in whose interests the ‘whole’ is depicted, and whether it is a useful concept. This is explored later in the chapter in holistic approaches to philosophies using the term ecology that developed in the 1960s.

2.3.3 Frederic Clements and biotic communities

The other important ideological approach within scientific ecology from the early 20th century emerged in the U.S. and coalesced around the work of Frederic Clements, an ecologist greatly admired by Tansley (Anker, 2001, p.153), but also one with whom he disagreed on his theory of the succession of plant communities.⁵⁶ Clements was concerned with the dynamic nature of succession of plant communities and the ways in which plant formations and assemblages mirror organisms in their character and structure. For Clements, plant communities were always in the process of change, with new communities continually overlaying each other with more sophisticated and mature formations. He believed, like Warming, that plant communities were working towards a final climax stage through succession. For Clements, nature had a ‘course’ to follow and one that could be charted by scientists (Worster, 2011, Kindle location 3474). Like other ecologists of

⁵⁶ See: Van der Valk, A.G., (2014), ‘*Form Formation to Ecosystem: Tansley’s Response to Clement’s Climax*’, *Journal of the History of Biology*, Volume 47, May 2014, pp. 293-321

the time, Clements' ideas were often expressed through the naturalisation of dominant concepts of human social organisation.

However, Clements broadened the concerns of ecologists at the time by looking at wider relationships between plants and animals, and merging them into a wider biotic community – which he called the biome. His model biotic community was the grasslands of Nebraska, with its pioneers and homesteads. This biotic ideal was thrown into question in the 1930s when due to over-farming, the grasslands became the Dust Bowl, and thousands of farmers left the land as economic refugees. Clements and his colleagues became instrumental in fashioning government efforts to understand the causes, proposing possible solutions that could restore the land and manage it more efficiently in future⁵⁷.

Outside of a wider argument that human social, political and environmental activities have continually caused topographical changes and migration around the world, the Dust Bowl was one of the first events to be acknowledged as the result of human mis-management of the land in the United States (Worster, 2011, Kindle location 3740). Ideas of the wilderness and simple living in harmony with the land were already ingrained in wider culture,⁵⁸ but the accelerated socio-environmental effects of aggressive

⁵⁷ See: Masutti, C., 2006 Frederic Clements, Climatology and conservation in the 1930s, *Historical Studies in the Physical and Biological Sciences* Vol. 37, No. 1 (September 2006), pp. 27-48

⁵⁸ The relationship between conservation and wilderness was already established in American Culture, Thoreau had written *Walden* in 1854 and National Parks were set up in the early 20th century, well before the birth of the environmental movement.

industrial development led the U.S. government to increase its knowledge of these situations in order to control them. As a result, it invested heavily in exploring the broader possibilities of scientific ecology, with the aim of solving the emerging environmental problems, without impeding industrial and economic growth.

2.3.4 Articulating the shifting dynamics within the growing field of scientific ecology

While Clements' climax theory was widely challenged as being monolithic, his research into the connections between human activity and the biological community broadened the field of ecology (Worster, 2011, Kindle location 3990). In addition, Worster argues, (*Ibid.*, Kindle location 3988) his work created a strong distinction between the imaginary of the 'unspoiled' wilderness as played out through the National Parks and wider conservation projects, where human intervention was at a minimum, and the scientific ecology which was concerned with researching the effects of human intervention on biotic communities in terms of their commercial status and potential.

But Clements' work is also important because he starts to establish the grounds for understanding nature, and organic entities, as being in a state of ongoing change through the intervention of human agency. The stark distinction that emerges between land that is used as human resource and land that is to be left 'to itself' also forces the question about the ways in which the parameters that frame ecosystems are negotiated and what kind of

activity will maintain an ecosystem within a useful state. Two points of focus emerge here; firstly there is a need for awareness for a particular human-instigated goal that is established through the negotiation of an ecosystem, what could be called a concern; secondly the establishment of this goal and the activities it requires set up a field of care in relation to it.

What becomes clear is that the development of scientific ecology has been driven by underlying ideological imperatives, as well as concepts of human social arrangements that were imported into so called natural systems. One of the most striking problematics of the forms of scientific ecology that emerge from this period is their ontological fluidity as both science and philosophy. There appear to be no unifying principles within it as a science, and the perspectives that characterise the various practices outlined here are all driven by ideological and social purposes. Forms of scientific ecology hence have a somewhat arbitrary status, and questions of its constitution shift and change, and are played out over again, ironically perhaps since many of its researchers are keen on establishing balance, equilibrium and stability. This arbitrary quality fed into the vastly divergent possibilities that scientific forms defined through the term ecology eventually adopted and embodied, and still embody today. The term ecology depicts simultaneously a science of how biotic organisms interact with their environments, and also under certain conditions, becomes a science that seeks to efficiently organise and manage resources for ruling elites. It also depicts a science that seeks to protect an imagined harmonious wilderness, a nature 'let be', a

place where humans can harmonise with nature apparently unfettered by human technological intervention.

Following the Dust Bowl and U.S. government's investment post World War II, scientific ecology became dominated and shaped by the work of American scientists. The U.S. was also the arena where many of the ongoing shifts, conflicts and contradictions in approaches to ecology as philosophy were played out as the science changed, and non-scientific philosophical and sociological approaches started to take form. I will now explore this process, beginning with the work of Howard T. Odum and Eugene Odum, two brothers who developed what became a dominant paradigm of scientific ecology at a point when it was most influential in government-funded environmental research.

2.4 Examining The Fundamentals of Ecology

2.4.1 The definition of principles by Howard T. and Eugene Odum

The increasing prominence of scientific ecology in the U.S as the main science investigating ways of managing the increased technologisation of extracting resources both economically and environmentally was characterised by Tansley's dominant ecosystem paradigm of energy transfer and economics. This was played out literally as an economics of nature, with scientists calculating energy 'capital' within a biotic community (Worster, Kindle location 5078) and attempting to measure precisely the energy co-efficient of all the organisms within it. This process enabled theoretical statistical models to be produced that determined the amount of

energy a ‘biome’ – an area of naturally occurring flora and fauna that adapts to its environment – could produce in any given time, and it helped to define the singular work that scientific ecologists did in the mid 20th century. Scientists measured biotic communities in terms of energy transfer (Worster, 2011, Kindle location 5123) and it became a kind of applied conservation in many regions translated into the economic return that could be gained from the land.

In the postwar period, brothers Eugene Odum and Howard T. Odum, a botanist and physicist respectively, attempted to define a unifying principle for the science of ecology, one that could be expressed in statistical and mathematical terms. Taking as their starting point Tansley’s notion of the ecosystem, their research was presented in *The Fundamentals of Ecology*, and this became the standard textbook for ecology until their theory of the self-organising ecosystem was discredited in the 1970s.

The Odum brothers’ work is interesting because, in seeking to articulate a unifying principle with the scientific ecology, their work encapsulated the fact that the scientific ecology as it had evolved up until then was about more than biology. Indeed, the opening chapter of the book makes it clear that the term ecology goes beyond biology saying ‘man has been interested in ecology in a practical sort of way since early ...history. In primitive society every individual to survive needed to have definite knowledge of his environment....It is even more necessary than ever for mankind as a whole

to have an intelligent knowledge of the environment if our complex civilization is to survive' (Odum & Odum, 1971, p.3).

The book makes an assumption that having an 'intelligent knowledge of the environment' is knowledge gathered through ecosystem ecology. Like Tansley, their notion of the ecosystem is broad-ranging and mechanistic: 'the definition of the ecosystem should be a broad one, its main function in ecological thought being to emphasise *obligatory relationships, interdependence* and causal relationship to form functional units. A corollary to this is that since parts are *operationally inseparable* from the whole, the ecosystem is the level of the biological *organisation* most suitable for the analysis of *systems analysis* techniques' (*Ibid.*, p.9 emphasis mine). The breadth of this definition was demonstrated in chapter 10 of the book, which made the claim that ecosystems were similar to electrical circuits, with inputs and outputs of energy. In addition, the final chapter dispensed with 'nature' and used the example of the spacecraft as an ecosystem. This was justified on the grounds that it was a life-support system for the astronaut, but at the same time it demonstrates the problematic fluidity of the ecosystem concept. For Eugene Odum, ecosystems, when properly operational, were self-organising and goal-oriented discrete entities aiming towards an equilibrium. Because such an equilibrium was only threatened by humans, Odum argued that in order to maintain a stable environment that could support the world's population, at least a third of all land in the world should be left as natural as possible with no human intervention. The Odum brothers' self-organising ecosystem

theory became the first clear paradigm of scientific ecology for the majority of the post war period and fed into the notion of ecology that took hold popular consciousness as representing equilibrium and balance between environment and its inhabitants.

2.4.2 The ideological and scientific fragmentation of the term ecology

Around time that the U.S. federal government was investing research money into scientific ecology in the 1950s and 1960s - which included significant investment into the effects of atomic testing in places such as Bikini Atoll and in the Nevada desert⁵⁹ - alternative, non-scientific approaches to the term ecology started to take form. First inspired by the land conservation movement, they also found political traction through a growing environmental movement politicised by their opposition to various activities such as the use of DDT and nuclear testing,⁶⁰ as well as through branches of political philosophy in academic circles, which will be discussed shortly. As wider cultural and political subjectivities were being expressed in public spheres in the U.S. and Europe, scientific ecology also started to disperse ideologically and philosophically. Activists took on more radical perspectives from philosophical, scientific and sociological standpoints, aiming to address the ethical questions relating to the ways in which humans

⁵⁹ For a summary of the relationship between atomic energy and scientific ecology in the 1950s and 1960s see: Hagen, J.B. (1992). Ecology and the Atomic Age in *An Entangled Bank: The Origins of Ecosystem Ecology*, pp. 100-121. New Brunswick: Rutgers University Press.

⁶⁰ For greater detail on the history of the U.S. environmental movement and in particular the work of Barry Commoner's role in the development of the anti-nuclear movement see Davies, K., 2013, *The Rise of the U.S. Environmental Health Movement*, Plymouth: Rowman and Littlefield

relate to the wider environment, the earth's biosphere and its other non-human inhabitants. This will be explored in the following sections.

In attempting to understand the formation of various interpretations of the term ecology, it has become clear so far that the constituent activities for approaches to scientific ecology are always operating at a juncture between science and philosophy. Situations are framed within a specific set of parameters that set the terms for understanding how scientific processes happen, as well as attempting to uncover laws and patterns of behaviour. The practices that engendered the forms of knowledge depicted by the term ecology have all started from a specific set of scientific laws, and focused on deploying those laws within specific ethical contexts, often alongside other scientific and social practices, as opposed to working directly with the practices of proving or disproving the laws themselves. The term ecology and the practices that formed its early interpretations therefore start to be seen as being engendered through practices that contextualized ways in which scientific information played out in various conditions - with the aim of organising resulting behaviours into systemic patterns.

This overview of the early development of practices emerging out of the term ecology aims to demonstrate the ways in which dispersal and fragmentation have always been embedded within all forms that have come out of interpretations of the term. While different interpretations of the term have developed scientifically, there has never been an investigation into the principles behind the practices that have been deployed to form these

interpretations. The scientific paradigm developed by Eugene and Howard Odum was intended to develop principles, but as with its predecessors, it was produced out of another hypothesis rather than out of a set of fundamental principles of practice. The fundamentals of the term ecology that are proposed in the Odum brothers' textbook are formulated through an idea of how an ecosystem operates. Scientific ecology can be understood as being concerned with discerning forms of organization according to a variety of conditions and aspirations, *in tandem with* the interests that their study served.

From the early research that served various empire-optimising activities to Clements' work on the Dust Bowl, and Eugene and Howard Odum's work on nuclear test sites, scientific ecology has been framed by the political interests of governing bodies. Things shifted in the late 1950s and 1960s when researchers including Rachel Carson, Barry Commoner, Arne Naess and James Lovelock started to employ similar relational approaches to environmental issues but focused on the interests of those who were being overlooked, ignored or repressed by the dominant authorities. At the time this meant focusing on ecosystems and communities that were being degraded by the widespread use of pesticides, or nuclear testing, and it also meant that interpretations of the term shifted away from a fixed single narrative of an ecosystem to an awareness of multiple ecosystems with often conflicting interests. This resulted in the dispersal of the term, with actants forming alternative perspectives on organization of society, the environment and organisms other than the human. The term actant is used here following

Bruno Latour's definition of an actor as 'not the source of an action, but the moving target of a vast array of entities swarming towards it' (Latour, 2005, p.46) As Latour says, the very word actor directs our attention to a complete dislocation of the action, warning us that this is not a coherent, controlled well rounded and clean-edged affair...action is borrowed, distributed, suggested, influenced, dominated betrayed, translated' (*Ibid.*, p.46).

To proceed with this exploration of the ideological interpretations of the term ecology, its shifts and ways that it is embroiled in wider socio-political contexts, the following section focuses on the key non-scientific approaches to the term ecology that have influenced writers and practitioners today.

2.5 Conflicting fragments : rethinking the term ecology

The starting point for this exploration of the fragmentation of the term ecology is a divide in the way that the term ecology is deployed. Post-war scientific ecology became contrasted with a use of the term ecology as a way of understanding alternative relationships between organisms, humans and the environment, which emerged out of the conservation movement. At first this use of the term ecology was largely focused on preserving wilderness and conserving wildlife, but as a result of the publication of Rachel Carson's *Silent Spring* in 1962 and the work of the anti-nuclear movement which publicised the wider health-related and environmental effects of the nuclear tests taking place across the world its ethical imperatives split and became politicised during the 1960s beyond issues relating to land preservation.

While scientific ecology continued to research the effects of industrialisation on the environment, charged by the government to find ways in which to successfully continue the existing system, people like ecologist Barry Commoner and scientist Rachel Carson started asking more probing questions about the relationships between the economic system and the environment. The engaged popular response that followed Carson's publication of *Silent Spring* highlighted issues to do with the use of DDT and the effects of pollution on the natural environment as it was being played out in the United States at the time. Carson faced huge and sustained opposition from chemical manufacturers, but upon publication, her work opened up a space for a wider discussion around environmental issues.⁶¹ In the 1960s expression of the environmental crisis was highly charged emotionally and was supported or even instigated to a certain extent through the emotive, almost elegiac language that Carson used in her book. It is interesting to note that the anarchist activist and founder of Social Ecology, Murray Bookchin, published *Our Synthetic Environment* in 1962, just before *Silent Spring* was released, but this was largely ignored⁶².

The movement that coalesced around the multiple issues relating to the crises in the environment in the U.S. included scientists, political radicals,

⁶¹ See Souder, W., 2012, 'High Tides and Low' in *On a Farther Shore: The Life and Legacy of Rachel Carson*, pp.319-390. New York: Crown

⁶² *Our Synthetic Environment* was first published under the pseudonym of Lewis Herber in 1962 by Knopf in New York. Today it is freely available online at <https://libcom.org/files/Bookchin%20M.%20Our%20Synthetic%20Environment.pdf> (accessed 14-05-16).

activists, as well many other concerned groups and individuals. Up until this point, in its interpretations, the term ecology had been mostly the preserve of scientists and academics. During the 1960s and 1970s however interpretations of the term ecology multiplied, and included complex scientific approaches like James Lovelock's Gaia theory – described below. The term also became related to radical political and philosophical ideas offering alternative perspectives from which to understand how human and non-human organisms and environments could interrelate and exist cooperatively and co-dependently. In practice, as will be shown, many of these ideas were often singular universal world-views with questionable means to their ends, but at the same time they can be seen as part of a wider fragmentation of socio-political approaches to the organization of communities and living situations within specific environments. The broad support for, and growing awareness of environmental issues at the time also meant that the term ecology (while never really properly defined) entered mainstream usage, and quickly became a shorthand for transmitting two overarching ideas: firstly that Earth was one big ecosystem with finite resources that had an optimum equilibrium; and secondly that this natural equilibrium was essentially fragile and required protection from human activities, as environmental crises of water and air pollution had shown.

2.5.1 A background to the philosophies of the term ecology

It is not necessary to give a forensic breakdown here of all the approaches to ecology that emerged at this time, nor a timeline of how environmentalism and climate change became part of mainstream culture and written into the

policies of governments worldwide. However, looking at some of the ways in which the term became conflictingly owned by governments, political radicals, and scientists will help us to understand its entangled and ultimately ineffectual contemporary status outside of specific scientific and social scientific fields. This section will briefly outline some of the political and philosophical approaches of the late 1960s and early 1970s, which proposed alternative systems of human and non-human organization. I will then discuss some later philosophical approaches of the term through Gregory Bateson, Felix Guattari, Bruno Latour, who have all approached the term and environmental issues in general as integral to wider problems, producing diffuse philosophical tools that take this into account. I will also mention changes in scientific ecology and wider scientific paradigms, which, as part of their far-reaching proposals, debunked the idea that ecosystems were always in a process of finding an optimum balance between all entities.

The emerging idea that humans had an ethical responsibility for managing the resources of the planet in a way that maintained their ongoing availability has fostered many conflicting ideas and ideals under a banner of ecology, and has thrown up various proposals for the alternative organisation of available natural resources in relation to human needs. Many of these were rooted in wider political philosophies of social amelioration in terms of transforming the socio-economic system, or in biocentric philosophies that focused on respecting the primacy of a fundamental 'natural' relationship between humans and the environment.

Political philosophies like Murray Bookchin's Social ecology, or E.F Schumacher's economic proposals in *Small is Beautiful* attributed environmental problems to society's political structures of social, and technological domination. Biocentric perspectives on ecology could be seen in the work of James Lovelock's Gaia theory and Arne Naess' Deep ecology. Other social perspectives that emerged around the same time included eco-feminism and spiritual ecology. In other academic fields, particularly geography, a research area called human ecology had been growing over the 20th century, and in the 1970s other academic areas including politics, the social sciences and psychology started to explore how and what studies related to the term ecology might constitute in wider social terms. This resulted in the appearance of subject areas like Political ecology, Cultural ecology and Eco-psychology. In the following section I will offer a brief outline of three of the dominant interpretations outside of the academic fields that are largely marginalised today: Gaia theory, Deep ecology and Social ecology. Please note that the aim is to give an introduction to these approaches but as they are not the focus of the main discussion in this chapter the introductions are brief.

It is important to recognise that the following approaches come out of different contexts and backgrounds and are not automatically interlinked. Although all arose during the late 1960s and early 1970s at a time of political upheaval and out of a growing awareness of the damage that industrialization was causing to the Earth's biosphere, they were not all

involved in the same type of struggle. Whereas Deep ecology and Gaia theory are concerned with preservation of and human connectivity with 'nature' and the relationships that form through these interactions, Murray Bookchin's Social ecology was involved in wider social and political activism and activities of the counter culture. Indeed in 1970 he wrote *The Youth Culture: An Anarcho-Communist View*, an essay on its revolutionary potential.⁶³

2.5.2 James Lovelock and Gaia Theory

James Lovelock is a chemist and environmentalist who was working with NASA in 1965 when he came up with his proposal for Gaia theory or the Gaia Hypothesis as it is sometimes called. Influenced by cybernetic theory, it proposes that all elements on earth, in effect the Earth, its biosphere, atmosphere, hydrosphere and pedosphere constitutes one single highly complex interacting system or organism, named Gaia. Gaia is always striving for optimal regulation of all chemical systems on the planet through a system of feedback.

Lovelock's notion of earth's singularity as a self-supporting system found its aesthetic expression in NASA's blue marble image of the earth taken from outer space, in which the Earth became both an object of awe and of great fragility, depicted as lonely in its galactic existence. He is a prolific

⁶³ Published in: Metefsky, G., Bookchin, M., 1970. *Hip Culture: 6 Essays on its Revolutionary Potential: Yippie, Third World, Feminist, Marxist, High School Student, Anarchist*. New York: Times Change Press, pp 54-60.

writer and through his continued work as a scientist, Lovelock has maintained and developed Gaia theory, publishing regularly on the topic, and the theory has a solid following among environmentalists and scientists.⁶⁴

2.5.3 Deep ecology

By contrast another biocentric approach, Deep ecology, was conceived by a philosopher. Influenced by thinkers like Spinoza and Gandhi, Arne Naess expressed a connection with, and respect for, the mountains in his native Norway. In terms of the environmental movement he distinguished between groups who dealt with the environmental crisis through reform and legislation, and those like himself who argued that more fundamental action was required, action that would shift the underlying structures between humans and the non-human environment. It was based on a philosophical proposition that all life forms have intrinsic worth, and that no one life form is more important, regardless of any anthropocentric value that it might have.

For Naess, human beings in the world are one part of the greater holistic system of the earth, and as such are equal to all other organisms, rather than being superior. This meant that as long as human beings were perceived to be superior to 'nature' they undermined the possibilities for the radical reform that was required to rectify social and environmental problems. Naess identified eight principles to underpin his philosophy. As well as

⁶⁴ For more information about Gaia see www.jameslovelock.org.

declaring the inherent worth of all life, these principles proposed that humans rethink their standards of living to learn to find a more equitable life quality. They also proposed that human, cultural and social life could only flourish with a greatly decreased population and that there needed to be radical legislation to support new economic, technological and ideological structures in order to implement the necessary changes that would support a Deep Ecological world view.

The intellectual nexus of Deep ecology concerned the necessity of individuals having what Naess called 'self-reflection' - the ability to rethink one's position in relation to one's environmental conditions. This became an individual's personal philosophy or ecosophy. Naess proposed that naming an ecosophy was a personal act, a personal interpretation of the world. He called his personal ecosophy, 'ecosophy T'. In *Life's Philosophy: Reason and Feeling in a Deeper World*, Naess explained that the T stood for Tvergastein, the name of his mountain home. (Naess, 2008, p.101). He makes this clear that this is his *personal* ecosophy and that the personal ecosophies of different people would be suffixed by whatever letter was relevant to them. For Naess there were as many ecosophies as there were people: "What is central to a person's ecosophical outlook is the demonstration of what we consider to have a *profound meaning* in life, an understanding of the warp and weft of tapestry' (*Ibid.*, p.101, emphasis in original). Naess continued his work with Deep ecology until his death in 2009 and it is maintained through foundations and organisations like Schumacher college in the UK, and the Deep Ecology Foundation in the

U.S., founded by Douglas Tompkins, the prominent clothing retailer, conservationist and philanthropist who died in 2015.

2.5.4 Social Ecology

Instead of starting from a foundation of fundamental equitability between nature and human beings, Murray Bookchin's Social ecology was based on the premise that environmental crises were the logical consequences of the existing social and political structures that prioritized humans over non-humans and framed nature in terms of economic value. Bookchin, an anarchist and activist, argued that the structures of domination that maintained the economic system meant that environmental crises were inevitable, and that more equitable relations between humans and other inhabitants and products of the Earths' biosphere can only be realized through the dismantling of such hierarchies.

For Bookchin, ecology dealt with the fact that 'humanity's capacity for destruction' was 'quixotic evidence' of its 'capacity for reconstruction'. (Bookchin, 1994, p.153). He saw the problem as one of humanity lacking the 'consciousness and sensibility' (*Ibid.*, p.153) that was required to restore the environment to a more sustainable state. Therefore, he argued, social systems needed to be reordered to harness human knowledge and sensibility in collaboration with 'nature' in order to start to achieve this goal. His metaphor for how humans needed to approach a restoration of natural balance, was one of managing the future as though 'steering a boat' (*Ibid.*, p.157), a reference to the etymology of the term Cybernetics, which comes

from the Greek *kubernetes* meaning steersman of a boat - an idea also used by architect and inventor Buckminster Fuller.

The theory of Social ecology was his proposal for re-organising society, and it started from the idea that ecology was inherently both philosophical and challenged 'conventional notions' of hierarchy (*Ibid.*, p.157). Ecology, he said dealt with the 'dynamic balance of nature' and the possibilities for re-assembling communities along holistic and non-hierarchical lines would therefore come from greater insight into and understanding of biotic systems. He suggested that Social ecology would do this by looking at the patterns and forms that emerged through the interrelationships within biotic ecosystems. Knowledge of the motivations, goals and support systems governing these systems, would enable humans to replicate the structures as intelligible non-hierarchical holistic communities, held together by the dynamic tensions between the diversity of elements within an ecosystem, what he called a 'dynamic unity' (*Ibid.*, p.157). In order to do this, cities, he argued would have to be decentralized into smaller communities in order to create a new balance between urban and rural areas and more productive points of interaction and communication between the earth's biotic systems and human beings (*Ibid.*, p.157).

These three perspectives demonstrate the key assumptions embedded in the many cultural and political approaches to ecology at the time. These can be summed up as: ecology means holism; secondly, it suggests a striving for, or belief in, an intrinsic balance of an ecosystem that can be achieved;

thirdly it suggests a shift away from anthropocentrism; and finally assumes a universal ontology of all human beings and entities on Earth, a common ‘we’.

2.6 Expanding the parameters of forms that emerge from the term ecology

So far I have discussed how the term ecology has been deployed in Western science, social science, philosophy and politics to describe sets of circumstances concerned with the relationships between environments – often natural – and entities that exist within these environments. I have also established how the term became supplanted by radical proposals for alternative ways of organising human society in response to concerns that were being addressed by the growing environmental movement that emerged in the 1960s in the U.S. and Western Europe. All these approaches, while ideological, are also underpinned by awkward acknowledgments of the tension between the need to address relationships between political and economic systems and wider, planetary concerns and the place of human beings in this as biological life form.

In the second part of this chapter, I will start to look at ways in which the term became detached from its context of Western environmentalism, opening up the possibilities for philosophical trajectories. I will begin by discussing the work of R. Buckminster Fuller and Gregory Bateson, whose work formed intersections between the term ecology, first order Cybernetic

Theory and the counter culture of the late 1960s and early 1970s⁶⁵. Buckminster Fuller's Geodisc Domes and *Operating Manual For Spaceship Earth* deployed control systems run on cybernetic principles to develop self-regulating habitation systems that aimed to distribute resources in more egalitarian and sustainable ways, and were highly influential in the development of the communes of the counterculture. In a similar way, Gregory Bateson, who was involved in the Macy Conferences on Cybernetics between 1944 and 1953⁶⁶, abstracted his early systems theories into wider philosophical mediations around relationships between human psychologies and environmental, social, and biological effects – leading to his now famous declaration that ‘there is an ecology of bad ideas, just as there is an ecology of weeds’ (Bateson, 1978, p.492).

While both Buckminster Fuller and Bateson had been established in their fields long before the emergence of environmentalism and the counter culture, their influence took hold in the context of the wider social and political upheaval during the 1960s and environmental concerns at the time, as well as through expanded forms of critical and utopian thinking exploring different ways of human organisation and living. Alongside Buckminster Fuller and Bateson, other notable activities and activists at the time included

⁶⁵ For a history of the relationship of Bateson and Guattari within cybernetics see: Hales, N.K., 2008. *How We Became Posthuman*. Chicago: University of Chicago Press

⁶⁶ The Macy conferences were a series of conferences initiated by Frank Fremont-Smith in 1946 as an experiment in multi-disciplinary interaction between ‘hard’ sciences and social sciences. The core group included Gregory Bateson and Norbert Wiener. A detailed summary can be found online at: <http://www.asc-cybernetics.org/foundations/history/MacySummary.htm#Part1> (accessed 20-06-16).

radical architecture groups like Superstudio or Gruppo Strum, artists like Joseph Beuys (who went on to be instrumental in the founding of the Green party in Germany), Steward Brand's *Whole Earth Catalogue*, and the Centre for Alternative Technology, among others.

Their work - along with that of Murray Bookchin - helps to identify a shift away from versions of the term ecology that take nature as a founding principle, towards a search for wider connectivities between human socio-political organisation and the ways in which human society is organized. In the following section I will outline these two practices in detail as a starting point in the process of moving from the term ecology to the ecological as experimental practices of exploring human socio-political organisation and settings and connectivities in which they take place.

2.6.1 Buckminster Fuller and Spaceship Earth

Buckminster Fuller had been using the term ecology, and developing resource-efficient habitation 'machines' for many years before he found popular support from the counterculture in the late 1960s. He used the term specifically to describe the study of the patterns that he saw as evidence of the inherently mechanistic structures of production and reproduction, with each form having its own 'unique ecological patterning'. (Fuller, 1969, p.305). However, his work also connects with many of the ideas that form the dominant paradigm of scientific ecology in that period. There are four key points where Fuller's ideas intersect with the deployment of the term ecology that I have discussed so far and these are outlined in what follows.

2.6.1.1 ‘Spaceship Earth’

The term Spaceship Earth was already in use before Fuller wrote his *Operating Manual for Spaceship Earth* in 1968, and today its most famous incarnation may be as the iconic attraction in Walt Disney World’s *Epcot* theme park in Florida⁶⁷. Fuller’s interpretation of the concept is founded on the belief that the earth’s resources are finite and hence could be organised into a more efficient system. He imagined Earth as one holistic complex interacting feedback system operated by human beings. As such humanity’s existence is ultimately part of a bigger but singularly universal state of affairs. In his book, Fuller defines the universal as ‘the biggest system’ and later continues, ‘The universe is the aggregate of all of humanity’s consciously-apprehended and communicated experience with the non-simultaneous, non-identical and only partially overlapping always complementary, weighable and unweighable, ever omni-transforming, event sequences’ (Fuller, 1968, p.19).

Spaceship Earth was therefore a finite universe but one that could be subdivided into systems and configurations and circumstances. It would eventually become borderless, and people would be freed from having to do menial, repetitive jobs by the infinite capabilities of the computer.

⁶⁷ <https://disneyworld.disney.go.com/destinations/epcot/>

2.6.1.2 Order and pattern

The concept of patterning was central to Fuller's understanding of the processes and modes of organisation that constructed his idea of the universe. Indeed, he believed that human beings' main 'function in universe' (*Ibid.*, p.24) was to 'intercept and redirect local energy patternings' (*Ibid.*, p.29) so that they could be put into service for the greater good of humanity – what he called humanity's 'forward metabolic regeneration'. (*Ibid.*, p.29)

Reorganising patterns were key to increasing both the intellectual and physical capabilities of humanity. Fuller argued that there was a 'total world pattern of needs, its resource flows, its recirculatory and regenerative processes' (Fuller 1969, p.79). He was concerned therefore with uncovering universal patterns that 'related to the whole world', such as through the discovery of a pattern in chemistry that could be translated into architecture, with the overall pattern one of 'progressive orderliness' (*Ibid.*, p.5) to counter what he saw as the 'random disorderliness' of human activities. He argued that this disorderliness was produced by politicians and he often said that getting rid of politicians would mean getting rid of all social problems (*Ibid.*, p.305).

Fuller's focus on pattern was mirrored by the concerns of scientific ecology with its relationships with systems theory and cybernetics, at the time. The notion of systems as ordered patterns was central to scientific ecology before its paradigm was challenged in the 1970s. The exemplification of an

ordered pattern – as also outlined by Howard and Eugene Odum in the final chapter of *The Fundamentals of Ecology* – was the space capsule (Odum, E., Odum, H., 1971, pp.498-509).

2.6.1.3 Synergy

Synergy is the idea that the cooperation of entities within a system can produce a combined effects greater than the sum of their separate effects. For Fuller therefore, the universe, ‘the master containment’ (Fuller, 1968, p.24) was the result of all its constituent activities, both human and non-human. The ultimate representation of this was the Geodesic dome, where each point interconnected with equal tension to create a stable load-resisting structure, and where it is through the integration of all the structure’s load-bearing points that it maintains its form. Through the use of synergetic approaches, humans would have the capability to provide feasible possibilities for managing Earth’s resources better in the long term.

Fuller’s proposal used General Systems Theory in tandem with cybernetics and synergetics to organise existing behaviours, and discover new system behaviours, revealing possibilities for new formations of resource deployment. He used the concept of energy in economic terms, hence ‘wealth’ was understood as the economics of living – the energy and resources available to humans. Managing wealth through synergy – i.e. cooperation between actors – was the capacity for finding sustainable systems for healthy long term living.

While Fuller's work reflects ideas that structured the dominant paradigm of scientific ecology at the time, his main influence was on the activities of the counter culture and their experiments in communal living. Fuller's beliefs that self-organising systems, optimal patterns of organisation and good design were their own organising principles were played out in communes across the U.S. These were mostly unsuccessful experiments and perhaps what can be inferred from these is that complex relationships between human agency and human psychology on the mechanistic or scientific systems are not easily reconciled with ideas emerging from scientific ecology.⁶⁸

2.6.2 Gregory Bateson

If the contingent unpredictability of human psychology could be seen as the inverse of Buckminster Fuller's controlled automatism, then Gregory Bateson's work presents us with an approach to questions of how the term ecology can be understood. Bateson's work is significant as firstly, the start of a wider debate around the term ecology that becomes abstracted from specific content as such, and secondly, as a key influence on contemporary interpretations of the term ecology by Felix Guattari, and later writers like Timothy Morton.

⁶⁸ For more on communes in the 1960s and 1970s see: Case, J., Taylor, Rosemary, C.R., (eds.,) 1979. *Co-ops, Communes and Collectives: Experiments in Social Change in the 1960s and 1970s*. New York: Pantheon.

Classifying Bateson's work within any form of pre-existing epistemology is difficult as it seeps out of predetermined fields, forming cross-disciplinary connectivities. His initial training and field research as an anthropologist spread across fields including biology, psychiatry, cybernetics, and ecology and it is important to bear in mind that it is the totality of this research across all fields that he sees as starting to build his science of the ecology of the mind. As a result, the term ecology takes on a number of different roles in Bateson's work. Another point to note is that many of Bateson's early ideas about systems as part of first order cybernetics have been long discredited, but many of his later key ideas still retain their relevance.

His 1972 publication of *Steps to an Ecology of Mind* - a collection of his writings spanning three decades, was significant because it contributed to the wider debate around the term ecology at the time. The overall theme of his texts is concerned with how psychological processes describe networked connections and patterns that become replicated in physical manifestations. In contrast to Fuller's mechanistic and objective holistic approach, Bateson believed in fundamental connections between human psychology and environment as exemplified in one of his most famous quotes where he comments about Lake Erie, 'you forget that the eco-mental system called Lake Erie is a part of your wider eco-mental system and that if Lake Erie is driven insane, its insanity is incorporated in the larger system of your thought and experience' (Bateson, 1978, p.460-1).

Bateson's early ideas were firstly focused on interactions between organisms and environments and the cycles and circuits that these interrelations produced. Secondly he was interested in how ideas were produced, within the context of their production and how the form that the ideas and expression took reflected the internal form of the idea itself. What characterised these two broad aims was Bateson's focus on mental process and the way that mental process is implicit in all forms of output by humans, whether it is as forms of knowledge, activities, or political or social relations. He proposed that the ecology of mind was 'a new way of thinking about ideas and about the aggregates of ideas which I call minds'. He continues, 'it is a science which does not yet exist as an organised body of theory or knowledge' (*Ibid.*, p.21).

Central to this idea is the fact of the mind being holistic in character and at the same time both connected to, and produced through, factors external to it. Importantly, these factors and the relations that their interactions created were always seen within a wider idea of a network: 'As I see it the world is made up of a very complex network (rather than a chain) of entities which have their own supplies of energy and perhaps even their own ideas of where they would like to go'. (*Ibid.*, p.239).

Bateson's contribution to systems theory presents a bridge between the role of information, and questions of process and change. For Bateson, systems operate through difference, and difference takes the form of information that acts on the system. Information acts to create interactions within existing

systems or brings together new forms of systemic activity which are then perceived through patterns of information that are revealed within a system. It was by examining patterns of activity in conjunction with the processes and environmental stimuli that produced them, that he saw a way of understanding how the mind was manifested in physical worlds.

Bateson started applying his ideas to the environmental issues that developed in the 1960s and 1970s in his text, *Pathologies of Epistemology and The Roots of Ecological Crisis* (1972). Here his main argument was that up until now humans had ignored the fact that survival of organisms was about organism-plus-environment not just organism, declaring that ‘we are learning by bitter experience that the organism which destroys its environment destroys itself.’ (Bateson, 1978, p.459). In order for humans to take on the question of the environment, he argued that humans needed to make an epistemological and psychological shift which would result in ‘a very strange and surprising idea...the unit of evolutionary survival turns out to be identical with the unit of mind’ (*Ibid.*, p.459). In other words, the awareness of the interaction that takes place between humans and the environment is a mental *process* as much as a physical exchange, and that to produce long-term survival patterns, human beings need to take into consideration the wider systems of which they are part. This requires a mental shift, he argued, suggesting at a mental health conference in Hawaii that delegates had a duty to try to help re-orchestrate human ‘sanity’ (*Ibid.*, p.463) in the interests of the environment.

The use of the term ecology can be described in a number of ways in Bateson's work. He was concerned with the term ecology as it related to the environmental crisis at the time, but the most important way he used was in his work on the relationship between psychology and environment. Ecology of mind represented both the practice and forms of the investigation, and the abstracted ideas that were its outcomes, or the objectified sum of these relationships. Bateson pushed the way the term had been used in a new direction because he also explicitly *questioned the forms in which such investigations were taking place* as well as locating the investigations as always already being products of the social, political and environmental factors within which they are conceived.

2.7 The next move: dissipation, disorder and chaos

Bateson's work created a distance in the relationship between the term ecology and a particular type of environmental or 'nature-based' content, and in doing so, opened up possibilities for more critical readings of the term to take place, which have been explored by thinkers including Felix Guattari, whose work will be examined below.

At the same time, during the 1970s and early 1980s, many activist groups in Western Europe who campaigned on platforms relating to environmental questions, started to become assimilated into mainstream political organisations such as Green political parties. In the U.K., the Ecology Party

(now the Green Party) formed in 1975⁶⁹, and the Green Party in Germany formed in 1980⁷⁰, with artist Joseph Beuys as one of its founder members⁷¹. These parties acted to unify a myriad of activities within conventional political structures, whereas groups like Earth First!⁷² and Greenpeace⁷³ chose to remain independent as they felt it gave their campaigns more political traction. As a result, philosophies like Deep ecology and Social ecology have become marginalised and are today best understood in historical terms, as products of a particular temporal configuration of ideological, socio-political and environmental circumstances. Despite this, Gaia theory still exists through the continued work of James Lovelock, and Deep ecology has a continued presence through the work of the Foundation for Deep Ecology⁷⁴ and the Arnae Naess Project in the University of Oslo.⁷⁵

In addition, also in the 1970s, the influence of texts like Paul Ehrlich's *The Population Bomb* (1968) and the Club of Rome's *Limits to Growth* (1972) thesis - both of which proposed population controls of some form - served to increase the complexities and political contradictions around forms of

⁶⁹ For more information about the development of the Green Party in the U.K. see archive editions of *The Ecologist* journal, particularly Vol. 6, no. 9, Nov 1976, which can be accessed online here: <http://exacteditions.theecologist.org/read/resurgence/ecologist-vol-6-no-9-nov-1976-6414/4/2/>

⁷⁰ See: Poguntke, T., 1993. *Alternative Politics: the German Green Party* Edinburgh: Edinburgh University Press, for a history of the party.

⁷¹ See a poster made for the Green Party by Joseph Beuys at: <http://www.medienkunstnetz.de/works/wahlplakat-fur-die-grunen/> (accessed 27-05-16). See also Mayer, M., Ely, J., 1998. *The German Greens: Paradox Between Movement and Party*. Philadelphia: Temple University Press

⁷² See <http://www.earthfirst.org/about.htm> and <http://earthfirstjournal.org/about/> (both accessed 27-05-16).

⁷³ See <http://www.greenpeace.org.uk> (accessed 27-05-16)

⁷⁴ See <http://www.deepecology.org>

⁷⁵ See <http://arnenaessproject.org>

organisation expressed through the term ecology. In *The Roots of Modern Environmentalism* David Pepper points out the subsequent paradoxes that emerged through the many forms that the term ecology took:

The paradox is that in the popular perception ecocentrics are usually seen as radical proponents of social reform, and as essentially progressive. Politically they are either seen as left of centre....or...as 'above' conventional politics and concerned with issues which transcend traditional left/right divisions. But our historical and materialist analysis of ecocentrism suggests the reverse; that it may be a (middle) class response to contradictions in capitalism, essentially conservative, reactionary...and very much involving political concerns. (Pepper, 1984, p.187).

Pepper's quote summarises one of the term ecology's central - and I believe irresolvable - problematics, a tension between its multifarious, fluid, 'everyman' nature that gives rise to multiple idealised contradictions, and its implication of an idealised singularity. By contrast, Joachin Radkau does not see this a problem. In his history of environmentalism, *The Age of Ecology* (2013), he proposes that the term ecology's ambiguity and fluidity is its strength, and that this ambiguity means that it can reflect its importance to wider global concerns around the issues that it encompasses:

After the demise of the great ideologies, popular ecology is left as the only intellectual force giving content to the new global horizon

and responding to the new challenges.... The chameleon-like character of ecology is proof of its vitality – as philosophy of life and source of political legitimacy, as science and as watchword of protest movements. It also points to the historical novelty of the entire phenomenon. If we think back to older movements – socialist, Communist, nationalist, fascist – we realize how quickly the ‘movement’ became tied down in a set of objectives and fixed ideas, and how great is the difference in this respect from the environmental movement (2013, p.27-28).

Radkau’s view differs from Pepper’s in that he seems to hold that the term ecology itself is able to ultimately transcend any sets of ideas or socio-political configurations that come under its aegis - in a way that perhaps actually affirms the inherent circularity of the problematic laid out by Pepper. I believe, in opposition to Radkau, that the term ecology, as embodied in forms of knowledge addressing concerns related to environmentalism and objects of human and non-human organisation, has reached its limits as an intellectual force, and that this has happened precisely because of its dispersal, naturalisation and socialisation.

2.7.1 Moving from ecology to the ecological

Instead, perhaps it is more politically helpful to think in terms of identifying and extracting underlying strands of thought that can be discerned through some of the term’s abstracted forms – either as extensions of their

imperatives, or as reactions to their constraints. This might make it possible to find ways of critically harnessing some of the underlying structural potentials that are encapsulated through the sovereign forms produced through the term ecology I have described here. The aim is to extract these potentials and formulate a number of theoretical tools that can be deployed to interrogate and re-assemble connectivities within all kinds of assemblages and the conditions in which they emerge. To achieve this, I am proposing a move away from the term ecology as producing objects of knowledge, towards an articulation of the idea of the ecological, which is constituted through a set of tools, understood as directives, that instigate ongoing processes of examination, interrogation and potential within the connectivities, engagements and activities of assemblages. One of the key shifts that occurs here therefore is that the ecological no longer directly refers to an assumed subject relating to pre-understood parameters embodied within the term ecology or within environmentalism. Rather, it refers to methods of interrogating all kinds of existing assemblages and their conditions, and characterises forms of making and doing that might intervene to change the configurations and trajectories and socio-political weighting of these assemblages and their conditions.

To unpick the intricacies of this move, I will now examine practices and theories that explore abstracted forms of connectivities between entities and environments and the socio-political implications of these, rather than characterising overall models of connectivities. First of all I will briefly outline two environmental-related practices that start to demonstrate the

kinds of processes that can be understood as ecological. However, it is important to state here that my understanding of the ecological moves beyond the parameters of environmentalism and environmental-related issues. The two practices outlined here are Environmental Justice – an umbrella term for diverse activism around the inequalities that are manifest in environmental concerns – and Political Ecology, an academic field that exists in geography departments of academic institutions in the US and Europe. Both are connected to issues relating to environmentalism but both also open up the possibilities of interrogating fields of connectivities that go beyond this and furthermore are not beholden to the production of pre-arranged forms. As a result, while emerging during the 1980s, these two fields of practice are still relevant today, and have been helpful in the development of my thesis. This is because they present possibilities for an understanding of activities of inquiry and intervention as unreifiable process through which to investigate specific assemblages and their interconnectivities with social, environmental and political forces. Also key here is the fact that they don't start from a philosophical interpretation of 'ecology' as an overarching model, or propose a holistic paradigm, instead they start with a specific set of circumstances from which to follow lines of enquiry.

2.7.1.1 Environmental justice

At the time of writing, the global capitalist economy is experiencing the ongoing repercussions of widespread and complex difficulties as a result of the 2008 financial crisis. The sweeping government cuts and reduced

budgets in the U.K. where I am based have been justified by Prime Minister David Cameron and his Conservative government's refrain of 'we are all in this together'⁷⁶ and it is striking to see the similarities in the messages from President Nixon, when, in response to a number of environmental disasters in the late 1960s such as the oil leak in Santa Barbara, and the pollution of the Cuyahoga River in Ohio, along with the growing concern around the effects of chemical use and nuclear testing, he addressed congress in 1970, declaring that the reparation of the natural world that had been damaged by industrial activity in the U.S. was a cause 'beyond party, beyond faction'.⁷⁷ His response was to set up the Environmental Protection Agency⁷⁸, and pass the Clean Air Act⁷⁹, the Clean Water Act⁸⁰ and Endangered Species Act⁸¹ with other governments and the United Nations mobilising similar efforts⁸². However, such a universalist approach ignores the inequalities in people's experience of environmental issues, and the subsequent effects on different communities.

In the U.S. in the 1980s, grassroots environmental activism started to focus on the environmental discrimination that was emerging as taking place

⁷⁶ <http://www.theguardian.com/politics/2009/oct/08/david-cameron-speech-in-full>

⁷⁷ <https://www.youtube.com/watch?v=5LpspwT0ZwA> begins at 22.48; see also <http://nixonfoundation.org/nixontv.php?videoid=57>

⁷⁸ <https://www.epa.gov/aboutepa/epa-history>

⁷⁹ <https://www.epa.gov/laws-regulations/summary-clean-air-act>

⁸⁰ <https://www.epa.gov/laws-regulations/summary-clean-water-act>

⁸¹ <http://www.nmfs.noaa.gov/pr/laws/esa/>

⁸² In the U.K. Ted Heath's government set up the Department for the environment in 1970, see <http://www.nationalarchives.gov.uk/documents/information-management/osp1.pdf>, (accessed 28-05-16); In 1972 the United Nations Environment Programme was established: <http://www.unep.org> (accessed 28-05-16)

within particular communities, and how these communities were adversely affected by environmental hazards, and more likely to play host or live near potentially toxic sites or facilities like landfills and incinerators. The Environmental or Ecological Justice⁸³ movement was born out of disparate campaigns by community and environmental activists against environmental injustices running along race and class lines. This included in the distribution of toxic waste, poor air quality and polluting factories.

A fusion of human rights and environmental activism, Environmental Justice is focussed on protecting and gaining justice for communities affected by these disparities. It has a broader overall aim that focuses on changing processes in which corporations make policy decisions on toxic waste sites etc. Examples of environmental justice activities include campaigns with housing communities on particular sites across the U.S including Altgeld Gardens housing community in South Chicago, which is 90% African American and built on a landfill site;⁸⁴ and Chester, Pennsylvania which is 65% African American and has a disproportionate number of waste sites in relation to other cities in Pennsylvania, along with the highest cancer rates in the state.⁸⁵ Through campaigns and activism, individuals and small interest groups have been able to participate in bigger environmental decisions. Further afield there are on-going campaigns

⁸³ For a useful account of an elision between environmental and ecological justice, see Schlosberg, D. 2007. *Defining Ecological Justice: Theories, Movements, Nature*, Oxford: OUP

⁸⁴ For an overview of the situation and campaign in Altgeld Gardens see: <https://ejatlas.org/conflict/chicagos-toxic-doughnut-usa> (accessed 28-05-16); also see <http://www.peopleforcommunityrecovery.org/history.html> for a history of the campaign

⁸⁵ <http://www.ejnet.org/chester/> (accessed 28-05-16)

around the still-evident consequences of the Union Carbide Chemical leak in Bhopal in India in 1984,⁸⁶ and the dumping of toxic water into the rivers of Ecuador by Chevron-Texaco when the oil corporation left the Lago Agrio Oilfield in 1992.⁸⁷ There are many prominent activists outside of the U.S and Europe, including Indian environmentalist Vandava Shiva⁸⁸ and the late Brazilian trade unionist for the Amazon rubber tappers, Chico Mendes.⁸⁹

2.7.1.2 Political ecology

Political ecology on the other hand, consists of a wide network of academic practices including geography, sociology, economics, politics, philosophy, anthropology and science. In *Political Ecology: A Critical Introduction* (2012), geographer Paul Robbins argues that all approaches to ecology are political, but political ecology starts from a position of acknowledging existing social and economic inequalities, and disproportionate resource distribution, and the fact that all changes in response to these have political implications. It sets out both to critically address the construction of accounts of environmental crises, and to explore alternatives.

Robbins argues that political ecology can be understood as a 'field of critical research predicated on the assumption that any tug on the strands of the

⁸⁶ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1142333/> (accessed 28-05-16); Also <http://www.bhopal.com> (accessed 27-05-16)

⁸⁷ <http://business-humanrights.org/en/texacochevron-lawsuits-re-ecuador>; also <http://chevrontoxico.com> (both accessed 28-05-16)

⁸⁸ <http://vandanashiva.com> (accessed 28-05-16)

⁸⁹ <https://www.edf.org/climate/chico-mendes-legacy>; also see low-budget documentary about Hollywood's attempt to make a film of Mendes' story at: <https://www.youtube.com/user/rubberjungles> (both accessed at 28-05-16)

global web of human–environment linkages reverberates throughout the system as a whole’ (Robbins, 2012, p. 13), rather than a singular philosophical approach to ideas relating to the term ecology as played out in approaches like Deep Ecology, Gaia Theory, and Social Ecology, described above. While the focus of the research within Political Ecology is largely on the broader socio-political consequences of environmental issues, the range of disciplines involved in the work means that it operates as a set of critical processes deployed to address these areas. (*Ibid.*, p.15) Its goals are similar to campaigns that can be understood through the umbrella of environmental justice in that it aims to find greater social and ecological justice (*Ibid.*, p.5) In a large part the discipline inhabits and emerges from the field of geography, but as Michael J. Watts states in his essay *Now and Then: The Origins of Political Ecology and the Rebirth of Adaptation as a Form of Thought* (2015), ‘the birth of political ecology was....a transnational, multi-sited and trans-disciplinary exercise’ (Watts, 2015, p.32) and he goes on to state that it is a ‘moving frontier’ (*Ibid.*, 2015, p.34).

Both Environmental Justice and Political ecology therefore embody practices that interrogate relationships and connectivities within specific socio-political assemblages, questioning the ways in which assemblages play out in socio-political terms in relation to the settings and conditions in which they are produced. This ongoing investigation is close to Bateson’s questioning of what constitutes ecology through relationships of cause and effect. Like Bateson’s notion of ecology of the mind, these two practices are understood as processes of examining the effects produced through

relationships, and complicate the idea of a singular notion of the term ecology. Here it becomes unquantifiable as an object. These practices are therefore characterised through their activities and the ways in which their activities aim to uncover connectivities that are hidden or overlooked, and which can contribute to a wider understanding of the assemblage in question. In this way, they might be understood as ecological in that they are not producing a form of ecology, but are constituted through activities and processes that eventually produce forms. This idea of process, and a focus on activities is a starting point that helps to position a notion of the ecological as ways of doing and making, and which also shifts the awareness to the continuous unstable positionings of entities in relation to each other and their conditions.

2.7.2 Shifting the paradigm in scientific ecology

During the 1970s, around a point at which philosophical and activist uses of the term ecology were proliferating,⁹⁰ scientific ecology experienced a major paradigm shift.⁹¹ A discussion emerged around the dynamics and

⁹⁰ See: Guha, R., 2000, *Environmentalism: A Global History*. Zug: Pearson; Radkau, J., 2013. *The Age of Ecology*. Cambridge: Polity

⁹¹ See: Tarlock, D.A. 1994. 'Nonequilibrium Paradigm in Ecology and the Partial Unraveling of Environmental Law' in *Loyola L.A. Law Review*. p1121-1144 vol 27. Available at: <http://digitalcommons.lmu.edu/llr/vol27/iss3/22> (accessed 28-05-16); Barrett, N.F., Jordan, W. R., 2012 'Frontiers in Religion and Ecology' p.336, in Haag, J.W., Peterson, G.R., Spezio, M.L., (eds) 2012. *Routledge Companion to Religion and Science*. London and New York: Routledge; Gardner, R.H., Turner, M.G., 2015. 'Landscape Disturbance Dynamics' pp.175-228 in *Landscape Ecology in Theory and Practice: Pattern and Process*. New York: Springer-Verlag

instability of scientific processes and configurations and represented a move away from the dominance of Howard Odum's paradigm of self-organising equilibrium ecosystem ecology. It came as part of a wider shift in scientific paradigms instigated by Ilya Prigogine's Nobel Prize-winning research on dissipative systems.

The challenge to conventional science that Prigogine initiated was in an idea of 'open' systems that lost or dissipated energy through their cycle. Energy did not operate in entropic cycles, but dissipated as the processes of the system took place, creating irreversible effects. Examples of such systems would be radiation, hurricanes, living organisms and cyclones. From this starting point, Prigogine's focus shifted onto a wider critique of theories of determinism within classical science, producing two texts with historian of science, Isabelle Stengers, *Order Out of Chaos: Man's New Dialogues with Nature* (1984) (hereafter *Order Out of Chaos*) and *The End of Certainty: Time, Chaos and the New Laws of Nature* (1997) (hereafter *The End of Certainty*).

In *The End of Certainty*, the authors argued that 'the more we know about our universe, the more difficult it becomes to believe in determinism' (Prigogine and Stengers, 1997, p.155). Prigogine and Stengers proposed an idea of nature that – in a similar way to Bateson's ideas emerging out of the term ecology – has no boundaries and is not static: '[in] our world we discover fluctuations, bifurcations and instabilities at all levels' (*Ibid.*, p.55). Key to this proposition meant challenging the second law of

thermodynamics, which, they argued, attempted to control and simplify nature and its processes. As Verena Andermatt Conley reiterates in her discussion around Prigogine and Stengers work in her history of continental thought relating to the term ecology, *Ecopolitics* (2006), 'Nature has a history and that is never stable. Nature transforms itself and is itself in movement slowly and at times abruptly' (Conley, 2006, p.70). Nature, Prigogine and Stengers argued, can no longer be understood as an object, but rather needs to be understood simultaneously as consisting of diversity and unity, of which humans are a part. Humans are therefore no longer to be seen as in the world but are part of nature and matter, where the dialogue with nature and the activities of questioning nature are intrinsically linked and can only be successful 'if it is carried on from within nature' (Prigogine & Stengers, 1984, p.218).

Prigogine's and Stengers' work brought the full implications of these scientific shifts to a wider audience, and the paradigm of chaos is arguably the dominant paradigm by which we understand political, social and environmental systems today. The overarching themes that emerged from their work proposed that there are limits to predictability, and that furthermore there is no unilateral itinerary which can be imposed on matter from the outside. By contrast, as Conley discusses, they emphasised science's connections with myth and poetry, through the fact that, 'it comes from the mind that offers through language various ways of reading and organising the world' (Conley, 2006, p.68). Scientific theories are therefore staged thought experiments which create spaces to upturn existing ideas,

rather than ruptures of knowledge. Such stagings are temporal, and led Prigogine and Stengers to argue that since time is a construction, it carries an ethical responsibility. (Prigogine & Stengers, 1984, p.312). The importance of thought experiments within Prigogine and Stengers' thesis (*Ibid.*, p.60) has some resonance with Bateson's notion that human psychological organisation and activity is manifest in the impact that humans have on environmental conditions. (Bateson, 1978, p.436). They are however, radically different from Arthur Tansley's objectified instrumentalism of Freud's theories of the mind, described above.

Prigogine's and Stenger's ideas around chaotic systems and unpredictability were taken up in the science of ecology by firstly mathematical ecologist Robert May who used modelling to demonstrate that stability in a system was not necessarily achieved by an increased number of organisms inhabiting an area (Esbjörn-Hargens & Zimmerman, 2009, p.163). The work of ecologist Daniel Botkin was also instrumental in developing the new chaos-order paradigm in the science. In *Discordant Harmonies* he states: 'where we seek to find constancy we discover change....The old idea of a static landscape....must be abandoned for such a landscape never existed except in our imagination. We see a landscape that is always in flux, changing over many scales of time and space.' (Botkin, 2012, p.84). This he argues, turns ecologists into historians, looking at the histories of the organisms within an ecosystem and the stories that they revealed.

In *The Ecology of Natural Disturbance and Patch Dynamics*, (1985) a group of ecologists who also challenged the dominant idea of equilibrium communities, proposed new approaches to understanding ecosystems through a chaotic order, by examining ‘processes of disturbance’ (Pickett & White, 1985, p.xiii) within ecosystems. These approaches proposed that following the occurrence of disturbance events such as fire, or extreme weather, an ecosystem did not re-balance itself, rather the event resulted in ‘alterations of resource availability and system structure’ (*Ibid.*, p.383), thus re-establishing a changed *configuration*. The idea of homogenous scientific ecosystems was replaced by a view that understood ecosystems as ‘mosaics of environmental conditions...that [arise] from the consequences of disturbances operating at various temporal and spatial scales’ (*Ibid.*, p.154).

Such challenges to the existing paradigm within scientific ecology - and consequently the majority of philosophical interpretations of the term - made a clear distinction between the existing idea of ecology as embodying teleological systems moving towards an ideal ‘balanced’ state and a new idea that there was no predictable goal within a system that any approach to ecology could be essentially moving towards. Important within this new approach to scientific ecology was the idea that while processes impinged on some structures, implicated others, or overwrote others, the resulting configurations were always temporary, contingent, located and heterogeneous. This move, from the interpretation of the term ecology as being embodied in a number of specific knowledge systems, to its interpretation as processes that unpick geo-political configurations of

organisms and entities in specific spatio-temporal circumstances, becomes a key theoretical anchor in the conceptualisation of the tools of the ecological developed at the end of this chapter.

2.7.3 Ecology and ecosophy in the work of Felix Guattari

Guattari's *The Three Ecologies* was influenced by the work of both Bateson and Prigogine, and can be understood as part of 'second order' cybernetics⁹². In highlighting the need to focus on connections between and across spheres of society and the contexts within which they take place, in many ways, it presents an extension of Bateson's thought. This takes place through the emphasis it places – in a similar manner to the work of Bateson, and Prigogine and Stengers – on the radical potential of artistic and aesthetic practices. This potential emerged through Guattari's proposal that the process of the artwork produced multiple criss-crossing subjectivities that can both connect to, and exist outside of, other forms of knowledge. In the text, he proposes a fluid, cross-disciplinary radical process that seeks out ways of forming new connectivities and allowing new subjectivities to emerge, where the aesthetic becomes part of a process of remodeling human relationships between non-humans and the earth's biosphere.

Guattari's expanded notion of ecology defines three distinct ecologies or ecosophies, each focusing on a different register—environment, society and

⁹² See: Hales, N.K., 2008. *How We Became Posthuman*. Chicago: University of Chicago Press

human subjectivity, and starts from the proposition that the conditions of producing environmental change cannot, and should not, be solely written in environmental terms. It can only be done, he argues by taking these wider structures of society into account. He says: ‘The ecosophical perspective does not totally exclude a definition of unifying objectives, such as the struggle against world hunger, an end to deforestation or to the blind proliferation of the nuclear industries; but it will no longer be a question of depending on reductionist, stereotypical order-words which only expropriate other more singular problematics and lead to the promotion of charismatic leaders’ (Guattari, 2000, 34). It is only through continuous interactions between these three ecosophies that meaningful, lasting shifts in the relationship between humans and the environment can take place.

2.7.3.1 Ecology and the transversal

These interactions occur through the process of transversality, a key concept in Guattari’s thought, and first introduced in *Chaosmosis*. Central to both Guattari’s thought and psychoanalytic practice, transversality proposes the instigation of radical connections between differing models to engender models of subjectivity that are ‘more operative within modified assemblages, more open, more processual, more deterritorialised’ (Guattari, 1995, p.61). In *The Three Ecologies*, Guattari reiterates transversality as necessary to address a problem that for him is endemic to capitalism and inextricably linked to other social and political affects of capitalism. It can be conceptualised as a breaking-through of the boundaries of existing social and political separations and limitations to identities, in an attempt to

undermine the structures that maintain the current limitations, inclusions and exclusions. The process of transversality is described by Guattari as a mode of being in a state of continuous rupture and breakdown of the boundaries defining the hierarchies and logics of society. The result is a constant state of production of new alliances and modes of being, meaning that '[s]ocial ecosophy will consist in developing specific practices that will modify and reinvent the ways in which we live as couples or in the family, in an urban context... it will be a question of literally reconstructing the modalities of 'group being'...through existential mutations driven by the motor of subjectivity' (Guattari, 2000. p.34).

Because it is continuous, the transversal mode of being does not offer any closure. Subjectivities are continually produced through open, porous systems. Subjectivities, Guattari argues, constitute 'components of subjectification' (Ibid. p.36), collapsing the relationship between the individual and the subject. Transversal subjectivity is also fragmented and in flux: 'Vectors of subjectification do not necessarily pass through the individual, which in reality appear to be something like a 'terminal' for processes that involve human groups, socio-economic ensembles, data processing machines etc. Therefore, interiority establishes itself at the crossroads of multiple components, each relatively autonomous in relation to the other, and if need be in open conflict' (Ibid. p.36). To transform ways in which human beings interact with the environment, the transversality of these vectors of subjectification need to take place unimpeded across all the three ecologies and it is only through understanding how these ecologies

operate simultaneously on an interactive and singular level that the human/environment relationship can be shifted. As he says, ‘in order to comprehend the interactions between the social and the individual Universes of reference, we must learn to think ‘transversally’ (Ibid. p.43).

In order to allow the process of transversality to take place, and for the processes of society to be reinvented, Guattari proposes that the three ecosophies come under the aegis of an ethico-aesthetic paradigm. Guattari also argues that it is artists and an artistic praxis that can provide the most relevant insights into the human condition to help overcome this—more so than psychoanalysts or scientists. For Guattari it is ‘essential to organise new ... practices, new solidarities....together with new aesthetic and analytic practices regarding the formation of the unconscious’ (Ibid., p.51). The aesthetic is important here because ‘everything, particularly in the field of practical psychiatry has to be re-invented, started again, from scratch, otherwise the processes become trapped in a cycle of deathly repetition (Ibid., p.39). The claims that Guattari makes for art’s agency are based on art as a form of practice that is able to free-flow between these three ecosophies to produce new disjunctive subjectivities. Its perceived ability to move between these different spaces means that art for Guattari seems to possess the capacity to escape from the continuous boundaries of existing structures that frame experience.

2.7.3.2 The term ecology as deterritorialisation

Guattari understood the transversal mode of being as taking place through deterritorialisation. The concept, first proposed by Deleuze and Guattari in *Anti-Oedipus*, refers to the detachment of established social, political and cultural practices from their established locations. In *The Three Ecologies*, Guattari prioritises process as the mechanism through which deterritorialisation takes place: ‘Process, which I oppose here to system or structure, strives to capture existence in the very act of its constitution, definition and deterritorialisation’ (Ibid., p.44). He calls for a ‘gentle deterritorialisation’, one that ‘might enable the assemblages to evolve in a constructive processual fashion’ (Ibid., p.45). The assemblages created by lines of deterritorialisation are composed of segments brought into being by ‘a-signifying ruptures’ (Ibid., p.45). These operate in a process of continual articulation and re-articulation and in so doing create an ongoing state of production of changing human subjectivities in new historical contexts.

This decentring of these three ecologies gives them the freedom to continuously produce an ‘autonomising subjectivity that can articulate itself appropriately to the rest of society’ (Ibid. p.59). He calls for large-scale involvement with capitalism and economics, while at the same time focusing on the individual and their creative autonomy, as opposed to a series of socio-political positions around which individuals can operate. This is borne out by his positing of the essay itself as his contribution to the transversality of the three ecologies by setting out, ‘in its own way to counter the pervasive atmosphere of dullness and passivity’ (Ibid. p.69).

Providing a number of conceptual operations, Guattari's work offers a substantial contribution to a move from the term ecology to the ecological. As philosophies and structures in flux, the three ecosophies need to be recognized as being in continuous processes of intersection, to the extent where they are indistinguishable as separate entities, producing assemblages at points of intersection that are complicated configurations of diverse elements from all three.

2.7.4 Severing the relationship between nature and the term ecology in Bruno Latour's work

There is one final contribution to this survey of the ways in which the term ecology has been understood and interpreted and this is the work of Bruno Latour. His work connects to the history of both science and philosophy, as well as to sociological approaches that use the term ecology, and he presents a critical breakdown of some of the term ecology's assumed components. It is his examination of the relationships between the term ecology and the concept of nature that is important to the development of the tools of the ecological here, and this is what will be outlined below.

In *Politics of Nature: How to Bring the Sciences into Democracy* (2004) Latour explored the problematics associated with the term ecology and the concept of nature. The book was written as response to the way that political ecology movements – and here Latour is referring specifically to

mainstream political organisations such as Green parties - were disempowered by the fact that they maintained a connection with the concept of nature, which for him is a depoliticised concept, and were consequently always set to fail. The primary problem for Latour is that nature is taken to be an obvious sphere of reality, when in fact it is really the result of a political division or constitution. As he says, 'the terms nature and society do not designate domains of reality; instead they refer to a quite specific form of public organisation. Not everything is political perhaps but politics gathers everything together so long as we agree to redefine politics as the entire set of tasks that allow the progressive composition of a common world' (Latour, 2004 p.53). In this way nature has always been inextricably tied to politics, but it is equally outside of politics. Organisations that are framed through the term ecology try to sit across the two by being connected to questions involving sciences, moralities, law and society among many others, but by linking it to nature, essentially empties it of politics, and manifests it 'in the destruction of the idea of nature' (Ibid., p.25).

Latour argued that the notion of nature should be abandoned, and take with it the nature/society dualism:

'It seems to be the case that the most sophisticated of the human sciences have also long since abandoned the notion of nature, by showing that we never have immediate access to 'nature in general'; humans only gain access, according to historians, the psychologists, the sociologists and the

anthropologists through the mediation of history, of culture – which are specifically mental categories’. (Ibid., p.32)

For Latour, therefore, the human condition is defined by a break with the reality of nature. All we are left with is the ‘chattering of fictions on one hand and the science of reality on the other’ (Ibid., p.15). Instead of nature, then, Latour says, there should exist the ‘multiplicity of non-humans and the enigma of their association’ (Ibid., p.41).

The elements of nature are not there to be marvelled at, as some kind of sublime he argues. Instead they play a collaborative role with the other elements. Latour is concerned with how the concept of nature acts as a ‘catch-all’ for the non-human world, and how it short-circuits politics by the fact of seeming to represent a power greater than that generated by the human world. In other words, nature consists of laws over which we have no power. Latour sees this problem arising because, as he says ‘for the moment, nature still has the resonance that ‘man’ had 20 or 40 years ago, as the unchallengeable universal category against the background on which ‘culture stands out clearly and distinctly, eternally particular’ (Ibid., p.49).

Latour argues that there is a clear need for this multiplicity of associations to be organised around a new set of imperatives. Central to this re-organisation is the notion of the collective, a singular collection that is in the process of continually exploring the possibilities of its associations and is always expanding: ‘the properties of human beings and non humans with

which it has come to terms are in no way assured....Yes there is an objective external reality, but this particular externality is not definitive: it simply indicates that new non-humans that have never before been included in the work of the collective find themselves recruited, socialized domesticated. Finally...when the newly recruited non-humans show up...they are there...to complicate and open up these processes.’ (Ibid., p.38).

The foundations of modernity for Latour are made up of a splitting of nature and culture into two separate camps. However, underneath this, Latour argues there is the proliferation of another practice: what he calls the work of translation. Latour says that these are incompatible but inextricably linked practices: the work of translation creates networks out of this mixture of beings created through this split, as he says ‘hybrids of nature and culture’ (Latour 1991, p.11). It is the practice of science and its scientists that carry out this work of purification. His proposition is that the ontology of far-reaching phenomena like global warming, bio-genetics and the problem of nuclear power are not and can never be properly accounted for in the modern schema – they already form networks that interlink aspects of both nature and culture. As a result of this, Latour argues for a constitution based on traceable networks of hybrid objects, connecting humans and non-humans, humans and humans, non-humans and non-humans and so on. Taking on Serres’ notion of a ‘quasi-object’, he argues that hybrids are formed from quasi-objects which are ‘much more social, much more fabricated, much more collective than the hard parts of nature, but they are

in no way the arbitrary receptacles of a fully fledged society. On the other hand they are much more real, non-human and objective than those shapeless screens on which society for unknown reasons – needed to be projected’ (Ibid., p.55).

2.8 Defining the ecological

There are many different accounts of the term ecology, and it is not the aim of this chapter to survey them all. Rather I have abstracted and discussed a number of approaches to the term ecology that have disconnected the term from its environmental and nature-related contexts in order to try to articulate strands of thought that can be applied in a wider context. In this final section I will now outline the key theoretical abstractions that have emerged through this discussion of the term, and use them to describe what I am calling the ‘tools’ of the ecological. The tools outlined below are of through methodological inquiries that aim to instigate strategies for unpicking the existing spatial, temporal, socio-political and environmental constituencies of existing assemblages, and establish conditions through which new configurations can unfold.

2.8.1 The four tools of the ecological

Since these four tools of the ecological have been constructed following a discussion of the history and philosophy of the concept of ecology in the Western tradition, they need to be understood as derivatives of the term in

some form. However, they are not derivatives in the sense that they remain faithful to the content that has been encapsulated by the term ecology, rather they begin from the position of being inquiries and incursions into processes by which the content was produced, following similar inquiries by Guattari, Bateson and Latour. As content-less frameworks, the tools aim to initiate conditions through which the socio-political, spatio-temporal and environmental connectivities and dependencies of an assemblage can be investigated in philosophical, theoretical and pragmatic terms. Reflecting the inherent instability of the assemblages that they act upon, the tools should not be seen as complete or fixed, and are presented here as starting points for a discussion, and are, as such, also open to change.

Founded through the expanded concepts of ecology discussed here in the work of Bateson, Latour, Guattari, and in the paradigm of dynamic complexity developed by Ilya Prigogine and Isabelle Stengers, the ecological is repositioned as producing conditions for possible inquiries that can unpick the intricacies of the socio-politics of assemblages and their circumstances. The tools act as theoretical agents through which to become embroiled in activities and practices out of which alternative configurations might emerge; configurations that draw out things like overlooked actors, conditions, interests, traditions or practices. They can be deployed by any actors and do not aim to create new objectified formats, rather they are setting up or inaugurating the possibilities for actualisations of new assemblages of actors and their social, scientific, and economic relationships and dependences. Through deploying the tools, actors using

them are immediately and automatically implicated within, and inextricably linked to the emerging assemblages and their conditions.

The tools of the ecological do not propose a conclusive pre-definition of what the ecological might be as such, nor is it a process for producing or understanding new ecological objects. Rather, they seek to open up the possibilities for being implicated in ways of doing and making things differently. They are not located in a particular discourse, and might be thought of in Guattari's terms as 'transversal' tools. Each tool acts as a way of questioning the structures that circumscribe mainstream and dominant relationships, positions and interests, to give grounds for possible potentials of how things can be made or done or thought ecologically. They therefore become transdisciplinary tools.

The propositions are developed here as a way of starting a discussion about how they can be used to think through ways of practicing ecologically and do not aim to reify a new form of the term ecology. They are presented below as provocations for investigators to deploy in opening up lines of questioning.

1. Observe, disclose and acknowledge multiple and disjunctive temporalities

There are many different forms of temporalities that are encompassed by the strands of thought that have been drawn out in the text so far. This tool begins from a position laid out by Prigogine

and Stengers, when they argue that time carries an ethical responsibility. Since events, whether staged or imposed, happen in time, their consequences and on-going related activities have far-reaching ethical implications. The effects of these events might often not be immediately visible, in both spatial and temporal terms, as Rob Nixon argues in his book *Slow Violence and the Environmentalism of the Poor* (2013). For Nixon, events are bound by multiple temporalities, including what he calls the ‘slow violence’ (Nixon, 2013, p.6) of historical events that continue to apparently invisibly and silently bear down on geo-politicalities, the contradictions between accelerated temporalities of corporate interests and temporal framings of everyday realities, and the non-human temporalities of biological and physical processes. This tool provides a method to frame strategies for inquiry that aims to uncover the presence of multiple temporalities within forms of socio-political organization and its conditions. These might be the temporalities of biological or physical processes of entropy, the consequences of long-forgotten historic pollution that continually interrupts subsequent forms of organization; or the accelerated temporalities of technological processes that speed up everyday processes; or multiple temporal disjunctions within planetary processes, human activities and forms of human assemblages.

2. Define and acknowledge whose interests are at stake

This tool interrogates the problematics raised by the contradictions between the seemingly universal nature of environmental issues and the different effects on individuals and groups. It aims to highlight that the ecological is not a process that sets out to define one or more holistic forms. There are no singular, idealized, interconnected systems that can be experienced simultaneously by all inhabitants of all communities at once, and hence no global connected community. There are only continuous forms of organization and the social relationships that engender these situations that are continuously in question. Taking Guattari's *The Three Ecologies* as its starting point, it accepts transversality as a necessary tool for the reconstruction of what he calls 'group dynamics' (Guattari, 2000, p.x). This sets up processes for reconfiguring the ways in which socio-political structures are produced, and starts to allow for the repositioning of subjectivities within them.

As such, this tool aims to support the production of conditions within which new models of subjectivity can be given space for their articulation. It asks who the operators and activists are, and what kind of new assemblages can be produced. How are new assemblages supporting new forms of subjectivity and what the structures of power that underline them? The focus in this inquiry is always on the ways in which groups and individuals are positioned within these structures of power.

3. Acknowledge instability in assemblages and configurations

Precarity, dynamism, instability and porosity are all terms that have been deployed in the discussion that has taken place around the term ecology. This tool acts as a reminder of the conditions in which assemblages are produced. It begins from Prigogine and Stengers' point that nature has no boundaries and that things are not to be objectified in static systems. In this scenario, no unilateral itinerary can be imposed and the forms produced are always at risk of being dislodged by intersecting, or new forms of organization. Such formations can perhaps be thought of as intersections or 'intensities' as Guattari might say (*Ibid.*, p.44), that arise at specific spatio-temporal points as the result of a particular set of conditions.

Looked at from another perspective, the processes of investigation that are instigated here can also be thought of in terms of Bateson's suggestion that scientists' 'eagerness to control' can be dislodged by unquantifiable factors that can come about through non-scientific practices, such as creative practices (in the widest sense of the term, and not just art). While Bateson's proposition that creative practices can dislodge dominant connectivities and hence change psychologies is problematic, it is perhaps in the doing of acts of creative practice that the possibilities of dislodging dominant connectivities and the production of new subjectivities are presented. Hence the practices of acting upon assemblages can be thought of as ways of revealing the instabilities that are already inherent.

4. Explore the parameters and agencies through which communities and connectivities are produced

As this chapter has revealed, the notion of community has been imbricated with forms of the term ecology since the 19th century and the work of Eugenius Warming. But it is not these early, objectified depictions of the communities that are the concern of this strategic tool. Forms of knowledge defined by the term ecology from the 20th century, such as Deep Ecology or Social Ecology have all proposed alternative forms of social organisation. Indeed as David Harvey proposes in an essay in the journal *Socialist Register* from 1993, ‘[o]ne of the more interesting exercises to undertake in enquiring into the environmental-ecological debate, is to inspect arguments not for what they have to say about the environment, but for what it is they say about the 'community' and political-economic organisation’ (Harvey, 1993, p.19).

But as a strategic tool, the exploration of parameters and agencies does not set out to define idealized forms of community, rather it aims to establish investigations into connectivities and agencies, and the assemblages and communities that emerge from these - not through being united by having a thing in common, but rather as Jean Luc Nancy would suggest, by ‘sharing their limits’ around common concerns (Nancy, 1991, p.41).

As a strategy, this tool brings multiple viewpoints to bear on the question of how communities form, for whom and under what conditions, and this is the starting point for the inquiry. This can be reflected in Bruno Latour's call for the reorganisation of the multiplicity of associations of entities that form assemblages, into what he calls the collective (Latour, 1999). Framing the collective through processes of producing traceable networks and the transmissions that take place in perpetuating them, it is through their ongoing formation that the parameters of an assemblage take shape.

The tool enunciates an ongoing excavation of relationships and connectivities within assemblages, and ways in which these connectivities instigate effects that directly impact on the assemblage and on factors outside of the initial assemblage. Such processes explore both specific assemblages and the wider networks to which they are connected and the ways in which connections are made between communities in terms of how shared and relevant knowledge, practices and objects are transmitted.

2.8.2 Deploying the tools of the ecological

The tools of the ecological present four irreducible perspectives which inaugurate processes of understanding and flexibility, and each highlight

key terms by which an assemblage can be understood: as temporary, contingent, located and heterogeneous. They are not embodied in any specific knowledge system, travelling within and across disciplinary boundaries. By framing processes of acting, doing, making and being, they force questions about the positions of the activity initiated, the diversity of the interests and actors involved, and the ways in which these involvements take place. They also operate at the level of the planetary, as opposed to the level of the global. By global, I am referring specifically to the globalised networks through which capital, and by extension, economic, corporate and political power are maintained and distributed. As the thinkers, activists and writers outlined above have shown, the complex environmental circumstances that have been accelerated through the growth of these global capital networks have broad implications for humanity as a whole, as well as being manifest evenly across the planet. Therefore the tools of the ecological aim to find alternative ways of connecting actors within specific socio-political, economic, environmental and spatio-temporal circumstances in a way that can produce subjects that can act at both a planetary and a localised level.

While these tools can be used in relation to any assemblage, my research is specifically concerned with the consequences of their impact on the curatorial, and how they might produce practices and formats of curating that are different from the forms of curating as care identified within the eco-critical curating paradigm in chapter one. The focus from now on is

how these strategic tools of the ecological can start to unpick the eco-critical curating models and what kind of alternative forms might emerge.

There is one final point to note. In describing these tools, it becomes clear that there are some points of intersection between the notion of the ecological and curatorial practice. A clear connection can be made in the etymology of the term curator, with its ecclesiastic roots in the term guardian, and the systematised forms of the term ecology outlined here, which position themselves as stewards or guardians of the organisation of the planet's biosphere. Similarities also occur where curating practices intervene in spaces between dominant structures and where they question boundaries and social contexts within which art is produced and displayed as well as in cases where they engage with non-art fields and contexts in relationship with art and modes of exhibition.

However, key differences arise between the tools of the ecological and the eco-critical curatorial forms outlined in chapter one. Firstly, the curatorial is specifically concerned with fields of aesthetics and modes of display. By contrast, the ecological tools operate through dispersed processes that do not have an area of expertise as such, but are designed to experiment with alternative assemblages of multiple forms of dominant structures, with an overall aim of exploring how different political relations can instigate new positions from which people, objects or groups can become visible. Crucially however, these new assemblages are not called ecologies.

The problems with the projects outlined in chapter one now start to become clear. As already noted, the tools of the ecological do not have any essential content of their own. By comparison, when the term ecology or forms of environmentalism is instrumental in forming the content of exhibitions containing artworks that exemplify such interpretations, the terms become objectified. It is at this point that the ecological and the curatorial meet in the eco-critical-curating paradigm. If interpretations of the term ecology within the curating practices described in chapter one are content driven, it becomes evident that the term as it has been largely used in these circumstances is antithetical to the processes of the four ecological tools outlined here.

The question that follows now is: what are the demands for the curatorial in relation to the ecological? How can the curatorial take up the question of the ecological, in what forms and in what ways are forms of knowledge engaged with in order to maintain a continual state of movement and enquiry? In order to start to answer these questions and to understand how curating practices might engage productively with the tools of the ecological, it is necessary to re-examine the case studies from chapter one through the prism of the tools of the ecological. This will demonstrate clearly where some of the problems are located and the difference between various interpretations of the term ecology as object and the ecological as process. Such a discussion aims to open up the field for a debate around ways in which the tools of the ecological can intersect with experimental curatorial practices.

CHAPTER 3: PROBLEMATICS OF JUNCTURES BETWEEN THE TERM ECOLOGY AND CURATING PRACTICES: A CRITIQUE OF THE ECO-CRITICAL CURATING PARADIGM

3.0 Introduction

The analysis of the term ecology and subsequent development of the tools of the ecological in chapter two, reframes the ecological as a condition from which to address fundamental structures and circumstances that give rise to the term ecology, where these are understood in planetary terms, as distinct from the structures of capitalism that gave rise to the forms of ecology discussed. The tools of the ecological developed in response are both simultaneously adaptable and specific, and exist at a level that is removed from forms of the term ecology. In other words, where the term ecology has become a synonym for practices that relate to specific environmental issues and activities that explore organisations of non-human and human living processes, the ecological as I have described it through the tools outlined in chapter two, refers to wider specificities of socio-political relationships and dependencies on a level that encompasses all possible expressions and conditions of the term. The resulting tools of the ecological can be used to both question existing assemblages and sets of circumstances, and to unfold new relationalities and connectivities.

The question that now arises is how the eco-critical curating projects described in chapter one operate in relation to the tools of the ecological. What happens to them when they are thought through the logics of the tools

of the ecological? This chapter addresses this question, critiquing the eco-critical logic of the case studies and exploring how their structures preclude them from addressing the wider, unpredictable implications of the tools of the ecological that exist at a planetary level.

To proceed, I will look at each case study described in chapter one through a theorist whose work has helped to create the separation between the term ecology and the tools of the ecological. I will examine how the questions at the foundation of the tools of the ecological are able to pinpoint the critical weaknesses at the heart of these projects, demonstrating their critical collapse into situations where they perpetuate structures in a process of what Guattari would call a ‘deathly repetition’ (Guattari, 2000, p.53).

3.1 Establishing grounds for the need to reform curating in relation to the term ecology

3.1.1 A brief recap of the eco-critical curating paradigm

As a reminder, it is helpful to briefly outline the parameters of the eco-critical curating paradigm and the propositions that frame it from chapter one. Firstly and most importantly, the eco-critical curating paradigm engages with questions addressing environmental issues and concerns emerging out of forms of the term ecology and the possibilities of art’s constructive response to these situations. Such questions are tested out largely through broad, networked exhibitions and discursive projects that establish conversations around these concerns and the role that art plays

within it. Secondly, the paradigm expands this questioning by building connectivities and networks between art circuits and focal points of practice, and related disciplines and practices outside of art. Extending this, the eco-critical paradigm is concerned with on-going social collaboration between curators, artists and non-artists. Finally, because of its taking-up of urgent concerns in social and environmental realities, the paradigm has an inherently pedagogical dynamic. This is played out in the relationships it forms with audiences and also in the sense that the artistic practice is assumed as having socio-political agency outside of the exhibitionary context.

3.1.2 Contexts and conditions of contemporary curating practices

All the case studies need to be seen as being produced with the specific conditions and contexts of contemporary curating, with its proliferation over the last 20 years of large thematic exhibitions, art fairs, and biennials, along with the professionalisation of the role of the curator into what Paul O'Neill calls 'internationally networked service providers' (O'Neill, 2007, p.20). They exist in a condition of continuous discourse with art world's constituent elements that 'functions to maintain the superstructure of the art world on a much wider scale than ever before' (*Ibid.*, p.20). The expansion of these conditions reflects the growth and development of the globalised economy, with the art world 'superstructure' formed through the production of complex curating networks that connect national and private art institutions, the art market, commercial and non-commercial gallery spaces,

not-for-profit independent spaces, curators, art fairs, biennials, collectors and artists.

Terry Smith argues that contemporary art can be thought of as ‘worldly’, rather than global or world (Smith, 2012, Kindle location 321), proposing that three distinct positions emerge through which curatorial practices of the last 15-20 years can be understood. These positions are firstly, re-modernism, or retro-sensationalism, which can be understood as attempts by existing art institutions to re-adapt the white cube model. The second position is characterised as transnational transitionality, which relates to the diffusion and proliferation of biennials and international exhibitions on the contemporary art circuit. Finally, he discerns a post-relational aesthetic current, which he argues ‘cannot be named as a style, period or tendency’ (*Ibid.*, Kindle location 325). This has come about, he argues, due to the increase in the number of artists and opportunities for self-production afforded through advanced communication technologies. He proposes that this has led to a ‘viral spread’ of small-scale, interactive, DIY art, which is less concerned with ‘high-art style or confrontational politics and more with tentative explorations of temporality, place, affiliation and affect – the ever-more uncertain conditions of living within contemporaneity on a fragile planet’ (*Ibid.*, Kindle location 333). Smith points out that these currents of production both function as modes of display and as modes through which fresh insights and new ideas on history and critique can be generated.

In terms of the exhibitions discussed in chapter one, the conditions for generating new critical insights in relation to art history and critique presents itself most clearly with the exhibition, *Radical Nature: Art and Architecture for a Changing Planet 1969-2009*. As I have described, the exhibition was a large-scale thematic endeavour that made art-historical connections between works over a period of 40 years. But in addition, all the eco-critical curating projects must be seen in this context of the growing role of curating practices as international mediators of ideas and concerns that address everyday realities, with Cape Farewell's touring exhibitions an explicit example of this.

However, research projects like Arts and Ecology and programmes like Cape Farewell have also emerged out of specific socio-political and temporal conditions of the U.K's cultural funding system as well as a wider instrumentalism of culture by the 1997-2010 Labour government, where culture was partly defined in relation to social policy and urban regeneration, and investment in the arts was part of wider social regeneration policy.⁹³ Additionally, Cape Farewell, in working with high-profile arts producers, can be seen as harnessing the after-effects of the era dubbed 'Cool Britannia' which inaugurated and celebrated cultural activities by U.K. producers as part of a wider re-branding of the U.K. as a global

⁹³ For a detailed discussion on the role of arts policy in relation to U.K. government social policy during the 2000s see Jonathon Vickery's 2007 research paper from Warwick University Centre for Cultural Policy Studies, 'The Emergence of Culture-led Regeneration: A Policy Concept and its Discontents'. Available at: https://www2.warwick.ac.uk/fac/arts/theatre_s/cp/research/publications/cent_repubs/ccps.paper9.pdf (accessed 20-06-16).

centre for culture and what has become known as the creative industries.⁹⁴

The creative industries are now worth £84.1bn a year to the U.K. economy.⁹⁵

The instrumentalisation of art, and the contradictions that arise in producing art projects about real environmental concerns can also be seen within the context of wider EU policy to find ways to communicate such environmental concerns. This imperative was part of a wider EU agenda relating to the environment and environmental sustainability that came out of the Amsterdam Treaty in 1997 which called for ‘a new approach to policy-making that ensures the EU's economic, social and environmental policies mutually reinforce each other’.⁹⁶ Within this context, projects like the RSA/ACE Arts and Ecology and Cape Farewell were propelled by a growing concern over climate change and an acknowledgement that it affects all areas of existence including culture, and a strategy that was driven by an assumption that, given the visibility of cultural products, they might also be a productive way of communicating these environmental imperatives.

⁹⁴ The success of U.K. cultural producers in raising the cultural and economic profile of the U.K. in the late 1990s was dubbed ‘Cool Britannia’. For a general background see:

<http://www.vanityfair.com/magazine/1997/03/london199703> (accessed 20-06-16). For a critique of the relationship between the creative industries and U.K. policy see: Oakley, K., 2004. Not So Cool Britannia: The Role of the Creative Industries in Economic Development in *International Journal of Cultural Studies*. Vol. 7, no.1, March 2004, pp 67-77.

⁹⁵ See: <http://www.thecreativeindustries.co.uk/resources/infographics>

⁹⁶ For an overview of the Amsterdam Treaty's environmental amends, see: <http://ec.europa.eu/environment/eussd/>. For analysis of the relationship between social, environmental and cultural policy in the U.K. see page 8 of Jonathon vicker's paper from note 1. Please note that the paper wrongly states that the Treaty was signed in 1987.

3.1.3 Transforming issues into exhibition

Within the eco-critical curating paradigm, the act of curating can be understood as the processes of co-ordinating, organising and presenting materials, artworks, knowledges, activities and ideas connected to themes and issues outlined above, and to create exhibitionary forms that reflect and encapsulate this content. The resulting exhibitions and presentations present activities, narratives and positionings relating to such concerns. These acts of curating are carried out by curators connected to art institutions and art and non-art organisations concerned with the constituent themes. However, the key effect of this is to locate such concerns within the socio-political framework of the exhibition and its specific socio-political circumstances. Environmental concerns and issues relating to the term ecology become a function of the exhibitions and the artwork, foreclosing the concerns themselves outside of the context of their presentation. This results in the exhibition's constituent concerns becoming symbolised and measured within *a priori* aesthetic terms.

Jean-Paul Martinon identifies this as a general condition of the act of curating in his *Theses in the Philosophy of Curating* (2013), where he states that curating is firstly 'a concern for the exhibition, the artist, the curator and above all for the objects on display' (Martinon, 2013, p. 27). In this sense, the ideals of the eco-critical curating paradigm are trapped between

the more far-reaching concerns behind the production of the exhibition, and the framing of these concerns as an exhibition within the institutions of art in which it is presented. Martinon also points out that curating ‘in its desperate attempt to *ex-hibit* is, like mapping, always already outdated’ (*Ibid.*, p.28 emphasis in original) as ‘measured, figured, idealised and hidden’ (*Ibid.*, p.28). As will be shown, this exposes the limitations of the form of the exhibition, where the stakes by which the constituent social realities are measured, are those of the aesthetic, presented within *a priori* forms of display. This also refers back to a point made at the end of chapter one, where the eco-critical curating paradigm is described as perpetually aspirational. As an aspirational paradigm, the parameters and limitations of the curating projects themselves consistently undermine the wider motivations of the overarching concerns of the projects, one of the central problems addressed in this research.

3.1.4. Rethinking structures of curating

The aim in this chapter is to explore and address the conceptual and political limitations of the eco-critical curating paradigm in detail, and in so doing, to lay the foundations for alternative approaches to curatorial forms. The final section of this chapter will emphasise how the terms of the eco-critical curating paradigm can be shifted through the tools of the ecological, in preparation for the discussion in chapter four. The move that will take place in chapter four therefore constitutes a shift from curating as forms of mediated display, towards the curatorial as activities and processes initiated

through the tools of the ecological as disjunctive devices that force the mutual dependency of form and content. In this way I aim to make clear the distinction between the eco-critical curating paradigm and possibilities for the actualisation of alternative formats in which a notion of the ecological is central to the production of critical shifts in terms of the parameters and political possibilities of curatorial practices and their structures and interdependencies.

The first task is to analyse ways in which each case study engaged with uses of the term ecology and forms and ideas relating to environmentalism, and to examine how the parameters of the eco-critical curating paradigm were played out. I will also examine the terms of each project's engagement with constituent theoretical structures that form the tools of ecological. The critiques will observe how their position within the eco-critical curating paradigm is antithetical to an engagement with the tools of the ecological. Each critique will be conducted through the work of a theorist who has helped to form the basis of the tools of the ecological in order to help to unpick the points at which the constraints of the eco-critical paradigm are located.

3.1.5 Outlining the key questions being addressed

As described in chapter one, the three case studies play out the eco-critical curating paradigm in different ways, with each embedded in a different

milieu of dialogue, modes of practice and display. In order to define their parameters in relation to the tools of the ecological, each case study will be explored through a theoretical building block of these tools. To this end, Arts and Ecology will be explored through its ‘founding’ theorist, Felix Guattari; Cape Farewell will be examined through the prism of Bruno Latour’s thought, and *Radical Nature* will be navigated through the work of Ilya Prigogine and Isabelle Stengers.

In demonstrating the ways in which the eco-critical curating paradigm plays out, the case studies will be seen to establish the paradigm’s parameters. They will also show how the social and critical potential of the curated artworks is limited by their framing through particular sets of socio-political themes and through their interdependencies and on the wider industry of curating and exhibition practices. The aim is to show that the case studies’ exhibitionary structures reproduce both the dominant socio-political relationships between artworks, practices and proposals, issues addressed, and systems and modes of exhibition, and the conceptual split between nature and society. Excluded therefore from the eco-critical logic are wider alternatives for strategies and actualisations of practices within everyday realities, that have exited from, rather than being tied to, the global curatorial networks of curating practices.

3.2 Revisiting Arts and Ecology

The theoretical framing for Arts and Ecology was built on Felix Guattari’s *The Three Ecologies*, his treatise on how to deal with the increasing

dislocation between the resources and biosphere of the planet, and the socio-political activities of humans themselves. With the launch symposium's keynote address from Guattari scholar Gary Genosko, Guattari's proposal that three separate ecosophies needed to be taken into account in order to set up possible conditions for radical transformations in the social, political and environmental circumstances of human and non-human habitation became a basis for experimental artistic and curatorial practices to explore these possibilities.

As shown in chapter two, Guattari proposes, after Bateson, that environmental crises are inherently connected to wider problems related to intersecting social, political and existential registers (Guattari, 1995 p.119), and that efforts to dislodge the dominant structures that produce and maintain such problems needs to take place through transversal practices. In expanding concepts coming out of the term ecology by arguing that the concept is composed of three separate but interconnecting registers, Guattari built on Gregory Bateson's connections between the mind and environment as being inherently interdependent – discussed in chapter two – and started to give form to ways of acting on cross-disciplinary dependencies within assemblages. Arts and Ecology assumed two key aspects of Guattari's text. Firstly, with the term ecology transformed into ways of understanding how environmental concerns were connected to wider issues relating to the socio-economic systems of governance and human subjectivities, Arts and Ecology started from a position of addressing questions arising out of the term ecology through cross-disciplinary and socially-engaged artistic

practices. The second key connection that the project made with The Three Ecologies was through the assumption of Guattari's ethico-aesthetic paradigm, which is founded on the idea that aesthetic practices, as creative actualisations of connectivities within assemblages,⁹⁷ play a key role in dislodging dominant machinic processes, enabling re-territorialisation and re-subjectification to take place. Using Guattari's concept of the ethico-aesthetic paradigm, artistic practices in Arts and Ecology were taken to have both the potential to commentate on current situations, and test out ways of re-aligning social, environment and political microsystems, in such a way that, as Max Andrews pointed out in his introduction to *Land Art: A Cultural Ecology Handbook* (2006), 'the processes and results of such modes of artistic expression – actions and thoughts that are intimately yoked to a host of other facts and fictions' (Andrews, 2006, p20).

How did the project and its constituent activities play out Guattari's ideas, and to what extent did they succeed in creating discussions around processual reconfigurations of subjectivities and assemblages through the examinations of the interrelationships of the three ecosophical registers? To start to address this, I will first look at how aspects of Guattari's ideas from The Three Ecologies were embodied within the projects that took place as part of Arts and Ecology, before examining how the project's parameters evolved in relation to Guattari's paradigm.

⁹⁷ See: <https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2009/02/making-links-john-thackara-felix-guattari-heath-bunting>

3.2.1 Arts and Ecology's engagement with Guattari's ethico-aesthetic paradigm

In *The Three Ecologies*, Guattari outlines three things that he argues can help facilitate an 'escape from the major crises of our era' (Guattari, 2000, p.68). They are: 'a nascent subjectivity; a constantly mutating socius; an environment in the process of being reinvented'. These, he argues, can provoke a deterritorialising of disciplines, fields and institutions, as modes of the transversal, happening through processes that engage with the 'a-signifying rupture' (Ibid., p.45) within assemblages. This a-signifying rupture is where, for Guattari, possibilities for change lie and where the dynamic processes that continually produce new associations and connections can be instigated. To clarify, these modes of the transversal are not a given concrete space or thing that can be visualised as such, they are states of continuous processes constituted through events or praxes that produce new alliances. In bringing together 'ensemble[s] of ontological strata' (Guattari, 1995, p.124), transversality is determined through the complex of its multiple strands of becoming, while at the same time these strands remain in their source fields. The question in relation to Arts and Ecology is whether the project's outputs produced such alliances in their actualisations. Did the activities articulate alternative forms of subjectivity, or did they instead produced artistic 'symbols' of transversal processes that became returned back into art flows? In order to understand to what extent Arts and Ecology critically explored Guattari's text, the critique here will focus on both its activities and the project as a whole.

In one sense, Arts and Ecology might be understood as an attempt to embody and test out transversal processes and praxes, with the aim of exploring through art and curating how ideas relating to the environment, the term ecology and human activity might be re-organised. The project's explorations of these ideas can be seen in terms of its artworks and activities where each one aims to constitute a rupture in existing structures. It is possible to start this critique by proposing that the entire Arts and Ecology project, in relying on Guattari's text, seemed to be concerned with exploring how the common principle to the three ecologies as defined by Guattari can be played out:

each of the existential territories with which they confront us is not given as an in-itself...closed in on itself, but instead as a for-itself...that is precarious, finite, finitised, singular, singularised, capable of bifurcating into stratified and deathly repetitions or of opening up processually from a praxis that enables it to be made habitable by a human project. It is this praxic opening-out that constitutes the essence of 'eco' art' (Guattari, 2000, p.53).

This quote seems to present a viable context within which the practices of the project might be understood as attempts to dismantle the layers of sedimented structures that underlie presiding forms of social, political and environmental organisation. However, in reality the project's activities were not able to embody such a format, or fulfill such ambitions, and the following examination of some of its practices and forms will show why.

3.2.2 The ‘capture’ of the transversal

Taking as its starting point the interdisciplinary interdependence of assemblages that can be loosely understood through Guattari’s three ecosophies, the projects and activities initiated by Arts and Ecology were multi-disciplinary in nature and form. Additionally, the commissions, residencies, symposia and partnerships followed the general course of socially-concerned artist practices of the last twenty years, exploring related issues, looking at the different possibilities for the artwork, and considered the instrumentality and social agency of the projects and of artists. Perhaps one of the project’s most useful general features was the breadth of its network. It brought together diverse practitioners and practices that were unified in all having a wide focus on issues relating to the term ecology and its relationship to environmental issues, with its website initially functioning as both a hub for the project’s activity and a forum and portal for related activity. In this sense it seemed to process new alliances between curatorial and artistic assemblages, working with material within and across networked systems, an attempt at what Deleuze and Guattari might call a ‘supple segmentarity’ (Deleuze & Guattari, 2004, p.234).

As well as their own two major symposia – the launch, and No Way Back – the project also collaborated on other public symposia at events like the 2007 Venice and Sharjah Biennials, and the Arts Catalyst’s Nuclear Forum in 2008 which generated further discursive nodes where ideas and proposals

could be taken forward in new forms. The project's constituent events can also be thought of in terms of producing places where the possibilities for actualisation of new subjectivities and new praxes could be explored, and many of the project's commissions can be seen as ways of testing out the socio-political complexities thrown up by Guattari's three ecological registers. This will be explored later in the discussion.

A number of Arts and Ecology's commissioned projects proposed micropolitical and microsocial interventions that might be interpreted as engaging with Guattari's notions of processes of deterritorialisation and the transversal. To clarify, I am understanding the term micropolitical here after Deleuze and Guattari, as psychic, affective and social processes and techniques that instigate connections that allow new social and political forms and subjectivities to emerge, and intervene in and around existing forms. Micropolitical processes and corresponding assemblages are not necessarily small in size, rather micropolitical refers to the scale of the components in the assemblage.⁹⁸ Microsocial, refers to experimental practices (like those carried out at La Borde Clinic, where Guattari worked) that modify or reinvent the social connectivities involved in living, doing and making through terms that are not connected to dominant socio-political or economic structures. Guattari argued in *The Three Ecologies* that microsocial practices are a way of countering the homogenisation caused by

⁹⁸ See Deleuze G., Guattari, F., 2004. 1933: Micropolitics and Segmentarity in *A Thousand Plateaus*. London: Continuum pp.229-257

International World Capitalism.⁹⁹ The term micro does not refer to an organisation being small as such, rather it refers to the scale of the relationships of the structures, relationships and positions constituted through new subjectifications – hence producing new relationships of power.

3.2.3 Encounters between imperatives and modes of communicability

Tue Greenfort's peripatetic commission, *Untitled, installation of three transparent-sided Eurobins outside the exit ramp of Frieze Art Fair, London (2008)*¹⁰⁰, while taking place in gallery and art spaces like the Frieze Art Fair, was presented outside of a traditional environment of display (for image see appendix i., fig 6). It was placed in a space where its visual and functional forms would normally render it invisible as anything other than a functional object. However the (in)visibility of the bin was highlighted by the fact that its sides were transparent and the rubbish deposited was made visible. At the same time it was not labeled as an artwork and designed for use as a bin, presenting passers-by and users with a sum of waste deposits.

The creation of this anonymous artwork and the replacing of the bin's sides with transparent plastic could be understood as an attempt to shift the relationship between an everyday, overlooked activity and its actors,

⁹⁹ For more information about La Borde Clinic and its practices see an interview with Camille Robcis available at: <http://somatosphere.net/2014/06/jean-oury-and-clinique-de-la-borde-a-conversation-with-camille-robcis.html> (accessed 24-05-16).

¹⁰⁰ An essay by curating organization Latitudes provides background information on the project. Available online at: <https://issuu.com/latitudes/docs/greenfort> (accessed 23-06-16).

bringing it into realms of visibility, outside, yet inside of the space of art. As the bin was filled up it became an intersection between the activities carried out in art fairs as well as public utilities that deal with its aftermath. However, placed at the exit as an art object - whether directly acknowledged as one or not - it also became a symbolic reference to the relationship between art, excess and disposability, an institutional critique on the economy of relationships between artists, galleries, art fairs, collectors and visitors. The artist's critique happens through a model of communication between the artist and his audience. Within this framework, the audience becomes implicated within the politics of display as both witness to the work and its captive.

However, the transversal was not defined through a communicative model, whereas Greenfort's project described here is enacted through modes of communicability. The transversal, for Guattari, was precisely the opposite, processes of breaking down models of communicability, to produce multiple ways of redefining existing relationships between different parties engaged in an assemblage. In contrast Greenfort's work replicated and reinforced existing structures of communicability moving an existing set of social structures (between objects and their transformation into waste through use, and the subsequent waste and the networks of municipal services that the bins operate within) into the sphere of aesthetic visibility in the art fair, so reinforcing rather than exiting a model of communicability. Reflected in this context, the once-useful things transformed into waste became symbols of cycles of human consumption presented as a universal

social act, rather than, for example, an investigation into how more specific relationships between cycles of consumption and waste might be rethought.

3.2.4 Gloom and hope in *Black Cloud*

Other commissioned art works largely took the form of discrete objects or installations with some taking the form of permanent monuments such as Jeremy Deller's Bat House, while others were temporary interventions like Heather and Ivan Morison's Black Cloud. In a similar ways to Greenfort's work, the projects were realised through already visible categories that are recognisable as art within the wider dominant discourse of relational and socially engaged practice. The problematics of this in relation to Guattari's paradigm was played out clearly in the Morisons' Black Cloud. Both as a pavilion and a space for events and discussion, its form was embedded within an elegiac exposition that re-affirmed a dominant apocalyptic narrative that underlies current cultural manifestations of contemporary climate situations. Read through an ethico-aesthetic paradigm, the project might have been expected to question both the socio-political contexts of the circumstances of the pavilion's production itself as an artistic construct in a public space, as well as the impact and affects that such a construct might have on the space and the communities involved in its construction. However neither of these issues was addressed within the project or incorporated into it.

As noted in chapter one, the artists' commission resulted from an open brief to create a work for the city of Bristol in the context of Bristol's growing identity as a sustainable city. It was produced as a result of a public consultation with park users, local communities and public bodies and built as a collective endeavour, following Amish construction principles. In contrast to Guattari's paradigm, which sets out to complicate relationships between artistic practice and environmental issues per se, once built, the pavilion was simultaneously a dystopian and utopian presence in the parkland with an oppressive overarching apocalyptic narrative representing a singular response to the complexities of uncertain futures and unknown consequences of human activity. This narrative was contrasted through the project's events, which focussed on environmental and sustainability issues through the terms of the project's futuristic finality. This had the effect of closing, instead of opening the critical possibilities for the pavilion, because a pre-written 'future' was always already present in its presentation of the pavilion within the confines of Fred Hoyle's apocalyptic narrative. The project created a dualistic divide between the optimism of the activities within the pavilion and its portentous structure that had the effect of undermining the agency of the human activity against this all-pervasive global horror. By contrast, *The Three Ecologies* aims to counter the effects of dominating, overarching narratives. Instead, narratives are understood to be dispersed and multiple, acting in processes of displacement and intersection. This is exemplified in Guattari's argument that relationships between the three ecosophical registers (subjectivity, environment and social relations) are played out through the chaotic and continuous

intersection of collective assemblages of enunciation and machinic assemblages.¹⁰¹

Black Cloud therefore reiterated an apocalyptic discourse that is used to frame climate change and environmental crises, represented it as the focus for concern. The pavilion spoke on behalf of this discourse, and became both a kind of safe haven from this eventuality, housing discussions about future potentialities, as well as its constant reminder. This is not to argue against the validity of these discussions, but their framing did not allow a full discussion of the wider contexts and assemblages that might be possible through the placement of the pavilion in the park. Wider questions around the politics of the pavilion and its aims were not given room for manoeuvre. Furthermore, the relationship between the artists, the pavilion and the users of the pavilion did not set up a politics that muddied or shifted the existing dominant connectivities between them.

3.2.5 Jeremy Deller's *Bat House*: a collision of bats and property developers

Similarly, other commissioned projects also created temporary social spaces traversed by multiple events and narratives which provided spaces for

¹⁰¹ Machinic assemblages refer to the systems and structures that produce frameworks of society; assemblages of enunciation refer to the way that language performs shifts in meanings of subjectivities and bodies. Assemblages of enunciation therefore intervene in machinic assemblages and the two are always intertwined. See: Deleuze, G., & Guattari, F., 2004. '10,000 BC: The Geology of Morals (Who Does The Earth Think It Is?)' in *A Thousand Plateaus*. London: Continuum, pp.44-82.

experimental assemblages, apparently playing out the expanded field of interconnectivities and production of subjectivities instigated through Guattari's three ecosophical registers. Microsocial experiments were proposed through projects like Heath Bunting and Kayle Brandon's ongoing *Food for Free*¹⁰² project that charted edible plants in Delhi, and Heath Bunting's daily newspaper for animals, *Daily News*,¹⁰³ but instead of altering positions that circulate around the production and reception of art, the projects initiated symbolic artifacts that presented impermeability within which issues relating to the open-sourcing of edible material and became confined.

Deller's *Bat House* is an interesting example in which a number of diverse fields intersected. Bringing together the London Wetlands Centre and its visitors, scientists, bat experts, and architects, the project generated a wider discussion about bats and how human urban actions were destroying their habitats. The result was an aesthetically pleasing (in human terms) structure that had been specifically designed as a permanent home to accommodate the needs of the roosting bats.

However, the project was underpinned by the reiteration and maintenance of existing socio-political relationships and structures of visibility and power that frame human relations with animals. It was based on codes of visibility where animals, in this case bats, are on show within pre-defined social

¹⁰² See: http://duo.irrational.org/food_for_free/material_maps/ (accessed 15-03-16)

¹⁰³ http://duo.irrational.org/daily_news/delhi/index.php (accessed 15-03-16)

spaces – the Wetlands Centre – designed for human pleasure, meaning that the bats become part of the attraction. The addition of the *Bat House*, known as the *Berkeley Bat House* after the sponsors of the project¹⁰⁴ - both as an artwork and a bat home - created a new focus for diverse audiences at the Wetland Centre, as well as caring for the animals themselves. While bats are generally not seen during the hours that the Wetland Centre is open to the public, this was a way of bringing them into some kind of visibility and imagined visibility to visitors. The problem is that these structures of visibility are rooted in the anthropocentric relationships developed through Western philosophy and science, which structure relationships between humans and animals in advanced capitalist societies, where the animal is maintained under ‘controlled’ conditions governed by human activities.¹⁰⁵ So the bats at the Wetland Centre were held in a state of permanent capture, both through the human-built home that replaced the human-induced loss of natural habitat, and visually as part of a spectacle at the centre itself.

What seemed to be missing from the project was a wider discussion around these issues and the ties and frameworks within which we engage with wild

¹⁰⁴ The project’s costs were realised through £150,000 in sponsorship from property developer The Berkeley Group. See: <http://www.berkeleygroup.co.uk/press-releases/2009/architect-designed-bat-house> (accessed 13-03-16)

¹⁰⁵ Agamben addresses the relationship between the animal and humans in *The Open*, proposing that taking on the fact of being human means closing off any biological relationship to other animals, so the biopolitical relationship becomes for Agamben, is the founding relationship of capitalism. On page 80 he says: “In our culture, the decisive political conflict, which governs every other conflict, is that between the animality and the humanity of man. That is to say, in its origin Western politics is also biopolitics.” Agamben, G, 2004. *The Open*. Stanford: California

animals in the British countryside, and in broader settings. Such a discussion might have also questioned the categories of visibility that were proposed here, and the over-arching need to produce a novel structure with artistic merit within a natural landscape as opposed to say, a modification of the existing landscape with the same ends. The politics of the project's wider connections to its funding sources and commissioners, as well as the relationships between the different participants that were being formulated through the various stages of the project might also be considered within an ethico-aesthetic approach to the situation. At the time, and within the contexts of Arts and Ecology as a project defined through Guattari's text, the Bat House seemed to miss an opportunity to initiate a fully 'ecological' discussion that addressed a more complete range of relationships between various human subjectivities that were embedded in the project, its setting and animals. With the monument a permanent fixture in the Wetland Centre, it still has the potential to become a focus for such discussions, while remaining a symbol of their absence.

3.2.6 The Dalston Mill

With the *Bat House* reflecting existing visual structures of communicability, EXYZT's *The Dalston Mill*, by contrast, was an interesting example of an experiment that eventually generated more long-term changes to the surrounding area. It might be understood as a series of interconnecting

forms of production, distribution and engagement, where the dependences between each form were played out within the site itself. As a microsocial experiment, the project expanded on Agnes Denes' *Wheatfield: A Confrontation* - as described in chapter one - to include a working mill, a field of wheat, a bakery, and a café and appears at first to depart from the logic of the eco-critical curating paradigm. The project, which will be discussed further in chapter four, interwove a number of diverse narratives around dependence and issues of cause and effect in relation to food and forms of social production. Through Guattarian logic, the project might be understood to have expanded the existential territories of possibilities for sustainable urban agriculture, by producing 'toolkits composed of concepts, percepts and affects, which diverse publics [can] use at their convenience' (Guattari, 1995,p.130).

The project also, it could be said, literally reterritorialised – in a non-Deleuze and Guattari sense – a derelict plot of land that was slated to become a car park in the context of the wider regeneration going on in the area.¹⁰⁶ This is to say that it created a territorial assemblage that was held together by the coexistence of reference to Denes' artwork and the inhabitation of the site. It is important to remember that this was not an artwork as such, but was commissioned within the frameworks of an exhibition and wider engagement with Arts and Ecology. While it was caught within the framework of display of the exhibition and wider discursive field of Arts and Ecology, it did to a certain extent through its

¹⁰⁶ More background information can be found at:
<https://vimeo.com/5541507> (accessed 30-05-16)

nature challenge those codes of display. Unlike *Black Cloud*, *Dalston Mill* had was not dominated by a premonitory narrative and the workshops and projects were overwhelmingly driven by much broader and positivist notions of care and provided practical and experimental workshops that engaged with ideas relating to ways of living. There was no specific narrative approach to environmental issues, and a more complex visual and experiential topography unfolded.

In Denes' project the wheat harvested from the site near New York's financial district was exhibited around the world as evidence of another possibility for production in that area of the city – that of food. The *Dalston Mill* by contrast did not generate any discrete objects for exhibition, rather it channeled different forms of practice that connected broad environmental concerns to a rethinking of how urban space is occupied. However, aside from the different modes of production and display, when it came to tangible products from both projects' activities, the projects had in common the fact that they also produced what Pierre Bourdieu would call cultural capital.¹⁰⁷ In the case of *Dalston Mill*, such cultural capital also fed back into the branding and gentrification of the area in which it is situated. Notably, at the time of writing, the Dalston Curve Garden that was

¹⁰⁷ See: Bourdieu, P, 1986. 'The Forms of Capital' in J.Richardson (Ed) *Handbook of Theory and Research for the Sociology of Education*. New York: Greenwood, pp.241-258. Available at: <https://www.marxists.org/reference/subject/philosophy/works/fr/bourdieu-forms-capital.htm> (accessed 16-06-16).

commissioned from EXYZT following the success of the *Dalston Mill*, is now under threat.¹⁰⁸

3.2.7 Conceptual limitations of the project

Guattari's paradigm does not simply advocate the production of micropolitical and microsocial experiments within art contexts per se. Such actions are located as part of a much wider set of ambitions to dislodge the socio-political and ideological codes that uphold the dominant social and political structures of what he calls Integrated World Capitalism, which is Guattari's term for post-industrial capitalism. From this position he argues that more fundamental operations need to take place in order to properly instigate the changes and shifts in collective and individual identities and subjectivities to effect bigger changes in the wider socio-economic and environmental sphere, 'new social and aesthetic practices, new practices of the self in relation to the other, to the foreign to the strange, a whole programme that seems far removed from current concerns.' (Guattari, 2000, p.68). This is not just about artistic practices testing out alternatives within existing social structures, rather, he says, 'it should...be clear that we are in no way advocating an aestheticisation of the Socius, for after all, promoting a new aesthetic paradigm involves overthrowing current forms of art as much as those of social life' (Guattari, 1995, p.134). This is a key aspect of Guattari's thinking that, as will be shown in chapter four, will help to clarify

¹⁰⁸ Hackney Council who own part of the site are outlining plans to sell off the site – see <http://opendalston.blogspot.co.uk/2015/12/hackney-to-sell-dalstons-cultural.html> accessed 17 April 2016.

and define the difference between the eco-critical curating paradigm and the ecological-curatorial.

The distortion of the ethico-aesthetic paradigm also arose through other Arts and Ecology activities, particularly its international residences and interventions. From an ethico-aesthetic perspective, sending Heath Bunting and Kayle Brandon to India or David Cottrell to Afghanistan, could have been the catalyst for a wider discussion around the relationships between artists from modernist, western-educated cultural centres and areas with very different aesthetic traditions that are compromised in terms of their economic and political circumstances, both in terms of dependences on the countries from which the visiting artists were from, and in terms of the wider socio-economic relationships between those countries. It also might have further explored the role of art, and questions around what constituted art within the particular circumstances in which the artists were working.

Instead, distinctions were upheld between artists engaging with issues relating to notions of ecology and the audiences and settings within which these took place, which could only result in the continuation of the structures that Guattari was aiming to question in his text. One of the key problems within Arts and Ecology was an over-reliance on international interventions and a disparate programme of commissions that broadened the content base of the project, and aimed to raise awareness of global environmental and ecological issues, but at the same time was conducted through existing structures and relationships of exhibition, which meant that

it avoided dealing with the more fundamental paradigmatic issues that were at the heart of Guattari's project. The dialogue therefore reiterated existing aesthetic and discursive codes around this field. Practices were expanded in ways that uncritically transferred models of artistic curatorial practices – through exhibitions, residencies and workshops for example – and also in ways that broadened the issues relating to with ecology and climate change, but this precluded a more probing discussion on the relationship between artists, curatorial practices and notions of ecology.

Furthermore, while *The Three Ecologies* was introduced by Gary Genosko in the launch event, a more complex public discussion around what the ideas meant for the project did not take place in terms of how the project's activities progressed, and questions were not asked about what the transversal practices inherent to Guattari's three ecologies might mean in terms of its activities. Instead, what Arts and Ecology did, by contrast, was to return its activities back to overarching systems of cultural and symbolic capital in already recognisable forms, as discrete artworks, installations and commissions that objectified and framed the project's concerns.

According to artist and writer Susan Kelly 'transversal practices' must often negotiate a double and sometimes paradoxical move: a logic of refusal – of resisting visibility, or taking on recognisable forms. This refusal while running serious risks of invisibility, marginalisation, or inoperability, however also becomes a condition for an opening out of another logic, or system of valorisation' (Kelly, 2005, p.5 emphasis in original).

3.2.8 Practical limitations of the project

While strands of Arts and Ecology's work were perhaps more successful in questioning modes and conditions of practice and production of ecology itself, for example in the UNESCO education workshop in Ahmedabad, and the 2006 book *Land Art: A Cultural Ecology Handbook*, for the most part the project was riven with a number of unresolved tensions that systematically undermined its aims and instead acted as modalities for communicability of ideas and practices related to the term ecology. These can be summed up as contradictions between the project's curatorial agenda as Guattari-influenced transversal practices, its instrumentalising of the artworks and participating artists, and its structural dependence on conventional structures of the visibility of artworks. Rather than critical questioning of the terms and forms of ecology itself, the project became more concerned with the problems arising out of its attempt to articulate an arts-based ecosystem about ecology, and the conflicting problem of how to support artists working from their own autonomous positions.

However, deeper engagement with Guattari's transversal tools would have initiated another line of questioning around the politics of the project itself and the politics of the structures it set up through its eco-critical curating paradigm and the position of the artists as delivering commentary on these issues through this model. Questions were not raised about how artistic and curatorial practice might proceed in relation to questions of ecology. While

conversations and projects were initiated between practitioners from diverse fields, the frameworks within which the commissions and activities were realised, and the art forms and modes of display happened through standard communicational models. Artworks commissioned were mostly monadic, or fell into largely orthodox models of socially-engaged practice, along with film screenings, discussions and symposia that largely focused on issues relating to environmental concerns and the term ecology as content, rather than the term ecology being part of the business of what Guattari calls in *Chaosmosis* ‘recomposing militant situations’ (Guattari, 2005, p.129), as will be discussed in chapter four.

The parameters of the eco-critical curating paradigm within Arts and Ecology are revealed here as being produced through firstly the production of networks of artistic collaboration with practitioners from other fields of knowledge, and secondly through the initiation of socially engaged and pedagogic practices that articulate critique and commentary on the issues at stake. These parameters were always constrained however within the flows and socio-political structures of curatorial and artistic frameworks and did not open up a space for discussion of the relationships that were established with audiences and other individuals and groups that engaged with the project.

Guattari is very clear that the ethico-aesthetic paradigm calls for an ‘overthrowing’ of aesthetic practices as much as social ones. He deploys the aesthetic as a tool for doing this because he views art as a semi-autonomous

practice that has the ability to intervene in wider socio-political circumstances and settings. The question that remains therefore is whether artistic practices still have this semi-autonomous status and in what sense they might operate semi-autonomously today, if at all. In this sense, Arts and Ecology missed an opportunity to initiate a much broader debate that probed not just ways in which artists can and do intervene in environmental issues, but rather the wider questions of what it means for artists to intervene in, and question, social situations, and what the implications of an expanded notion of ecology might be on artistic and curatorial practices.

3.2.9 A summary of the problematics between the tools of the ecological and Arts and Ecology

The examination above demonstrates how, if interpreted through the tools of the ecological, the curatorial framework of Arts and Ecology meant that it was limited in its ability to engage with and alter the realities with which it was engaging. Questions relating to the term ecology and to the relationship between human activity and the Earth's biosphere formed the curatorial subject matter but did not extend beyond these parameters. Through discussions of these questions, artworks relating to issues raised through the curating framework were produced and displayed, but the discussions did not extend to an investigation around the conditions of the curatorial actions themselves. So while the project referred to Guattari's expanded notion of the term ecology, the project did not address the wider implications of Guattari's text, creating a split between the content and the

curatorial imperatives through which the content was produced. This meant that the wider aspirations of the project to connect with everyday realities were suspended within its curatorial frameworks.

By beginning with a framework of inquiry built through a priori relationships and structures of connectivity between the artwork, the modes of display, artists, curators, and audiences, the project missed an opportunity to open up a wider – ecological – investigation into how these curatorial structures both reinforce and are reinforced by these a priori relationships themselves. As a result, the broader implications of the tools of the ecological are not able to be played out here leaving Arts and Ecology unable to follow Guattari's thesis within *The Three Ecologies* to instigate a wider inquiry into what constitutes the structural parameters – in this case the curatorial – which frame the issues and relationships under investigation, and where the term ecology is deployed as content.

3.3 Cape Farewell

In contrast to the expanded exploratory practices of Arts and Ecology, Cape Farewell's body of work focuses on an ongoing practice of expeditions and exhibitions. These activities are underscored by a belief that artists can creatively respond to the factual realities of Earth's current anthropogenic biospheric disorder in order to initiate dialogues that result in shifts in social attitudes, to propose modes of resilience, as well as ways of being in relation to changing circumstances. The project makes a number of claims

around how relationships between artists, scientists/science and climate change can be played out. These claims unfold thus: firstly, art, as Marshall McLuhan says can act as ‘Distant Early Warning’ signs that ‘can always be relied on to tell the old culture what is beginning to happen to it’.¹⁰⁹ In terms of climate change, artists’ interpretation of the potential problems being revealed through the scientific data can bring about cultural shifts and propagate ‘visions for the future’; and secondly, that these problems are best explored and communicated by artists, scientists and what I am calling ‘communicators’ – journalists, designers, activists, documentarists and the like – largely through exhibitions of the art produced out of these collaborations.

These claims generate two key questions that I will address in this discussion. What kind of relational framework is established between the artworks and ideas about climate change and the audience, when presented through thematic display formats as they are here, and do Cape Farewell’s projects offer the possibilities for the production of new socialities and dynamic intersections between art, science and audiences that might bring about changes in attitudes and practices? Through the examination of these questions I propose that in their practices Cape Farewell reiterates, reflects and furthermore reproduces existing socio-political relationships between humans, non-humans and the Earth’s biosphere, which ultimately preclude

¹⁰⁹ For more about Marshall McLuhan’s DEW Line newsletter see: <https://mcluhangalaxy.wordpress.com/2014/05/10/marshall-mcluhans-dew-line-newsletter-1968-70/> (accessed 20-06-16). Also see the quote in context of Cape Farewell: <https://www.capefarewell.com/art/past-projects/carbon-13.html>

the possibilities of deploying the artwork as a way of shifting social attitudes and relationships.

3.3.1 General points about the project

Before I start a more detailed examination of these questions, there are some general points to be considered. Cape Farewell's major expeditions have been largely focused on evocative sites, where human habitation is minimal but which are very sensitive to the long-term effects of human activities around the world. Recent projects like *Sea Change* in the north of Scotland, *Phytology* in east London, or the rural artist-in-residence programme in Dorset (all described in chapter one), take place in areas with human settlements, but are still locations that evoke a binary relationship between 'nature' (understood as biospheric activity or organic entities with processes that can operate independent of humans), and human society. These settings are presented within a tradition of the romantic sublime, as settings that should be free from human intervention but which are being degraded as a result of human activity. An idea of anthropogenic climate change as a process of loss of the sublime natural becomes projected onto these landscapes, played out in projects that engage with shifting environmental conditions or lost histories.

This fails to engage with wider questions relating to the complex and remote political relationships that have given rise to the detrimental impacts on these areas. As a result, questions around the multiple relationships between

climate change and urban settings are precluded and a separation between climate change and everyday realities is reinforced. The project's engagement with the term climate also needs to be examined more closely. This is because the juncture the project creates between climate and culture in their headline 'Climate is culture'¹¹⁰ condenses and simplifies the complexities of these two sets of conditions into on the one hand scientific enquiry, and on the other, cultural production. This is key because neither the term climate nor the term culture stands for tangible sets of circumstances. Rather, both are constituted through multiple systems, processes and factors that are both material and immaterial, as well as being continuously variable and which as a result, produce diverse and contradictory realities. The many different environmental and social consequences of climatic configurations are matched by the complex realities produced by the term culture, realities that include both artistic products and ways of doing, making, interacting and living.

Director David Buckland's claim, referenced in chapter one, about artists going to the Arctic to be at the forefront of dealing with climate change is also highly problematic because it suggests that climate change exists as an object that can be witnessed. This is not the case, because the facts of climate change exist as much through the modelling of data as in an experience of a landscape. It is questionable whether experiencing a new landscape for a short time is a way of discerning climate change, as the

¹¹⁰ See: <http://www.capefarewell.com> (accessed 23-06-16)

situation is in its broadest sense a composite of numerous different activities, experiences and events, founded on scientific, socio-political and cultural factors, whose physical manifestations are monitored and modelled over time. Going to the Arctic for two weeks with a group of scientists might give artists a valuable insight into how scientists gather data in that remote and precarious part of the world, and an experience of survival techniques in that particular climate, as well as valuable experiences that feed into their work discretely. It also raises wider questions about what it means to experience climate change, and who is experiencing it, as well as to what extent climate change as it is manifest in the Arctic can be experienced through a relatively brief visit to such a specific location.¹¹¹

3.3.2 Socialities produced through the expeditions and the ‘Carbon’ exhibition series

The following section will examine the politics of the relationships that structure and frame the activities and outcomes of the Cape Farewell’s activities and how their parameters and criteria play out against the tools of the ecological. In order to achieve this I will look at what kind of structural propositions and possibilities evolve through the socialities that are produced through the project, and what kind of work they do towards the aims of altering dominant relationships that humans have in relation to the

¹¹¹ A key question arises here: are the the high costs of the expeditions and Cape Farewell’s other projects matched in terms of the results and outcomes of the projects in terms of cultural changes that are instigated through their activities?

earth's biosphere. These will be critically explored through three key areas of practice: the Arctic expeditions, the *Carbon* series of exhibitions, and the site-based project, Phytology. It is the socialities and junctures produced through these practices that reveal the ways in which the activities connect with the project's wider aims. They are also the points at which they can be analysed in relation to the tools of the ecological, conducted here through the work of Bruno Latour.

Cape Farewell establishes the overall project as happening from a position of care and concern for Earth's biosphere and the ways in which humans and non-humans interact with it. This concern is mediated through the organisation's activities and the socialities that are produced by its curatorial and artistic practices. The resulting art works are set up as communicators that aim to instigate wider productive discussion and activity around the mitigation of the effects of these changing patterns of the earth's biosphere. Dialogue is established between artists and experts, with climate science underscoring all the activities. In the expeditions, which Ruth Little, the associate director, calls 'a way of knowing',¹¹² scientists set the agenda and get on with their research, with the artists free to either engage with the science, carry out their own investigations or work with a combination of the two. As active researchers in areas of climate science, the involvement of the scientists is strategic in that they make sure that the project keeps up

¹¹² See: <http://www.greenworld.org.uk/page400/page400.html> (accessed 13-03-16)

to date with the latest climate research.¹¹³ The scientists' research therefore guides the development of the project's programme as a whole in terms of climate science. However, in the art that emerges out of the expeditions the infiltration of the science into artworks depends on the response of the individual artist. In recent years the relationships between scientists and artists have shifted slightly. For example, in *Sea Change*, the project proposes that the encounters between the two create 'spaces of possibility'.¹¹⁴

What kinds of socialities are produced through these activities and outcomes? How do they operate? The expeditions can be seen in one sense as ways of setting up a mobile community of artists and scientists. These communities travel together and exchange dialogue and ideas. They are, however, established and maintained as exceptional communities, produced through the fulcrum of the project's leadership team and abstracted from wider connectivities that relate to climate change and human practices in relation to Earth's resources. They also maintain the hierarchies and dominant structures: firstly between artists and scientists, since the trips are led by the scientists with whom the artists can choose to engage; secondly a

¹¹³ See: <http://www.capefarewell.com/who-we-are/science.html> (accessed 20-06-16)

¹¹⁴ See: <http://www.greenworld.org.uk/page400/page400.html> (accessed 15-03-16)

social hierarchy is upheld that places experts and creatives as being in an exceptional position to deal with issues relating to the Earth's biosphere and climate change - as opposed to non experts or anonymous 'publics' who need to be informed about these concerns. So there is a disconnect between the expected outcomes of the expeditions and those who take part in the expeditions. This separation also plays out between communities who live in the Arctic, in that the communities who form the expeditions do not engage with their realities, but remain in a state of exceptionality focussed on extracting aesthetic and scientific information, and sensuous engagement from the surroundings through which they navigate. As a result dominant structures between ideologies and communities, art and science, and expert and non-expert remain unquestioned throughout these activities.

3.3.3 Critical limitations of the socialities produced by Cape Farewell

The exclusive mobile socialities of the expedition are antithetical to the production of alternative formats of sociality between and across communities and their inter-relationships and dependences on each other and the circumstances of their settings, as set out in the tools of the ecological. If the expeditions in particular are seen through the prism of tool number four, which is concerned with a continuous excavation of relationships and parameters and agencies that aim to uncover the modes of production of communities and socialities, it becomes clear that the relationships being produced through the project are limited to existing relationships between artistic and scientific knowledge and their wider

realities. They do not expand beyond these boundaries and set out possibilities for the ways in which these relationships can produce alternative formats of cooperation in response to climate change issues.

Similarly, the socialities that are produced by the Carbon exhibitions also present a number of conceptual and critical limitations. As group exhibitions, according to Cape Farewell they demonstrate that ‘one salient image can speak louder than volumes of scientific data and capture the public’s imagination with an immediate and resonant voice’.¹¹⁵ The exhibitions and related programmes create socialities in which audiences are given the opportunity to engage with the work, and through this engagement the expectation is they will be inspired to make changes in their wider socialities. The problem however is that the framework of the exhibition places the audience as passive receivers of the knowledge and creativity produced by artists, and presented and funded through the hierarchies and networks of public institution and private companies and corporations. These issues are displayed within the socio-political flows of publicly funded art institutions, and connect into things like local governing bodies, local environmental organisations, local businesses working on environmentally sustainable living solutions, art funds, foundations, and NGOs with international reach. These are the hidden networks within which the art is embedded but which are not included in wider conversations around the issues that Cape Farewell takes up.

¹¹⁵ See: <http://www.capefarewell.com/art/past-projects/carbon-13.html> (accessed 13-03-16).

Thus these exhibitions, while appearing to display and explore wider issues relating to how humans negotiate the resources and settings that are inhabited, do not open up wider discussions around the complexities of these connectivities between the issues they are addressing and the many aspects of the structures of society that they are implicated in, including the flows and circuits of art and those of Cape Farewell itself. Instead the exhibitions produce projections of ideas in exclusive environments, which are by their nature limited in their cultural and political reach.

What, therefore, might socialities that do the difficult work of unpicking the connectivities that form attitudes and relationships with environments and habitats both lived and remote in order to instigate re-formations look like? To clarify the limitations of Cape Farewell's agenda, it is worth examining this in relation to Latour's version of the social.

3.3.4 The parameters of Cape Farewell as seen through Bruno Latour's notion of the social

In *Reassembling the Social*, Latour argues that the social is 'what emerges when the ties in which one is entangled start to unravel' (Latour, 2005, p.247). The key point to note is that this social is not a bounded dimension, nor a place or an entity that can be pre-defined as such, but rather it is a way

to ‘inspect and decompose the contents of sets of (*Ibid.*, p.252) procedures that trace associations between things, with the aim of assembling a common collective where the traced associations are visible, and the entities who have now become visible’. These entities are not in themselves social but they may become participants (*Ibid.*, p.247). These situations are produced through associations and through the circulation of these associations and the entities, which, Latour argues, exist in the frameworks of resources that are ‘in between and not made of social stuff’ (*Ibid.*, p.244).

To clarify, social assemblages are produced through dynamic interactions and associations that are equally in the process of disentanglement as much as communication and which, crucially, *produce their own parameters*, rather than being bounded. If we think of this schema in relation to Cape Farewell, the points of focus become the ways in which the project’s socialities are navigated by different actors and what their outcomes are as opposed to practices working towards the specific parameters of the exhibition. Cape Farewell’s exhibitions therefore aim to inspire audiences to change their attitudes to the human relationship with the earth’s biosphere through interaction with individual artists’ responses relating to narratives around climate change. So while the project engages scientists and artists in communal endeavours, the framework for the project as a whole maintains a number of boundaries between the artworks and the audience, where the artwork and narrative around climate change is presented in a space that is a demarcated space for art, and where this demarcation is premised on the ‘extraction’ of the artists and artworks from any wider social realities. While

appearing to break down through artist-scientist collaborations, the project maintains conventional distinctions between science, culture and audience through its production and the presentation.

How might this be considered in terms of producing cultural change? Processes and strategies that produce cultural change are by necessity connected to wider social, political, economic, scientific and environmental factors, so I would argue that instigating lasting cultural shifts requires active broad approaches by multiple actors, rather than just an art-based approach. This is because the connectivities between environments and humans (and the effects of climate events are experienced differently by different communities and individuals) depend on a wide range of factors, and also arise out of uneven and messy economic circumstances. Perhaps as a starting point, we need, as Latour says, to allow things to become enigmatic again as a way of disembodying the associations and connections that are made between entities, humans and the effects that they cause: ‘[a]t every corner, science, religion, politics, law, economics, organizations, etc. offer phenomena that we have to find puzzling again if we want to understand the types of entities collectives may be composed of in the future’ (*Ibid.*, p.248).

By contrast, Cape Farewell is asking artists to engage in surroundings without acknowledging that in order to do so connections need to be forged within the surroundings themselves. In addition, such connections cannot be

formed without engaging in dialogue with existing local communities and acting collectively to address the socio-political relationship that affect themes and roles that artists can play in this process.

Instead Cape Farewell invites artists to make works about scientific issues relating to climate change, but in so doing the commodifies the Arctic and its inhabitants as objects of production and exchange within art. They are to be both observed and recorded before being deployed as rhetorical devices within the project's wider aims through exhibition and display in the systems and flows of contemporary art. If, as Latour suggests, the social as process opens up new inquiries into the connections between things, their contexts and their circumstances, then everything becomes open to question including spaces and circumstances of production, display and exhibition. Cape Farewell's practices preclude these inquiries, leaving the artworks instrumentalised and segregated from everyday realities as silent witnesses of the socio-political presence of the project's specific artist-scientist teams. As audiences, we are onlookers in the exhibitions and from this position, supposedly to 'be inspired, provoked, and thrilled' in the hope that 'inspiration leads to action'.¹¹⁶ The Carbon14 exhibition calls on audiences to 'participate in a unique, visionary and powerful four-month engagement with one of the most pressing issues of our time – Climate Change'.¹¹⁷ The

¹¹⁶ See: Miller, D. 2014, *Carbon14* exhibition handbook. Accessible at: http://www.capefarewellfoundation.com/downloads/Carbon14_Program_Guide.pdf (accessed 19-06-16).

¹¹⁷ See: http://www.capefarewellfoundation.com/downloads/Carbon14_Program_Guide.pdf (accessed 19-06-16)

extravagant language here only serves to reinforce the gap between the activities of the project and its aims. As audiences we can only stand and stare.

There is one final fundamental issue that is not ultimately challenged by Cape Farewell's strategic reliance on science as the foundation of its cultural activities, despite appearing to be. This is the hierarchy of relationships between science and culture. This might not be easily visible, as the relationships that are set up between artists and scientists, and the points of intersection between science and art appear to be a breaking down of this hierarchy. However, the relationships that Cape Farewell establishes with scientists – working with them as advisors to generate the contexts for their artistic research; developing relationships through their expeditions and other projects – seem to be enacting the multiple dependencies and interconnectivities that Latour proposes between forms of science and culture. As artists engage with scientists, the claims for the boundaries of artistic research seem to be in the process of being rethought in relation to cultural contexts, but this doesn't happen in practice here.

The problem that arises is that while the project works closely with scientists, it does not address the constitutions, contradictions, and politics of the contexts within which the science is produced. Instead a specific set of scientific practices are used to validate the aims of the project and act as evidence of climate change. Science is not produced through other forms of engagement as part of the project's activities, for example, through citizen

or artist engagement, and its position within the project remains as an ‘expert advisor’.

It is these structures and contexts that are at the heart of Latour’s questioning of modernity in *We have Never Been Modern* (1991). Latour does not deny the existence of modernity as such, rather he is questioning the validity of the grounds on which it is claimed. As covered in chapter two, Latour explored how modernity is rooted in a split between knowledge of people (power, politics, economics, culture) and knowledge of things (science), arguing that this split between science and politics is false, and proposing that objects of science are already intertwined with politics and culture. Latour proposes that this false split can be overcome by uniting all things in the parliament of things, in which all objects have rights.¹¹⁸ Here he argues for the recuperation and development of entities within networks that enable them to be accounted for from multiple positions. These entities then become ‘hybrids’ which are acknowledged as bound in webs of the social and political, as well as the scientific, and are not separated into an irrevocable duality.

Can the work of Cape Farewell be reconsidered in relation to Latour’s idea of hybrids? One of the glaring inhibitors that emerges is that the project has

¹¹⁸ In *We Have Never Been Modern*, Bruno Latour argues for the rights of objects, stating that they have been systematically refused through the subject/object dualism of modernity, where objects are universal in spatio-temporal terms and society is constructed by citizens and subjects; the parliament of things upends this schema and is where equal representation can take place. See: Latour, B., 1993. *We Have Never Been Modern*, trans. Porter, C. Cambridge, Ma: Harvard University Press

very little room for other fields of knowledge, like politics, anthropology, sociology, architecture, philosophy, agriculture, etc., that are also intrinsic to scenarios of climate change. At the same time the project acts out a parallel scenario that sends socio-political and cultural frameworks of science back into wider culture as unquestioned products of current socio-political flows, reinforcing the separation between science and politics. Rather than recognising the complex and multifarious nature of climate change and its surrounding politics, Cape Farewell reduces it to a science that is separate from politics and doesn't question the structures within which these changes are taking place. The scientists become 'truth-tellers' of sorts, but at the same time the project doesn't explore the wider socio-political considerations surrounding the production of these truths and the implications they have for differing communities. In other words the wider interdependencies of both the science and the artistic collaborations with scientists within the context of Cape Farewell run the risk of producing calcifications of scientific knowledge as art communicating climate change.

While scientists involved with Cape Farewell are working in multiple fields related to climate change, they are all scientists working in fields of biology- or geology-based research, such as oceanography, marine biology, biology, environmental health, or working for the British Geological survey. The specialists with whom they work do not expand out of these limitations, and are drawn from a narrow field of scientific research. The result of this relationship fixes the issues relating to climate change in purely scientific terms within the project as a whole. The non-scientific contexts of climate

change are overlooked. So by upholding science as the overall ‘knowledge’ that justifies the project, art knowledge is implicitly *of the science*, rather than creating more complex intersections between science and art. As a result, the projects within Cape Farewell and the project of Cape Farewell perpetuate a separation between science and culture that means that climate change is always a projected form disconnected from individual subjectivities and socialities. The result of this is that the project fails to address its main aims of bringing about shifts in attitudes and culture around climate change, because it does not properly address the question of what constitutes cultural change, and what kind of role artists have in testing out ideas that respond to possible future challenges. Furthermore, this compromises the project’s key message, which states: ‘what does culture have to do with climate change? Everything’ by presenting all the issues in relation to an overarching field of scientific knowledge.

3.3.5 The relationship between Cape Farewell and the tools of the ecological

What I have tried to show above is how Cape Farewell operated through a highly specific prism of practice that, while apparently broadening the field of questions around the relationship between science, art and everyday realities is in fact, tied to the idea of art’s autonomy and its perceived ability to speak silently and poetically from this singular position.

The promotion of this singularity and an absolutist approach to ideas is reflected throughout the project’s activities, from the cultural elite who take

part in their expeditions and projects to the large scale touring exhibitions that ‘drop down’ into centres on the international art circuit, and their predetermined relationship between art and science. The project does not in any way operate in, or set up social conditions for change, or highlight sets of specific circumstances that it is interested in changing. The conditions in which it works are equally part of the problem it is claiming to address, and are not going to be altered through its activities. Indeed, they are a necessary pre-condition for its work.

This follows through with the science, which whilst obviously a necessary part of the wider implications for, and implications for research into, climate change, in this artistic context is ring-fenced along with the Arctic as producing the grounds for the artistic practices. This hypostasises both these conditions and activities as emblematic of climate change but also as evidence of the need for humanity to change and alter the way practices of living are conducted. What the project does is acknowledge the wider planetary impact of climate change, without acknowledging the specificities of the manifold and complex ways in which it is manifest. It takes on board the deep time of the ice-cores, but not the politicised time of the economic system within which their excavation has to be framed.

It is also an interesting paradox that emerges where, in claiming to address concerns arising from human-activity induced climate change, the project

travels to and operates in places where there are small concentrations of human communities and even then does not take their presence into account, preferring to project ghostly moving images of humans walking onto ice floes in the Arctic.

The potentials of the tools of the ecological can only be understood as being disavowed in this context, where the interests, temporalities, instabilities and communities of the areas in which the project works, and equally of the spaces of its exhibition are ignored and overlooked. As I have shown, thinking the project through the enquiries set up by the tools of the ecological leaves the projects and its artworks as simplified static statements presented within rarified cultural environments.

3.4 Revisiting *Radical Nature: Art and Architecture for a Changing*

Planet 1969-2009

As described in chapter one, *Radical Nature: Art and Architecture for a Changing Planet 1969-2009* (hereafter shortened to *Radical Nature*) was a large themed group exhibition in the Barbican Art Gallery in London that explored artistic responses to concepts of nature during that period. In a video introducing the exhibition, curator Francesco Manacorda described the exhibition as drawing on a number of aesthetic traditions and themes – Land Art, environmental activism, experimental architecture and utopianism

– in order to explore ways in which artists ‘collaborate with nature’.¹¹⁹ He described the exhibition as being ‘designed as one fantastical landscape....with each piece introducing into the gallery space a dramatic portion of nature’.¹²⁰

TJ Demos, in the catalogue’s keynote essay, argued that the exhibition was necessary because it contributed to ‘the on-going public engagement with the politics of sustainability, to advance creative proposals for alternative forms of life based on environmental justice in a global framework, and to do so until such art exhibitions can somehow meet the requirements of a just sustainability’ (Demos, 2009, p.28).¹²¹ For Demos, *Radical Nature* promotes these as ‘imperatives for a contemporary environmental art’ (*Ibid.*, p.28).

These statements demonstrate that the aim of the exhibition was to install recent artistic practice that engaged with notions of nature into a wider art-historical context of artistic engagements with nature and the politics of anthropogenic climate change. While this seems to be an apparently straightforward proposition, the use of the term radical throws up a number of questions about what constitutes the radical when presenting artworks

¹¹⁹ See Francesco Manacorda discussing the exhibition at: <https://www.youtube.com/watch?v=wz8Ra9wUNTw> (accessed on 15-06-16)

¹²⁰ *Ibid.*, note 19

¹²¹ Full text is available at: <http://www.environmentandsociety.org/node/3417> (accessed 19-06-16)

that are aiming to address ways in which humans interact with nature and the settings that they inhabit. Does radical refer to the ways in which the artists are engaging with nature, or to the ways in which nature is being changed through anthropogenic activities of capitalism? The question is also raised as to how the radical might be a way of describing how the form of the exhibition itself in its human-produced setting attempts to deflect the construction of existing relationships that humans have with nature.

I will begin by exploring this question of the construction and understanding of nature and its shortcomings in the exhibition *Radical Nature*. This will take place through the work of Ilya Prigogine and Isabelle Stengers who, as discussed in chapter two, asked fundamental questions about nature and the formation of the concept. The aim is to assess to what extent the interactions between art and the concept of ‘radical nature’ within the exhibition opened up fundamental questions about the relationship between humans and nature, or whether the exhibition simply worked to further aestheticise a concept of nature as separate from culture and society.

Before I do this, I want to make a general comment about the meaning of the term radical in order to identify how it relates to the exhibition. The term has a number of permutations. Etymologically it is connected to the Latin term *radicalis* which relates to the root, primary, original or fundamental element of an idea, thing, or in more specific terms a plant. This notion of root follows through in its meanings, which all revolve around a questioning of foundations of all kinds of entities and organisations. As a noun it means

the root or foundation of something, of an idea, organisation or entity. Biologically it also denotes the root of a plant, and mathematically it denotes a quantity, which is at the foundation of another. As an adjective it refers to the advocacy of far-reaching political and social reform, as well as characterising things and people that move away from what is traditional, towards progressive or unorthodox views and practices.

Within the exhibition, the term ‘radical’ was deployed in the sense of describing different ways in which artists are inscribing nature in artworks in relation to issues that have arisen in relation to anthropogenic changes within Earth’s biospheres. The artworks were positioned as propositions that considered alternative ways in which human actors might work with nature: as ways of creating more sustainable living solutions, as critique and commentary on past human-nature relationships, as excavations of existing human relationships with nature, and as exegesis on the problems of the planet’s future ability to sustain itself. Engaging with notions of nature in these broad ways, the works created junctures between artistic practices and engagement with social and environmental realities. These junctures happened through idealistic experiments, explorations into the fragility of nature-human systems, relationships between land and time, and human-non-human dialogues, with the overarching narrative depicting a nature as being choreographed and altered within socio-political, scientific and cultural flows. Nature, as various biological entities and phenomena of the physical world activated through immanent processes appeared in a number of ways: cultivated within the gallery space; as inspiration for architecture; as resource; as politicised space, and in attempted ‘dialogue’ with humans.

3.5.1 Radical and dissipative systems and *Radical Nature*

As outlined in chapter two, Prigogine and Stengers took up Prigogine's earlier work on complex systems to provide a reformulation of ways in which scientific approaches to nature exist in relation to human societies, along with a questioning of the fundamental ways in which nature was processed through the practices of science. Prigogine's notion of dissipative structures was diffused into fields of the humanities, with the aim of demonstrating the interdependence of science and culture. The cultural construction of nature was not therefore about interpretations of the relationship between humans and nature, rather it was an inextricable aspect of doing science itself.

It seems fitting therefore to examine an exhibition that claims to be exploring the relationship between humans and nature through the work of theorists who have similar aims. What becomes evident however is that while there appear to be some similarities, *Radical Nature* is hindered by largely upholding the central tenets of anthropocentric approaches to the human-nature relationship, further complicated by its exhibition within the context of the circuits and flows of the contemporary art. One key problem is that the conventional exhibition structure and the aesthetic relationships that exist within this structure are part of the same logics of visibility that take place in the science that rendered nature silent in the first place.

Western science (the dominant mode of science within the global circuits of research) is based on evidence collected through observation and presented in its abstracted forms. Equally here, the exhibition of artworks presents them as decontextualised reifications of culture, and manifestations of the artists' responses to cultural circumstances. These are presented for viewing and observation in order for general audiences to elicit their own affects, and for specialised art audiences to gain deeper understanding of the works and their relationships to each other and art history. So nature brought into the gallery as art within this system of display is not a breaking of that system but a doubling up of the system where nature finds new modes of entry into the flows of power in which the artworks exist.

Another key problem with *Radical Nature* was that the concept of nature as it was deployed within the exhibition was not clearly defined. The exhibition started from the historical separation between the concept of nature and culture, citing the shifts in the recent re-consideration of this relationship as occurring through emerging evidence of environmental degradation. However, a more detailed understanding of these shifts within the concept of nature was left to be gleaned through the work of the artists and not placed in a wider socio-historical context. Hence wider shifts in scientific thinking relating to the production of science, and the development of an environmental consciousness, as I have described in chapter two, which were happening around the same time as the starting year for the exhibition (1969) are overlooked. This means that the works on

display became filtered through a singular definition, with more nuanced responses to nature that have developed over recent years, such as through Bruno Latour and Prigogine and Stengers, being excluded.¹²² So while the artworks critically engaged with many different aspect of what we understand as nature and in cases of the architecture bio-mimicry, to what extent they worked to explore a radical re-imagining of how humans exist in relation to nature was a question left unanswered, as there was no benchmark for how nature might be understood here. The works in the exhibition are explained only in terms of artists politicising the relationship between nature and humans through their practice, but without a discussion around the terms of that relationship.

There are three main aspects of Prigogine's and Stengers' work that I will deploy in this critique. Firstly, I will establish how we might understand the structure of the exhibition in relation to Prigogine's notion of dissipative systems. This will be followed by an exploration of Prigogine and Stengers' idea that humans exist *within* nature as part of processes of becoming and what this might mean for the way the artworks within the exhibition could be understood. I will conclude this critique by exploring how Prigogine and Stengers' work connects with the notion of creativity and the humanities in their expansion of the understanding of scientific practices, finally looking

¹²² Thomas S. Kuhn, 1962. *The Structure of Scientific Revolutions*. University of Chicago: Chicago. Kuhn's text challenged the models by which scientific knowledge had been produced, proposing that shifts in science were the result of wider intersections of science, politics and sociology, instead of being part of a logically determined process.

at how their expansion of ideas of invention shifts to incorporate both the cultural and scientific.

As already outlined, Prigogine's and Stenger's work set out to navigate a pathway that led away from the deterministic structures of the second law of thermodynamics and looked at how what they called open systems, with their inherent uncertainty, could be harnessed to relocate human beings in relation to nature and the earth's biosphere. This took as its starting point Prigogine's notion of dissipative systems. To recap, dissipative systems are those formed from irreversible processes and which lack a general set of principles that determine how their states will proceed and conclude. As Prigogine and Kondepudi say in *Modern Thermodynamics from Heat Engines to Dissipative Structures* 'they are destroyers of order near equilibrium and Creators of order far from equilibrium' (Prigogine and Kondepudi, 2014, p.421).

As a result, dissipative structures can be understood as having many possible states which cannot be predicted but which when achieved can be understood as 'ordered states' which are organised according to the space and time frames within which they occur. This inhomogeneity of structures and the fluctuations of states gives way to a new way of understanding order, one that is in a perpetual state of uncertainty and which Prigogine and Kondepudi term 'order through fluctuations' (*Ibid.*, p.421). The key fact is

that these systems can only ever be understood in relation to their environment. The conditions within which they take place are inherently linked to the actions that take place within the system. This is reiterated by Prigogine and Stengers in their book *Order Out of Chaos: Man's New Dialogue with Nature* (henceforth shortened to *Order Out of Chaos*) 'the interaction of a system with the outside world, its embedding in non-equilibrium conditions, may become in this way the starting point for the formation of new dynamic states of matter.' (Prigogine and Stengers, 1984, p.143).

Prigogine and Stengers expanded the notion of dissipative structures beyond the field of science in *Order out of Chaos*. This move was achieved by citing Isaiah Berlin's opposition of the specific and the unique with the repetitive and the universal, which they deployed as an analogy to understand the relationships between equilibrium and non-equilibrium systems: 'The remarkable feature is that when we move from equilibrium to far-from equilibrium conditions, we move away from the repetitive and the universal to the specific and the unique (*Ibid.*, p.13). They continue: 'to use somewhat anthropomorphic language, in equilibrium matter is 'blind' but in far-from equilibrium conditions it begins to perceive, to take into account in its way of functioning, differences in the external world' (*Ibid.*, p.14).

3.5.2 Collaboration and silence

Through the work of philosophers such as Bergson, Heidegger, Deleuze and Whitehead, Prigogine and Stengers also started to unpack the problem of what they called the ‘delusion of the universal’ (*Ibid.*, p.25). One proposal that emerged from this was the idea that time was irreversible and hence had an ethical dimension (*Ibid.*, p.312). What this means is that when the irreversibility of time is taken into account, the specific conditions under which activities take place, and the prior actions that lead up to the event of something happening are have both socio-political as well as scientific consequences, and implications that are both unknown, as well as known. At the end of *Order Out of Chaos* the authors conclude that the breakdown of the split between the scientific and the cultural means that ‘we can no longer accept the ...*a priori* distinction between scientific and ethical values’. (*Ibid.*, p.312).

As Verena Andermatt Conley points out in *Ecopolitics: The Environment in Poststructuralist Thought* (1997), the result of this is that ‘the future of the world is forever written into its investigation’ (Conley, 1997, p.71). This does not mean that the future is written into the present, rather, it means to suggest that the socio-politicalities that frame the actions of the present are replicated in and have wider implications for future scenarios. The idea of the open dissipative systems meant that it was impossible to arrest an object, and hold it in stasis, and therefore for Prigogine and Stengers, the consequence was that human beings, alongside other entities within the

world, were instead also continually embedded in ongoing simultaneous processes of change, bifurcation, mutation and evolution. As a central idea in *Order Out of Chaos*, the notion of humans being embedded in nature aimed to overturn the classical separation between humans and nature. In this condition of being embedded, and existing within any number of ongoing processes, humans are instated as a part of processes of nature, with both humans and the processes and entities they are connected to, always existing in a process of becoming.

Becoming is not separated from being however, and while the authors make a clear distinction between the parameters of the two conditions, they are always connected. Being is associated with ‘initial conditions’, i.e., the state of being in a system and the state of that system (Prigogine and Stengers, 1984, p.310). Becoming, by contrast, exists in relation to ‘laws involving temporal changes’ (*Ibid.*, p.310). Being and becoming do not exist in opposition, however, but rather express ‘two related aspects of reality’ (*Ibid.* p.310) and there are no ‘given’ states, no fundamental modes of description; each level of description is implied by another and implicates the other’ (*Ibid.* p.300).

3.5.3 The problematics of artists collaborating with nature

Establishing the foundations of Prigogine and Stengers’ work here helps us to start to understand its relevance to key aspects of *Radical Nature*.

Through Manacorda's claims of artists 'collaborating' with nature, the exhibition proposed that the artists might be communicating in new ways with elements of the earth's biosphere and its non-human entities. However this notion of collaboration is beset with problems, since it is produced under conditions that are only accounted for by the artists and the curator. If collaboration is the act of working together, this suggests that both sides have something invested in the act. The idea of collaboration can only exist here because of the historical conditions where nature has been instrumentalised for the ends of capital and scientific development, in the sense that anything that moves away from these structures might be considered to be collaborative precisely because it is - to a certain extent - taking the needs of the non-human entities into consideration. However, this is not collaboration, since, however sympathetically the artists are working with non-human entities, they are ultimately rendered mute through the structure of presentation into which they are incorporated. This leaves them undermined, rather than celebrated, by the structure of the exhibition itself.

The dystopian landscape within the gallery confronts the audience with narratives that depict the imaginary outcomes of human actions as a result of existing relationships that human beings have had - and still have - with nature. This gives the effect of a 'self-castigation', a warning of what might come. Such a dystopian landscape does not enunciate realities that enable audiences to engage with alternative ways of understanding how human beings can shift their relationships to nature, rather, narrative fictions are

presented before the audience as objects that use given ideas of nature to embody this dystopia, instead of as objects that embody actualisations of relationships between humans and non-human nature. Claims for collaboration therefore suggest that processes of non-human nature are playing an active part in the construction of the artwork alongside the human activities. However, in most of the artworks in the exhibition, nature, while it maybe deployed in a way that critically engages with its agency, uses and semiotic limitations, is largely directed towards an artistic narrative that reflects on realities and situations that are then presented as aesthetic symbolisms of the contemporary condition. What the audience encounters therefore are not collaborations between humans and non-human nature, but rather, artists' comments on ways in which the relationships that humans have had with non-human entities and the earth's biosphere until now have been conducted. The result was an a priori universal curatorial narrative embracing relationships between non-human nature, the earth's biosphere and culture, which then displayed further a priori artistic narratives on these relationships.

The concept of humans collaborating with nature might be more productively considered by reflecting on Prigogine's and Stengers' suggestion that humans are actively rooted within nature. In these circumstances, collaboration might imply that the work is equally produced through the independent agency of the non-human collaborators and also that this would actively contribute to the work's meaning. An example of

this taking place might be R-Urban, the urban agriculture project which is founded on the integration of natural production cycles into urban settings and is discussed closely in Chapter four. In *Radical Nature* by contrast, it is the artists who direct the position of non-human nature within most of these artworks and the work's meaning is based on their position. Nature appears in many works as a silent victim of human activity. This silencing brings 'nature' itself into relief as a tragic victim of human negligence and thoughtlessness, for example in works like Mark Dion's *Mobile Wilderness* (2006) (for image see appendix ii., fig. 5), Anya Gallaccio's *Meter* (2009), Henrik Hakkanson's *Fallen Forest*, Simon Starling's *Island for Weeds*, Heather and Ivan Morison's *I'm So Sorry, Goodbye* and Hans Haacke's *Grass Grows* (1966). In the construction of these works, the artists bring nature to the service of the work, but at the same time dis-activate themselves from this nature, creating a finite symbol in which the only voice that is heard is the disembodied voice of the artist. Within the exhibition therefore the audience becomes aware of 'given' states of nature, rather than becoming, as Prigogine and Stengers might contend, part of a process of the production of nature.

3.5.4 Speculative temporalities

The exhibition also presented artworks as proposals for future strategies for working with natural entities. These include EXYZT's *Dalston Mill*, Tomas Saraceno's *Flying Gardens*, Helen Meyer and Newton Harrison's *Full Farm*, and Ant Farm's *Dolphin Embassy*. A key characteristic of such

works is their implication of elements of the earth's biosphere and its processes within a functioning artistic structure. In all works, forms of natural entities interact, resulting in tangible products or desired effects that happen through a chain of reactions. This might be the grinding of wheat to produce flour and eventually bread in *Dalston Mill*, the propagation of fruit, vegetables and fish in *Full Farm*, or the growing of Tillandsia in *Flying Gardens*, which gets all its nutrients from air. The one work that does not complete a 'cycle' of cause and effect here is Ant Farm's *Dolphin Embassy*, which had a longer term ambition to steward new forms of communication between dolphins and humans, and foundered due to the scale of these ambitions as described in chapter one.¹²³ Each work created a chain of consequences and feedback that gave its constituent elements functional as well as aesthetic purpose.

As aesthetic strategies to explore the relationship between human beings and nature, the works are designed to predetermine the events that will result from the connections made within these settings. These events set the aesthetic and functional parameters for the work, and in the framework of the exhibition also become symbols for reciprocal functioning systems. To function successfully in the exhibition as artworks, they need to operate in a maintainable state, and this is constructed through the conditions of the exhibition. However, as Priogine and Stengers pointed out systems do not run in perfect equilibrium, and the processes that maintain systems are

¹²³ See: Lewallen, C., Seid, S., 2004. *Ant Farm 1968-1978*. Oakland: University of California Press

always in a state of change, and that this condition instigates new states and conditions:

‘We live in an evolutionary universe whose roots lie in the fundamental laws of physics, which we are now able to identify through the concept of instability associate with deterministic chaos and non-integrability. Chance, or probability is no longer a convenient way of accepting ignorance, but rather part of a new extended rationality’ (Prigogine and Stengers, 1997, p.155).

So if the starting point here is that chance is the organising principle for natural systems, the ideals of the systems in these artworks collapse. In *Radical Nature*, artworks like *Full Farm*, *Dalston Mill* or *Flying Gardens* engender deterministic cycles, where energies are transferred across the system to generate a predetermined outcome.

Of course, if the conditions necessary for these systems to continue were to change, then the systems would change. But in the exhibition, they were deployed to produce certain effects. What actually happened therefore was that the gallery acted as a laboratory, a controlled environment that established the conditions for these processes to take place. This was also the case for other artworks that required specific conditions within the gallery space, such as Henrik Hakkanson’s *Fallen Forest* and Simon Starling’s *Island For Weeds*. And while Helen and Newton Harrison’s *Full Farm* was eventually, as with all previous iterations of their project, donated

to a local school, the project drops generic growing boxes into local settings, rather than perhaps working with schools to develop specific growing conditions – something that many schools are doing already.¹²⁴ In addition, as objects deployed to be emblematic of human-nature interconnections, and highlighting a continuous cycle of cause and effect, these systems-based artworks also created a split between being and becoming – between for Prigogine and Stengers, ‘permanence and change’ (*Ibid.* p.291), where the artwork remains on the side of permanence, instead of subsuming itself to the complexities of moments of permanence within structures in continuous change.

3.5.5 Creativity, science and art in Radical Nature

To conclude this section, I would like to briefly comment on how Prigogine and Stengers’ ideas of creativity in relation to science might be thought in terms of the exhibition. They contend that science ‘occupies a peculiar position, that of a poetical interrogation of nature, in the etymological sense that the poet is a ‘maker’ – active, manipulating and exploring’ (Prigogine and Stengers, 1984, p.301). The point that they are making is that the practice of science therefore has an intrinsic capacity for questioning, and that engagement with the humanities and philosophers like Bergson and Whitehead opens up the structures of this questioning to bring its socio-

¹²⁴ There are many examples of kitchen gardens in schools, one of the most visible is a countrywide initiative by chef Jamie Oliver: <http://www.jamieskitchengarden.org/our-community/> (accessed 16-05-16)

political contexts into the frame of the practice of science itself. The humanities are therefore integral to the production of science, as is implied with the following questioning: ‘how can we consider as accidental that the discovery of time in physics is occurring at a time of extreme acceleration in human history? Cultural context cannot be the complete answer, but it cannot be denied either. We have to incorporate the complex relations between ‘internal’ and external’ determinations of the production of scientific concepts.’ (*Ibid.* p.309).

In the context of *Radical Nature*, where artworks engage with elements of science and nature in creative contexts the exhibition would seem – to a certain extent – to play out this diffusion of the science into the humanities. But I would argue that the majority of the artworks within the exhibition operate to enslave nature – whether in an intended way or otherwise – by being predicated on a number of carefully orchestrated and controlled effects. Furthermore they present creative responses to aspects of scientific processes, as opposed to becoming involved with the navigation of, and investigation into, relationships, junctures and dependencies between science/nature and human beings and culture. The artworks therefore engaged with *a priori* scientific structures, and worked to illustrate sets of pre-existing scientific circumstances within these limitations. As a result, the exhibition reinforced the subject/object dualism that underpins Western scientific rationalisation since the development of the idea of objectivity,

and the work of people like Hume, Locke, Descartes and Kant.¹²⁵ The exhibition was an encounter with a number of objects, entities and experiences that illustrated environmental problems that had arisen through these dominant structures of science, but as a curatorial strategy it maintained the principles of these dominant structures between the visitors to the exhibition and the material that was on display.

What the investigation here demonstrates therefore is that the concept embodied by the term ‘radical’ as deployed here within *Radical Nature* fell short of pursuing a comprehensive rethinking of what constitutes nature. The exhibition’s claim to encompass and reflect the urgency of its constituents artworks as responses to environmental changes since the later part of the 20th century was instead fed back into a structure – a fantastical landscape – that in itself arose as part of the structures that framed and caused these changes. The limitations of the eco-critical curating paradigm are clearly evident here, in an exhibition that proposes the display of concern for specific realities through artistic practices, while at the same time closing down the mechanisms through which these realities can be properly interrogated in relation to artistic practices, by maintaining the invisibility of the exhibitionary structures themselves.

¹²⁵ For a detailed exploration of the shaping of objectivity as the dominant position from which scientific activities are practices see Daston, L., Galison, P., 2007. *Objectivity*. New York: Zone. A critical discussion around the wider complexities of objectivity and the politics of the ways in which it made things available to social realities can be accessed in Stengers, I., 2000. *The Invention of Modern Science*, trans. Daniel W Smith. Minneapolis: University of Minnesota Press.

In using the term radical, the exhibition also referred to the shifts that artists had made in ways of working with ideas around nature, primarily in terms of a critical engagement with aspects of the way in humans exist with nature and the effects this has had on the planet's biosphere. However the exhibition did not play out as an exploration of radical possibilities for relationships between humans and nature through ways in which artists were engaging with more fundamental questions of the construction of nature as such. Furthermore it maintained a narrow interpretation of the concept of nature and artistic practice, entirely omitting conversations that artists were having at the time around topics such as biotechnology, engagement with animals and animal intelligence, and longer-term community-based endeavours.¹²⁶ The result was a display of artistic questioning of the way in which scientific and socio-political systems have deployed the entities known as nature into a silent resource that is exploited as a machine for human 'progress'. But despite the keynote essay of the catalogue referencing Guattari's *The Three Ecologies* (Demos, 2009, p.27)¹²⁷ as a useful model for rethinking processes of intersection across social, environmental and psychological registers, instead of drilling down into the wider implications of this situation, the exhibition simply brought

¹²⁶ As a small example: Brandon Ballengée, Critical Art Ensemble, Beatriz da Costa, Natalie Jeremijenko, Eduardo Kac, Rachel Mayeri, Agnes Meyer-Brandis.

¹²⁷ In this text Demos only makes one explicit reference to Guattari's *The Three Ecologies*, but he consolidates his position further in the introduction to *Third Text* Vol 27, issue 1, Jan 2013: *Contemporary Art and the Politics of Ecology*. Available at: <http://www.tandfonline.com/doi/abs/10.1080/09528822.2013.753187> (accessed 24-06-16).

into relief questions around the processes through which dominant structures organising human and non-human entities within sets of conditions had failed, without asking more probing curatorial questions about the structures themselves.

3.5.6 Summarising the relationship between the tools of the ecological and *Radical Nature*

At the heart of *Radical Nature*'s claims to explore how artists and architects were collaborating with nature is a problematic that emerges from a failure to acknowledge and interrogate what the conditions and terms of these collaborations were. The problematic focuses on an idea that through the activities of the exhibition there is an outside to nature. So there is a tension created on the one hand discussing collaboration with nature, but at the same time excluding the practices of the exhibition itself as being part of this process.

To this end, questions around the processes, circumstances, stakes and interest of the collaborating parties did not arise in the wider context of the exhibition. The exhibition's parameters worked to entrap forms of nature as a symbol representing all possible sets of conditions. In this context, Henrik Hakkanson's *Fallen Forest*, a section of potted rainforest kept alive in artificial conditions in the gallery, becomes a universal symbol for human activities in relation to rainforest ecosystems. However, at the same time –

and in a similar way to Cape Farewell's relationship to the Arctic, humans are absent, except as an audience. The diverse socio-political, environmental and economic complexities of rainforest activities are distilled into an artist's 'collaboration' with a number of trees, which are artificially kept alive as objects for a specific art audience. Seen in this context, the work comes to represent the problems with the wider claims of the exhibition.

The trees 'artificial existence maintained within the gallery only served to demonstrate a continued delusion of human control – derived directly from the socio-economic system of capitalism – over an equally delusional idea of a universal 'nature'. It was this double delusion that replicated itself throughout the exhibition.

3.6 Disassembling the eco-critical curating paradigm through the tools of the ecological

The critiques of the three case studies above demonstrate the fact that the eco-critical curating paradigm defined in chapter one is characterised by a number of contradictions that create paradoxical and politically ineffectual expressions of the term ecology, and concerns related to environmentalism. What becomes clear is that the tools of the ecological here have helped to articulate the need for curating to reform itself in relation to the term ecology and in relation to concerns arising out of environmental issues and systems of sustainable living. The eco-critical curating paradigm is caught

within a double bind of care for such concerns, while at the same time incorporating them back into the systems that have created them and which are part of the problem. The question now is, how can curatorial practices be rethought through the tools of the ecological? Can the tools of the ecological help to reformat curating, to produce forms of curatorial practice that can help to rescale realities at a planetary and socio-political level?

In an attempt to find alternative curatorial approaches that can address critical organisation and interdependencies of humans, non humans and their shared, planetary conditions of existence, it is important to understand how the tools of the ecological might provide stimuli for alternative assemblages to emerge out of specific sets of circumstances and conditions and how they might do so without simply producing another singular model of an alternative practice or reified configuration of a specific concern or starting point. Understood as disjunctive methodologies, the tools aim to generate questions and conversations that split apart existing structures of organisation, allowing multiple new lines of inquiry to open up. Such inquiries act both as critique for related dominant structures, and as agents towards the establishment of new forms of organisation and connectivities within wider realities, imaginaries and settings.

3.6.1 Re-orienting the curatorial as processes

The major shift that occurs between the eco-critical curating paradigm and the ecological-curatorial is a move from static curating practices concerned

with defining specific forms of display that encompass a discursive space for artworks, practices and conversations related to the term ecology and environmentalism, towards structural ecological-curatorial conditions that are produced through the dynamic exchange between sets of circumstances, conditions, entities, connectivities, politics and dependencies. The eco-critical curating paradigm produces static and symbolic expressions of ideas or concerns that emerge through a pre-defined discursive framework, reifying its constituent ideas.

The destabilisation of the eco-critical curating paradigm through the introduction of the structural deployment of the tools of the ecological happens precisely because the boundaries through which the paradigm is built determine the boundaries of the paradigm's conceptual content as it relates to, and is produced through, the term ecology. As such it is contingent on pre-determined approaches to the term ecology, and of the terms by which environmental issues are held together. In moving from a fixed paradigm to one of instability, interrogation, temporality and process, the conditions for more persistent and multi-dimensional questioning of the boundaries of the paradigm, and by extension, of the ways in which the term ecology operates within the paradigm can start to emerge.

In the critiques above I have demonstrated how ideas of the network and the social as elements of the eco-critical curating paradigm can be rethought through the tools of the ecological and expanded out of the boundaries of the paradigm. The final key aspect of the paradigm that needs to be

addressed through the tools of the ecological now before I move on is the concept of care. As the central ethical pivot on which the paradigm turns, it is grounded in the belief in the regenerative and affective power of art. It also becomes an idiom for a curating practice that is conditioned as a form of care concerned with firstly, urgent realities outside of the immediate field of art, and secondly the socio-political benefits of producing exhibitionary forms that address these realities, as a contribution of art to the world.

However, thinking the eco-critical curating paradigm through the tools of the ecological throws the structures of care at the heart of this paradigm into question since the parameter of this form of curating as care are superseded by questions around the meanings of care and caring itself, the socio-politics of how these concepts and practices are produced, and whose interests are at stake. Through the tools of the ecological, the imperative of care in the eco-critical curating paradigm appears as a hypostatized one-dimensional form that ignores the possibilities for wider discussion to take place around the concept of care's spatial and temporal conditions and connectivities. In this static form, as shown in the case study critiques, care connects to notions of regulated and politically-instituted care provided through ideological concepts of the welfare state and democracy and the idea of equal access to basic services for citizen well-being, and through direct and indirect providers of care such as hospitals, schools, environmental campaign groups, public cultural programmes.¹²⁸ In this form of curating practice, it

¹²⁸ An analysis of the relationships between culture and forms of care can be found in Andrea Phillips' essay, 'Too Careful: Contemporary Art's Public

sets up a dualistic relationship between care-giver and receiver that doesn't explore the wider interests and concerns that are at stake, nor the socio-political institution of care as a concept.

To explore ways in which this proceeds, I will briefly look at a number of ways in which the concept of care can be approached through the tools of the ecological. Opening up this paradigm of care to an interrogation through these tools with their imperative to examine and locate multiple interests, spatialities and temporalities, allows for a more abstract concept of care to emerge, one that is linked to wider considerations of concepts of concern, possibility and futurity. Care no longer becomes an imperative of possible ecological-curatorial forms, as it is in the eco-critical curating paradigm.

I will start by looking the notion of futurity in relation to care. Futurity here does not refer to an abstracted imaginary future as such, but to the process of imagining future realities that might be actualised as a result of the activities that are carried out in present times. These realities exist in both positive and negative forms, and can also be understood as a context where some environmental activism takes place¹²⁹. It is a projection of the effects of present day activities into the complexities of imagined realities and the practices of taking these realities into account. Care here is also understood through concern for the consequences and impacts of socio-economic

Making' in Phillips, A., & Miessen M., (eds.), 2011. *Caring Culture: Art, Architecture and the Politics of Public Health*

¹²⁹ For a interrogation of the relationship between temporalities and environmental activism see: Nixon, R, 2014, *Slow Violence and the Environmentalism of the Poor*. Cambridge, Ma: Harvard University Press

activities that are revealed and intensified through forthcoming generations. One obvious example here is the management of high-level nuclear waste in geological depositories, or highly radioactive sites such as the reactor at Chernobyl.

This idea of care as a concern for possible futures is explored by Barbara Adam and Chris Groves in *Future Matters* (2007). They argue that there is a social, political and corporate amnesia when it comes to planning for futures through short-sighted planning and policy-making that does not take into account the effects of past actions nor the possible futures that are being created. They propose that care is the ‘basis of ethical engagement with others’ (Adam & Groves, 2007, p.154) that is conducted through two concepts of the future, the lived future and the living future. Lived future refers to the ways in which the human projection of the self constitutes lived experience. The idea begins from Martin Heidegger’s notion of *Dasein* and draws on his notion that the human experience of the world is a ‘thrown possibility’ (*Ibid.*, p.126) that, the authors claim, produces ‘a sense of being cast into the midst of a world that is already loaded with the interpretations and meanings into which the possibilities of others have coalesced before we were born. (*Ibid.*, p.126). This means for Adam and Groves that no-one can ever be outside of the ‘active interweaving of the past present and future of a collectivity within which the significance of the world is experienced’ (*Ibid.*, p.126-7). As a result, human beings’ necessary and intrinsic involvement in the world means that ‘our most human feature is that we care about the world’. (*Ibid.*, p.127). The act of caring is part of the lived

future of human beings. ‘Living futures’ by contrast are the ‘flows of potential’ within entities – human and non-human - that can come into being (or not) through the specific configurations of circumstances. The processes of doing this do not constitute acts of ‘colonising an empty future’, rather they say, if the future is ‘virtual, projects and therefore real, we are its artisans rather than its architects ...and [our] relation to the future of the objects of ...concern is one of care’ (*Ibid.*, p.140).

While Adam and Groves do not address the socio-political, economic and spatial complexities that govern decisions around the activities of individual, groups, governments and international organisations and do not offer any tangible strategies for deploying their approach to care, their focus on care as being constituted through process, and as having a futurity plays an important role in helping to understand how the tools of the ecological operate. Where these forms are identifying modes of care and caring within social realities, the concept of care as a projection of concern towards future scenarios also lays the foundations for an unpicking of these situations, their past activities and future scenarios, as well as revealing the inherent instabilities in the precarious relationships of power that are embedded in notions of care, as well as proposals for possible alternatives.

A concept of care as understood through the tools of the ecological might therefore be rethought as the process of instigating on-going investigations into the socio-political and economic practices that aim to sustain, dis-conceal, manage or ameliorate circumstance of individuals, groups or non-

human entities, for example natural ecosystems, animals or buildings, both in terms of how they affect present communities and might affect future communities. They might embody creative research practices that investigate and excavate social realities concerned with ways of organising and maintaining day-to-day living, and be embedded within particular social realities where they engage with particular temporal, spatial and socio-political conditions. In the context of artistic and cultural practices, the tools of the ecological allow the concept of care to be opened up to possibilities for producing critical strategies that address urgent questions about ways in which the relationship between concerns and curators are played out in artistic practices and their socio-political contexts. Through the tools of the ecological therefore, the notion of care can exist as part of more nuanced and unstable sets of concepts, propositions and ideas both in relation to art and otherwise, as it is produced through the parameters of questions, rather than as an imperative that prevails within a pre-defined set of socio-political relationships.

The tools of the ecological perform ruptures in the concept of care as it relates to the act of curating within the eco-critical curating paradigm, and the focus shifts onto the notion of care itself and its multiple forms and contradictions, not just its relationship to curating. So the notion of care that is embedded in the eco-critical curating paradigm is not simply modified through the tools, but rather the tools of the ecological produce frameworks out of which new concepts of care are allowed to emerge, frameworks that are not dependent on the relationship between art and its audience.

What this demonstrates about the tools of the ecological - and this will be taken up in the final chapter - is that they act as devices to open up a discursive space around a concern; they are not illustrative devices of a form or forms of the term ecology. Their aim is to force a rethink of connectivities around a concern or set of concerns that leads to new forms of actualisations.

3.6.2 Curating and culture

A key imperative within the eco-critical curating paradigm concerns the production of new artistic forms of knowledge, where exhibitions are producing knowledge objects, relating to artistic intervention through uses of the term ecology, which have their roots in an imperative to care for the related concerns. The tools of the ecological, by contrast, shift the emphasis away from knowledge as objects of care to be displayed, viewed and experienced, towards situations where actors are engaged in activities that are generated through - and are concerned with generating - conversations about ways of knowing the concept of care. Importantly, they are not pedagogic as such, but are concerned with embodied ways of knowing produced through their activities. That is not to say that the discussions that might emerge through these activities are not transferable between and across other assemblages, but the point of moving from displaying and acquiring knowledge to activities of doing, making and knowing is to find

ways of embodying experiments and practices that are porous and continuously subject to change.

The movement from producing knowledge objects displayed as forms of care, to active processes of doing, making and knowing also raises another question around the question of the term culture. If, when seen through the tools of the ecological, curatorial practices become hands-on, heuristic activities that do not resemble traditional forms of art, and which might be actively located outside of traditional art frameworks it also opens up the notion of culture to a investigation around its meaning and constitution. After all, Guattari's ethico-aesthetic paradigm does not necessarily refer to art.

All of the projects described above start from a position of culture as being the production of intellectual achievements such as visual art, literature, film, theatre, music. Whereas they (rightly) begin from a position where culture is seen to be part of the response to climate change – as Cape Farewell says, 'climate is culture', and it is also at the heart of Art and Ecology – they do not ask crucial questions regarding what is meant by culture here, who makes culture and for whom and how does culture change. Bound to a universalised and specific idea of culture, these projects are limited in how they can make the changes to which they aspire. They overlook the fact that in order to connect the everyday reality of climate and environmental issues to culture, it is also culture that needs to be opened up. The tools of the ecological can start to open up the possibilities for this line

of questioning and in this thesis the terms for understanding culture are broadened, and as described in the introduction are framed in terms of the behaviours, traditions, rituals and attitudes and collective knowledge of groups and individuals – this can include, but is not limited to art. This is because it is through these activities that opportunities for the interrogation of connectivities and structures can take place, and it is where structures are formed and levels of power operate. These activities produce locations where alternative socio-political relationships and structures can be produced, and its is activities that take place at these points that can start to address the complexities of the situations related to environmental issues and climate change.

In this these therefore culture is not solely located within a set of globalised systems defined through specific forms of practice. Rather I follow Appadurai's attempts to understand culture as localised, dissensual, relative, leaky and generative. But most importantly, Appadurai argues, culture is orientated towards futurity, by which means that culture needs to be located in positivistic forms that emphasise the aspiration of future possibilities (Appadurai, 2004, p.60). Culture here therefore emerges out of a much more diverse sets of activities, practices and connectivities that expands out of the confines of the exhibited culture that forms the basis of the eco-critical curating paradigm.

This is where the tools of the ecological are most important. By acting upon, and getting involved with sets of concerns, the tools open up discussions

around constituent terms as well as circumstances. However, what will become clear is that while the elements of the eco-critical curating paradigm might be rethought through the tools of the ecological, the aim of this research is not to produce a new paradigm or model for curating, but to propose that the tools of the ecological assist in the process of rethinking the socio-politics of form-structure-content relationships – in this case that of curating and by extension the curatorial – as constitutive unfolding intellectual and practical inquiries into the organisation of culture in its broadest sense. In this way the tools of the ecological can be seen to operate as part of a broader set of questions that aim to bypass and critique wider dominant structures through which resources, materials, land and people are organised and connected.

In the case of curating therefore, the tools effectively destroy one form of curating – that of curating *about* ecology – and propose another. The following chapter will look at how this takes place, and what alternative forms unfold as the ecological-curatorial.

CHAPTER 4: FORMS OF THE ECOLOGICAL-CURATORIAL

4.0 Deploying the tools of the ecological

Through the critiques of the case studies in chapter three, this thesis has so far established that curating practices that engage with the term ecology and environmental issues within art frameworks need to change for two main reasons. The first is that the term ecology is unstable and problematic in itself as a category of knowledge, as outlined in chapter two, and the second reason is that curating practices that create thematic curated projects that reach out to concerns relating to everyday realities are necessarily undermined by the fact of their own autonomy within the circuits of contemporary art worlds, in which they exist as practices distinct from everyday reality.

Additionally, they are inextricably linked with the dominant flows of contemporary art and their intersecting and dependent relationships with the art market and wider economic realities. Such projects, as I have outlined, are hence caught up in a double bind where their practices and intentions are attempting, unsuccessfully, to exit the conditions under which they are produced while at the same time being caught up in ethical questions arising out of their relationship with resources used and wider environmental issues. These points have all been clearly illustrated through examinations of Arts and Ecology, *Radical Nature: Art and Architecture for a Changing Planet – 1969-2009*, and Cape Farewell.

The thesis has also established that the term ecology emerged as a direct result of the dualistic relationship formed through the historical development of scientific inquiry, and the fact of its role in the service of the expansion of the capitalist economy. It has also discussed how, in the latter part of the 20th century, scientific ecology's capacity for highlighting cause and effect within specific environmental situations and within various systems of the organisation of humans and non-humans also meant that it became harnessed to describe efforts to find alternatives to this dominant economy, trying to operate on a 'holistic' or planetary level. I have argued therefore that the term ecology needs to be abandoned as a critical term, proposing the tools of the ecological as possible alternative methods that can be deployed to find ways to navigate the tangled relationships between humans, non-humans, environments and the dominant socio-political and economic systems in which they are organised. The tools of the ecological do not operate as 'anti-capitalist' per se, they aim to allow for new structural forms to emerge, not as critique, nor as an exploitation of the system, but as forms that may find gaps or junctures through transversal activities, and which do not consciously set out to create a dialectical relationship to the system. Finally, I have established that the term culture needs to be thought of in broader terms than those through which they are considered within the projects of the eco-critical curating paradigm.

The aim of this final chapter therefore is to demonstrate how the tools of the ecological identified in chapter two can be used to establish a radically different approach to curating as practices that instigate and articulate

resilient¹³⁰, collective, and accountable forms of activities of organising, making and doing in response to specific conditions and socio-political contexts. The first thing to emphasise is that in these situations, the aim is not to reify or arrest the term ecology within the type of content being produced as has been outlined and discussed through the case studies in chapters one and three, but rather to establish exactly how the ecological-curatorial embodies processes and activities out of which alternative cultural practices and forms can unfold and emerge.

The ecological-curatorial will be articulated as processes of making and doing where the tools of the ecological are taken into account as the structural instigators of curatorial forms. These are therefore not environmental, nor do they relate to other ‘green’ ideas that might emanate from conventional interpretations of the term ecology. In the processes of unfolding the structural possibilities introduced by the tools of the ecological a shift takes place, from curated content deploying notions relating to the term ecology, towards more experimental ‘ecological-curatorial’ forms that come into being through a wider questioning of the specific concerns, that bypasses the connectivities framing dominant modes of curated forms. Here, the concern is not what the projects are ‘about’ as such, but rather through what processes these curated forms come into

¹³⁰ The term resilience, while often used to describe the ability of individuals and organisations to successfully subsist within the dominant structures of capitalism, is used here to refer to the ability to develop strong networks and structures that are mediated outside the circuits of capital. Resilient connections might be understood as long-term, productive connectivities that are not solely based on the exchange of labour or goods for funds and capital, the production of profit, or issues relating to these.

being, where their interests lie, and what role they perform in the network of realities in which they are located.

To clarify, what this changes for curating is that questionings of form, organisation and production will take equal roles alongside the questioning of the subject matter of a project. By the same token, the function of the idea of the ecological within the context of the ecological-curatorial, shifts from characterising a subject for discussion towards the framing of set of structural and philosophical provocations that force questions about ways in which connectivities are made between settings and subjects, within the context of curated forms and possibilities.

The case studies below present forms of organisation that are sometimes related to art and visual culture, but which through their practices ask fundamental structural and socio-political questions about the ways in which sets of concerns are addressed and located and the ways in which the activities around these concerns form connectivities with groups and individuals, and lay bare the interests behind their activities. Assisted by texts from Maurizio Lazzarato and Felix Guattari, I will argue that their practices are underpinned by the kind of questions that form the tools of the ecological and such practices enable them to construct new possibilities for critical intervention within everyday realities, and that through these practices they are extricated from what Lazzarato would call, ‘the serialised and standardised production of subjectivity’ (Lazzarato, 2006). I will also highlight the ways in which these examples re-organise connectivities

between shared interests and concerns, structures and aims, producing a network of what might be called ‘planetary’ subjects.

4.1 Rehearsing the curatorial

The tools of the ecological are pragmatic tools rather than principles, and as such, their deployment takes the form of methods that activate connectivities. It should be noted that the case study projects explored here are projects that do not start from positions of privileging representation or exhibitionary forms. Two of the projects – MayDay Rooms and R-Urban – do not intervene directly within artistic contexts as such. Another project, Communal Knowledge, operates a reorganisation of gallery educational practices through constituent activities; and finally, Ultra Red, while being produced by artists, uses sound as a way of articulating community constituencies that bypass the exclusivity of visual representation. What all these projects do however is to ask rigorous questions about the relationships, interests and dependences that drive their aims, activities and the contexts within which they find themselves operating. As a result, they work towards reorganising routines, processes, and habits, producing assemblages that seep out of the boundaries of their fields of concern, to form more complex relationships with social and political realities that belie and elide these dominant curatorial and socio-political structures.

In order that forms of the curatorial can continue to engage with realities that exist outside of art worlds, while avoiding the problem of those realities being recuperated back into those circuits of contemporary art, the

frameworks of the curatorial need to have been already defined outside of these circuits. This happens through the convergence of curating and the tools of the ecological.

But how do the tools of the ecological alter and generate new curatorial forms by asking questions about the constitutive processes that structure existing concerns? To address this, the case studies will explore how the curating practices are no longer defined by the circuits of art, and the tools of the ecological frame those practices through terms that question the interests, locations, agencies, instabilities and temporalities of the concerns addressed by the curating practices. This shift in the curatorial, while having some intersections with the philosophical concepts of the curatorial,¹³¹ as developed in Jean Paul Martinon's edited volume of texts, *The Curatorial, A Philosophy of Curating* (2013), does not aim to build a new philosophy for the curating of art. In Martinon's schema, the focus is on exploring the meaning of the concept of the curatorial 'without necessarily entrenching it within a particular discourse, discipline ... field of knowledge ... or ideology' (Martinon, 2013, p.4). However the curatorial in Martinon's text remains wedded to the circuits of art, proposing alternative models of negotiation through these circuits and outlining strategies that frame

¹³¹ In his essay, *Theses on the Philosophy of Curating* (2013), there are two main points at which Martinon's notion of the curatorial intersects with the notion of the curatorial that is being developed here through the tools of the ecological. Firstly, an intersection takes place at the points at which the terms of the curatorial are broadened to explore alternative forms of engagement between knowledges, the social and forms of display. Secondly another point of commonality between the two versions takes place through the disengagement of the term from its relation to the production of exhibitions in variations and extensions of the white cube format.

continued encounters with art. Despite this, the book sets up a number of useful platforms which can be used as departure points for thinking the curatorial, even if the curatorial is outside the circuits of art. The aim is to encourage ways of thinking the curatorial that transcend the structures of its conventional forms, and to complicate lines of demarcation around which curated forms exist, placing the curatorial and thought in a continual ‘interdependence that is irreducible’ (*Ibid.*, p.31).

4.2 Activating originating processes to produce forms of the ecological-curatorial

The curatorial practices that have been examined through the case studies in chapters one and three place the work of the curator in specific pre-aligned artistic and cultural contexts and temporalities. Some of the works that have been part of these curatorial projects, such as Newton and Helen Mayer Harrison’s *Full Farm*, or EXYZT’S *Dalston Mill* appear to blur the boundaries between art and everyday realities, presenting more porous project frameworks that at first look could be seen to be forms of the ecological-curatorial. As events that are engaged with social realities outside of the art world, they would already seem to have formed alternative structures that explore questions of food sustainability and the relationship between production and locality, that also appear to exit art world circuits to a certain extent. These are important questions to address, so before I explore alternative case studies, I will briefly use *Dalston Mill* as an example to clarify the distinction between the eco-critical logic of projects like *Dalston Mill* and the examples that follow.

4.2.1 *Dalston Mill* revisited

In many ways EXYZT's *Dalston Mill* with its working mill and bakery, which serviced a café and social centre, seemed to present a break with the eco-critical curatorial paradigm outlined in chapter one, where curating projects relating to the term ecology are understood through their authored constituent content relating to that term, rather than a wider investigation into the term itself. This break appears to start from the fact that the project was a working bakery - albeit on a small scale - that produced goods for sale in the café, along with the fact that it became integrated into the everyday life of its locality, raising questions about how disused spaces could be repurposed for use by local groups and individuals in that area.

In a spatio-temporal sense the project deviates from the paradigm in a number of key ways. Firstly as a re-staging of Agnes Denes' artwork from 1982 it created an historical bridge between the original work and its contemporary interpretation. Secondly, it engaged with many all stages of the food production and delivery process on one site - in contrast to the dispersed structures and time scales of food production and delivery. Thirdly, the project occupied and changed the use of a plot of land, and in so doing, created a space that also enabled individuals and groups to take part in activities that engaged with concerns relating to alternative patterns of food production and living, as well as introducing a discussion about how the space itself might be used when the project had finished. The project

also produced a community by bringing local people and groups together in activities related to the activities of the bakery – for example through its baking classes as well as through activities that related to the flows of production that it established through the bakery.

While the project was received with both popular and critical acclaim, and inspired the council to rethink the way it used the land, there are also a number of issues that need to be taken into account when considering its relationship to the term ecology as outlined in earlier chapters. While the project was an actual intervention that produced a set of specific social circumstances, this sociality was a ‘commissioned’ reality, in the sense that its reason for being there derived from a wider curatorial directive of the *Radical Nature* exhibition and the RSA/ACE Arts and Ecology programme.

In this sense therefore, the project’s structures were a pre-determined framing of alternative reality, that, while taking the form of a social experiment, aimed to produce experiential outcomes in its audiences, rather than deeper structural outcomes relating to the production of food, or indeed the regeneration of space in that part of Hackney. As EXYZT said, it was designed to ‘reconnect local residents and visitors from other areas with community-based activities. It also sought to inspire community spirit and care for the local environment’.¹³²

¹³² See documentation and discussion of the mill by at: <http://eco-publicart.org/dalston-mill/> (accessed 24-06-16)

4.2.2 Deconstructing *Dalston Mill*

It's helpful here to look at how the concerns relating to *Dalston Mill* might be treated differently through the tools of the ecological and how the tools change the trajectories of the project. Taking its central concern as the relationship between production and consumption of food in relation to place and locality, an inquiry that develops through the tools of the ecological, with their focus on the acknowledgement of multiple temporalities and interests, inherent instability in assemblages, and interrogation of the parameters through which communities and connectivities are produced, might unfold sets of questions that focus on for example, the development of new cycles of food production within the area, an inquiry into the establishment of a permanent bakery or food production site, or practical workshops looking at relationships between food, production and locality. Instead the project's social aims were tied to the wider curatorial frameworks and imperatives of the exhibition, and of the curators who commissioned it. The project ended up as in effect, a representation of ideas it was trying to embody. To reiterate, since the project's aims and conditions of production were rooted in the theoretical framings of nature and environmental issues of *Radical Nature: Art and Architecture for a Changing Planet*, the project origins were not directly a response to the socio-political and environmental concerns that were specific to its location. Furthermore, while the project's success resulted in a permanent public community urban garden, the project's 'pop-up' mode of ad hoc art intervention served to amplify the narrative of 'Creative

Hackney' that has long been used as part of strategies for attracting investment and regeneration in the borough.¹³³

The short-term nature of the project also meant that the processes and flows of sowing, growing, baking and consuming integrated into the project were not fully reflected within the practices of the project itself. In *Dalston Mill* for, example, the wheat was delivered ready to harvest so that the bakery could go into immediate production, as there was only a three-week window for the project to be open to the public. The mill and the wind turbine were also supposed to generate electricity for other functions in the bakery. However, in reality the amount of electricity generated was so small that the project had to be connected to the national grid in order to function properly. These details highlight the ways in which *Dalston Mill* became a project about issues relating to ecology. By contrast, if it was a project produced through the tools of the ecological, the focus might have been both on the parameters and connectivities of the project's commissioning and context, as well as wider relationships between the site, its history, socio-political context, the activities taking place and their wider relationships to the locality and food production methods and the relationships between the site and individuals and groups who engaged with it. In its status as a commissioned experience within an artistic context – while nonetheless very amenable and not entirely without its critical dimensions and activities – the project missed out on a wider opportunity to

¹³³ See <http://investinhackney.org/creative-hackney/>
<http://mrzine.monthlyreview.org/2011/millar020811p.html> (both accessed 20-06-16)

open up a more nuanced conversation about its own role as both a socio-political intervention and affective experience.

4.2.3 *Dalston Mill* as eco-critical logic

This is where *Dalston Mill* can be said to have upheld the logic of the eco-critical curating paradigm. While the project had an art-historical dimension, was connected to local communities, and explored the development of a cycle of production from the harvesting of the corn to its milling, baking and selling, it was ultimately a temporary event that offered a pre-determined, affective experience within the sovereign critical framework of the exhibition. It did not aim to establish anything long-term out of this, for example the possibilities of continuing and developing these activities within a different experimental framework within the site. The project did have a long-term effect, however. Responding to its success, the local authority commissioned a community garden for the space, known as the Dalston Curve Garden,¹³⁴ but this is still subject to the vicissitudes of the land requirements of the local council.¹³⁵

Lack of resilience could be seen as a problematic inherent in the curatorial framework within which the original project was produced, in its incarnation as a short-term instrumentalisation of an idea, but not in itself an

¹³⁴ See: <http://dalstongarden.org> (accessed 20-06-16)

¹³⁵ <http://hackneycitizen.co.uk/2015/12/17/hackney-council-dalston-cultural-quarter-not-for-sale/> (accessed 21-06-16)
http://www.hackney.gov.uk/Assets/Documents/Richard_Lee_02.pdf (accessed 21-06-16)

instrumental project. This emerges from its position as a singular commission that responded to a number of ideas relating to the term ecology and environmental issues through the remembering of Denes' artwork, rather than it being a project that started from a focus on contemporary structural questions that might have been partly inspired by Denes' artwork but which might also relate to, for example, urban agriculture and its relation to contemporary cultural, and economic systems, and urban resilience.

In contrast to the authored curatorial frameworks and motivations of projects like *Dalston Mill*, the following case studies demonstrate how the tools of the ecological help to draw structural relationships and points of movement out of sets of concerns that can bypass dominant socio-political and economic circuits. They reveal that the tools of the ecological do not set out to act on pre-existing structures, but to aid the development of alternative forms by enacting a rigorous interrogation of the concerns at hand, rather than framing these concerns within existing curatorial structures.

4.3 Introducing the case studies for the ecological-curatorial

Before I continue I would like to briefly rehearse a number of points about the following case studies. The first is that the projects described here are not contemporary art or curating projects, nor are they concerned with the display of art. Equally they are not designed to be presented as temporary

events to an audience. Instead, all these projects that have their own instrumentality and goals that are directly connected to the concerns they address. In this positioning, they form their own specific location and connectedness to everyday realities and the networks.

The second point to make about these projects – and this differs from the first point, despite its apparent similarity – is that they are curatorial, but not in the sense that they are concerned with the display of art, or accessed through an exhibitionary event, or are produced through the systemic operations of contemporary curating as I have described them in chapter three. Curating is no longer understood as activities related to organising exhibitionary framings of artworks, but is acknowledged as practices of organising that emerge out of specific concerns. The questions asked by the tools of the ecological explore the curatorial as active processes of positioning that emerge through the interplay of forces generated through collective activities – according to what Keller Easterling characterises as ‘active form’.¹³⁶ Through the case studies, the curatorial will be re-established as collective processes of reinvention, as Jenny Doussan says, ‘active embodied cognitive experience’ (Doussan, 2013, p.88).

Curating therefore becomes constituted through practices that, through specific concerns, activate possibilities for thought and action to develop new modes of engaging in collective responsibility in the world. The tools of the ecological have been devised to be understood as ‘active’ thought

¹³⁶ Easterling, K., 2012. An Internet of Things, *E-flux Journal*. No. 31, p.3. Accessible at: <http://www.e-flux.com/journal/an-internet-of-things/> (accessed 10-05-16).

provocations. Each tool is an interrogative concept that acts as a motivator to tease out actualisations of processes and connectivities and bring into form alternative and productive assemblages for interests, actors and entities that are unaccounted for, suppressed or overlooked in existing assemblages and dominant structures of reality. The activities generated by these practices are at the heart of this newly configured form of the curatorial. What is common to them is that they all begin from a set of concerns that are rooted in everyday realities, and all interrogate these realities through activities that exist both inside and outside wider contexts of their existing concerns, of which art may be one. Some of the projects propose alternative modes of engagement with existing formats that are already established within artistic organisation. Others propose modes of micro-sociality through points of engagement for communities, groups and individuals.

Here we might aim to understand the act of curating not as Jean Paul Martinon says as 'the event of knowledge' (Martinon, 2013, p.26), but rather as 'processes of organisation'. Through these processes, activities are not carried out for the purposes of drawing an audience, but for the purposes of engaging groups and individuals in articulating alternative worldly realities, in acts that motivate collective responsibility to produce new, on-going forms in the world. Aesthetic engagement happens contingently, through the terms of Guattari's ethico-aesthetic paradigm where the aesthetic appears as point of transversality, at points of multiple intersectionality, rather than being reified within the project. It is here that social transformation can be understood as happening, through the activities

of the project, rather than through an audience's affective reaction to objects or experiences produced.

The final point to make about the projects here is that they are not produced as mechanisms of critique of existing forms of contemporary curating, nor as propositions that are framed as escape or elision from modes of contemporary curating. Rather they are inaugurated as ecological-curatorial responses to concerns within everyday realities, where the response acts in a connected, instrumentalised way, losing its speculative 'horizon' and existing as theorist Stephen Wright might suggest as 'a context dependent set of tools, energies and competences'.¹³⁷

Each case study therefore, acts as an experimental framework for a proposal for a form of the ecological-curatorial. They are examples of practices that explore and question socio-political connectivities within dominant systems and structures, and which sometimes consider ways in which social and political forces that are currently ignored or overlooked might interplay to create new forms that originate and manifest in social and aesthetic realities. The aim is to extend a wider political debate around what role the curatorial can play in the production of resilient, cooperative structures and sustainable realities, which may be unaligned to art, but where art might come into its orbit.

¹³⁷ See <http://northeastwestsouth.net/then-you-disappear> (accessed 13-06-16)

There are four case studies: the urban agriculture project in Colombes, France, R-Urban; the *Communal Knowledge* programme of The Showroom Gallery in London; the work of the radical archive MayDay Rooms, and the practice of art collective Ultra Red.

4.4 R-Urban

4.4.1 Harnessing the force of the virtual

At the end of Rosa Braidotti's lecture *Thinking as a Nomadic Subject*, during which she outlines key concepts behind her work on the post-human,¹³⁸ she makes an impassioned claim for sustainability, declaring that in its constitution, sustainability is about 'sustaining the possibility of life-assemblages that open up to the force of the virtual in order to make the present sustainable'.¹³⁹ The virtual, as she references it here, follows Deleuze's conceptualisation which he outlines in *Bergsonism* (1988) as being 'a unity, simplicity, or virtual totality' (Deleuze, 1988, p.95) and the 'Whole' (*Ibid.*, p.93). Deleuze's idea of the virtual, thought in relation to the notion of the sustainable is useful in beginning to approach the work of the urban agriculture project R-urban, so I will briefly outline it here. The virtual for Deleuze, 'has parts....but only potentially' (*Ibid.*, p.93). The coming into being of these potential parts is understood as actualisation, and in this sense the virtual can be understood as being what we might call the 'source' of the actual. As such, the virtual whole needs to be understood not

¹³⁸ ICI Berlin in Oct 2014. See: <https://www.ici-berlin.org/event/620/> (accessed 12-03-16)

¹³⁹ *Ibid.* note 1

as a perceptible whole, but rather as a ‘totality in the process of dividing up’ (*Ibid.*, p.94). These processes of division are able to produce new assemblages that, while being connected to and carrying traces of their virtual origins, are at the same time differentiated from it. This happens through the process of actualisation which creates ‘its own lines of actualisation in positive acts’ (*Ibid.*, p.97), but where, in its division and actualisation, these acts enter not into relationships of ‘association and addition’ but into relationships of ‘dissociation or division’ (*Ibid.*, p.99).

Deleuze sets out a key distinction between the virtual and the possible. While the virtual can be understood as the totality of the whole which can be actualised into realities, the possible has ‘no reality’ (*Ibid.*, p.96). Deleuze argues that the possible is realised in the image of the possible, and that ‘every possible is not realised, realisation involves a limitation by which some possibles are supposed to be repulsed or thwarted, while others ‘pass’ into the real’ (*Ibid.*, p.97). By contrast, the virtual is not *realised* as such, but actualised, and ‘the rules of actualisation are not those of resemblance and limitation but those of difference, of divergence, and of creation’ (*Ibid.*, p.97). The distinction can be clarified by thinking of the actualisation of the virtual as taking place in a non-teleological manner, with no pre-existing directions, but rather as being ‘created along with the act that runs through them’ (*Ibid.*, p.106).

As Simon O’Sullivan points out in his 2010 essay, *Guattari’s Aesthetic Paradigm: From the Folding of the Finite/Infinite Relation to*

Schizoanalytic Metamodelisation (2010), the virtual needs to be understood not as a 'transcendent realm above the actual, but is its very ground, the stuff from which the actual is actualised' (O'Sullivan, 2010, p.265). It is helpful to take this idea of actualised forms stemming from a virtual whole when thinking about the forms of urban agriculture practiced by R-Urban. Indeed, this process of exploring forms of collective spatial production that offer alternatives to the structures that arise out of the globalised corporate networks that dominate production and spatial arrangements is one of grounding principles of R-urban, and of Atelier d'Architecture Autogérée (AAA), both founded and run by Doina Petrescu and Constantin Petcou.

4.4.2 Practices and Activities of R-Urban

R-Urban explores alternative ways to organise modes of living, producing and consuming in cities. It looks at ways of creating reciprocal systems of local production and consumption, building networks of solidarity and knowledge, rethinking living practices and ways that they are connected to, and interdependent on, local and wider frameworks. Its activities are focused on experimental structures and practices that work towards the realisation of community needs. They consider how these needs can be met by practices set up through mutual relationships formed under principles of non-hierarchical organisation that aim to construct non-exploitative ways of managing and stewarding land and resources.

The project frames local conditions for the reproduction of living in terms of cycles, flows and spaces that are exceptional to the time-space compression of capitalist production that David Harvey described in *The Condition of Postmodernity* (1991). The rhythms of towns and cities are for the large part dominated by wider connectivities to globalised capital and subject to its ebbs and flows, and the project in Colombes locates spaces where these dominant flows can be bypassed, transforming three sites into an agriculture unit, AgroCité, a recycling and eco-construction unit, RecyLab, and an experimental housing unit, EcoHab.

AgroCité consists of a micro-experimental farm, community garden, composting and rainwater recycling centre, educational and cultural space, and energy production devices (for images, see appendix iv., figs. 1, 2, 4, 5). RecyLab is constructed around equipment used for the recycling of urban waste and subsequent transformation into materials of construction (for image see appendix iv., fig. 3). EcoHab is a residential unit with seven social flats, researcher/student residence and community spaces that can be partially self-built. The practices of R-Urban in Colombes, as with all AAA projects, are focused around the development and stewardship of the day-to-day running of these spaces. There are regular events, where knowledge and skills are shared, a community café, where meals are cooked from the farm's produce, a shop where produce can be purchased, as well as cultural events and discussions. With its multiple connected activities and structures of self-organisation, the aim here, as Petrescu and Petcou state in their essay R-Urban Resilience in *Atlas: Geography Architecture and Change in an*

Interdependent World (2012) is to start to ‘disassemble’ the dominant structures that organise systems of living: ‘To slowly escape from the generalised footprint of the neo-liberal economy, which has excluded all other forms of material and symbolic exchange, we must dismantle one by one our ties to the market system and go out of the system to make change possible.’ (*Ibid.*, p.68)

The project receives its financial support from the European Commission’s *EU Life* programme, which supports environmental, conservation and climate action projects throughout the EU.¹⁴⁰ Project partners include the Mairie of Colombes, Conseil General Hauts de Seine, as well as local community and cultural organisations including, Myvillages, Public Works, and artists and writers including JK Gibson-Graham and Fernando Garcia-Dory. The wider investigations of R-Urban were initiated in 2008, with its implementation in Colombes beginning in 2011, and at the time of writing in June 2016 the project is still in operation.

4.4.3 Creating reciprocal forms

While a number of smaller R-Urban experiments have been set up in Paris and London, the programme in Colombes is the most ambitious and is closely integrated into the wider culture of the town. Colombes, a suburban town outside Paris of around 84,000 inhabitants was chosen as a site for the project because of its long history of active civic engagement. In its

¹⁴⁰ See: <http://ec.europa.eu/environment/life/> (accessed 14-03-16)

broadest practical and conceptual sense, R-urban aims to respond to needs faced by societies across the world to maintain and develop habitable and productive communities that are sustainable and resilient. The idea of resilience here is understood as the strength of connectivities that are made between the community and the resources available to it that are not dependent on free market economic principles. It looks at ways of creating reciprocal systems of local production and consumption, building networks of solidarity and knowledge, rethinking living practices and how they connect to, and are interdependent on, local and wider frameworks.

To this end, amid questions about how possibilities for alternative sustainable forms of production can be engendered, the project is built around principles of recycling, reusing, repairing, rethinking routines, exploring a number of key questions. Firstly, how can a socially-oriented economy that is not dependent on the global market be constructed? Secondly, how can progressive practices and sustainable lifestyles be initiated while acting locally? And finally, how can cultures of sharing and collaboration be reactivated in a world that promotes individualism and competition? In addressing these questions, R-Urban has set up cycles of collective activities that aim to engage individuals and groups across different levels of organisation and assemblage: the domestic, neighbourhood, city and regional. Each level addresses key areas of human activity that 'define the contemporary urban condition'. (Petrescu, 2010, p.142), encompassing housing, economy, agriculture, culture and mobility. This is achieved by setting up what the project calls 'locally closed

ecological cycles' that are firstly concerned with the material of living including the management of water, energy, waste and food, and secondly the immaterial, in the form of skills, social economies, cultures, and self-organising.

4.4.4 R-Urban and the tools of the ecological

As a critical practice, the project can be seen as being the closest out of all the case studies in this chapter to some of the motivations of the curating case studies outlined in chapter one. It is a response to the effects of existing capitalist relationships between human activity and the Earth's resources and refers to its practices as ecological in the sense that they are about the reciprocal relationships between the land and its inhabitants. However, there are a number of important structural differences in R-Urban that align it with the questions that frame the tools of the ecological. The first difference is that the project is not an art project in the sense that it has not been brought into being through the frameworks of art commissioning and production, and has not been commissioned as part of a curatorial programme. It is part of an on-going initiative that arises out of a set of specific concerns relating to the production of food and the use of space within urban environments, and interrogates ideas around these concerns, exploring how architecture can make sustainable interventions in such settings. As Doina Petrescu - one of the project's founders - points out, the project is not only about sustainability but also about 'societal change and

political and cultural reinvention, addressing issues of social inequality and power and cultural difference (AAA, 2014, p.5).

R-Urban operates as a on-going cultural practice, embedded in the town and aiming to ‘retrofit’ urban areas with ‘efficient new models of ecological living’ in the absence of government policy and large organisational intervention. (Petrescu, 2010, p.138). The key structural differences to the case studies in chapter one that I will discuss here are the project’s relationships to time and its modes of organisation. Firstly, I will look at how R-urban sets up multiple flows of temporalities and associations that help to create spaces where practices and solidarities can be built away from the dominant temporalities of production and consumption. The aim is to articulate how the unfolding of these temporalities exemplifies an ecological-curatorial aspect of the project. Secondly, I will explore the project’s forms of organisation and its methods of direct intervention that generated new activities in previously unused physical spaces in Colombes and how this sets up both a living experiment and a stage for dialogue. The project exists both as a cultural endeavour that is to a certain extent exceptional from dominant cycles of production, consumption and habitation within urban settings, but at the same time it exists as an actualised alternative to these dominant cycles. I intend to outline how the project exists as a form of what Guattari would call an ethico-political and aesthetic ‘ecosophy’, that, ‘[r]ather than being a discipline of refolding on interiority, or a simple renewal of earlier forms of militancy...will be a multi-faceted movement, deploying agencies and dispositives that

simultaneously analyse and produce subjectivity.’ (Guattari, 2000, p.68). I conclude with the proposal that R-Urban might be seen as a form of the ecological-curatorial that explores a pragmatics of the relationship between its actuality as a sustainable mode of production, habitation and consumption, and its virtuality as modes of organisation that produce new subjectivities that do not exist as critique of dominant socio-economic structures.

The project’s activities include DIY workshops, music making, discussions and debates, gardening, cooking, and pedagogy, and individuals and groups who are engaged in the project work across multiple forms. Their diversity becomes a way of enabling individuals to get involved in different kind of production and encourages interactions across different areas of production. Activities therefore become hybrids with actors and groups engaged across these hybrids – in for example learning and deploying new techniques for managing resources such as energy and water, or designing and building new structures for dwelling, growing or leisure – creating porous boundaries and situations where knowledge is transferred between activities. The activities are organised out of each modular unit of the project, i.e. through the Recyclab, Ecohab and Agrocité. The Recyclab functions as a social enterprise that reuses salvaged material as eco-construction elements for self-building. It also organises activities like the RepairCafe where individuals can bring broken household items and get help repairing them, and equally can share their repair skills. As well as running units of urban agriculture, Agrocité runs skill share workshops, where local residents can

for example get involved in beekeeping, or learn cooking skills, as well as getting involved in the day to day running of the agriculture units. Ecohab is involved in the development of eco-materials for building construction in collaboration with Recyclab, as well as the construction of a number of experimental dwellings for temporary and permanent use.

4.4.5 Future aspiration

In his essay *The Capacity to Aspire: Culture and the Terms of Recognition*, Arjun Appadurai discusses the relationship between culture and the future, arguing that culture is often defined as being related to the past – through habit, custom, heritage and tradition, as a counterpoint to economics which has become the ‘science of the future’. He proposes that culture can be an important tool in development activities and argues that it has three main dimensions: ‘relationality....dissensus within some frame of consensus...weak boundaries’ (Appadurai, 2004. p62). Within these norms of culture, he argues for the ‘capacity to aspire’, a capacity to explore the possibilities for the future that can rethink social values and norms and economic possibilities with an ethical ‘horizon within which more concrete capabilities can be given meaning substance and sustainability’ (*Ibid.*, p.82). R-Urban structures can be understood as being rooted in such a cultural futurity, in that they are mobilising experiments in practices of living that have long term repercussions and which are produced with far-reaching ethical and temporal horizons. These collective experiments are organised and articulated by the groups and individuals involved and this self

organisation, as Appadurai points out, is vital to changing existing forms of consensus and building new ones (*Ibid.*, p.81). For Appadurai, this means building new rituals, which, rather than being understood as the ‘meaningless repetition of set patterns of action’ (*Ibid.*, p.81), are flexible activities that create social effects and new states of feeling and connection – not just reflections or commemorations.

The capacity of R-Urban to create aspirations for sustainable civic activities connected to the necessities of living can therefore also be seen as a cultural dialogue that aims to change the ways in which people navigate social spaces. It builds capacity to believe in value of pursuing different forms of future food production within the locality of the town as long term models of closed cycles of production. The timescale of the project is open-ended, and while in early 2016 it was threatened with closure by the mayor of Colombes, at the time of writing, it remains active.¹⁴¹

4.4.6 Abstracted temporalities

This ambition for future production is grounded in the development of cycles of production and growing that exist out of time with those of the global market and how it is manifest in local conditions. This means that while things happen according to specific schedules and plans of action, they are not tied into the values and the working processes of the local, or

¹⁴¹ For information on up to date activities see the project’s newsletters at: http://r-urban.net/en/fr_newsletters/newsletter-31-june-2016/ (accessed 20-06-16)

indeed global economy. Groups and individuals who live locally are involved in cycles of growing, harvesting, cooking which are conducted and stewarded according to 'nature'. The flows of activities take place according to the needs of the processes being nurtured and developed within the community, on the land and with its products, according to the wider vision and expectations of the project. R-urban therefore creates a space that attempts to exist outside, or dissociate from, to put it in Deleuzian terms, the temporalities of capitalism, and can be seen as attempting to articulate and produce logics that exist outside capital.

In his essay, *Temporalities of Capitalism* (2008), William H. Sewell argues that capitalism exists through the tension of two contradictory temporalities: eventful temporalities that are characterised by contingent irreversible uneven and transformational events, and a static temporality exemplified in the abstract logic of Marx' cycle of $M - C - M$, where money is increased through the value of a commodity. Within this scenario, dynamic events are always connected to the logic of the static cycle, in that in order to function within capital these events become commodified. Part of R-Urban's strategy seems to be an attempt to resist this commodification and through the various cycles of production it nurtures, to dislocate them from capital accumulation. The project operates according to an on-going timetable of activities that take place in line with a set of ethical principles based on developing sustainable patterns of growing, making and living.

As diverse collective activities, the practices generated through R-Urban start from the position of being outside the market system – what AAA calls being ‘off market’ (AAA, 2012, p.68). From the disused or forgotten spaces in which the project’s practices take place to the community organisations that engage with them, and the marginalised or experimental practices that take form, its activities mark out spaces of ‘permanent negotiation’ (Petrescu, 2009, p.69), always open to reconfiguration.

The activities generate new arrangements across social, cultural and professional realms, and individuals and groups can change their relationship with the municipality through their involvement in these activities. In re-positing actors this way, the activities are what Guattari might call productive ‘agencies’ (Guattari, 2000, p.68); processes of re-subjectification take place, where the porous structures framing active skills and knowledge enable actors to become embedded within new yet equally porous configurations. These processes produce communities and configurations assembled from actors and groups of actors who exist in relation to other actors and boundaries, in fluid exchanges, around common resources and without a centralised, singular point of sovereign power.

The activities and community of R-Urban are localised to its parameters in one sense, but they also extend beyond these, connecting and sharing skills across the activities of other similar projects around the world, as a way of connecting strategies of resistance to a homogenised global world economy. While re-initiating local cycles of production and consumption along with

non-commodified qualities (sharing, conviviality, solidarity), the project aims to become part of a rhizomic network of support, a trans-local, ‘intermediate level between local and global...a polymorphous and heterogeneous network’ (Petrescu, 2010, p.234). This heterogeneous network functions as a community of sorts, a community of ‘subjectivities’ as a ‘community of in-betweens’ (*Ibid.*, p.234) and acts as a way of allowing diverse activities on local, national and international levels to exchange knowledge and information and to work together. Community therefore can be understood in terms of Jean Luc Nancy’s notion of a community that is not defined by a common place, but rather it means ‘the socially exposed particularity, in opposition to the socially imploded generality characteristic of capitalist community’ (Nancy, 1991).

It is this community perhaps that we see as attempting to connect with Deleuze’s force of the virtual. And it may be helpful in seeing this virtuality as an acknowledgment of all possible possibilities that exist at the level of the planet. By this I mean to describe a level that acknowledges the environmental challenges that are faced by communities around the world as a result of the long-term effects of unchecked industrialisation and extraction of fossil fuels, while at the same time acknowledging that these effects, with implications for the whole of humanity have been caused by specific groups, governments and organisations. R-Urban is enacting actualised forms of organisation that aim to uphold long-term sustainable relationships of supply and demand, cause and effect within specific locales and the users within these areas, and which does so by appropriating and

deploying existing technologies, developing new technologies and using them for purposes that have different interests and different ethical frameworks from the dominant free-market systems that govern the flows of the city around them.

4.5. MayDay Rooms

4.5.1 A space of struggle and active social resource

‘There is no political power without control of the archive, if not memory’
(Derrida, 1996, p.4, *note 1*)

Towards the end of *Fahrenheit 451*, Ray Bradbury’s futuristic 1953 novel about a time and place where books are prohibited, he introduces the ‘Book People’. The eponymous community is a kind of living library, where individuals have each committed a book to memory and become embodiments of the knowledge they are carers for, or keepers of. This knowledge, literature or otherwise, is kept alive through reiteration and transmission within their community, with an optimism for a time when it will be allowed to be retransmitted to medium outside of the human mind. Until then, the Book People live as an assemblage of knowledge, and, equally as a living archive of sorts.

This is a partial metaphor, but in focusing on experimental but urgent ways of protecting knowledge that is in danger of being overlooked, Bradbury’s

rather whimsical fiction previews one of the underlying principles of an approach to an archive as it is constructed by MayDay Rooms (MDR). Like Bradbury's Book People community, MDR's offices and other rooms offer a safe haven for the knowledge it holds, calling itself 'an active repository...for experimental and marginal cultures, social movements and their histories'.¹⁴²

Established in 2011, MDR was set up as a way of demarcating a physical space where social, political and cultural conversations, and activities about past and present struggles could take place, and where historical material for marginal or experimental activism and radical film and other media that such movements had produced could be logged, housed, and accessed. Its activities can be understood through three broad categories: material, activation, activism. Of these, it is the holding and activation of material that are the essential activities of MDR, whereas activism involves the use of the building by activist and other groups whose founding principles are shared with MDR, such as Justice for Domestic Workers and Strike! Magazine. The material that comes into the archive finds its way there; it is the material that 'got through' or that has managed to survive destruction. Once admitted into the archive, the material is given conditions that will preserve its physical wellbeing, as well as being committed to digitised formats. The archive is built up through an organic process of discovery and discussion, and in most cases, potential donors engaging in a detailed dialogue with MDR. Such discussions open up the material and its historical

¹⁴² See: <http://maydayrooms.org> (Accessed 23-06-16).

and conceptual parameters prior to becoming part of the archive. Current holdings include Big Flame, a radical newspaper that became a revolutionary feminist organisation; Greenham Common Women's Peace Movement; East London Big Flame, the London Psychogeographies Association, The Scratch Orchestra (for image see appendix v., fig. 5), and Wages for Housework.

Finding ways to rejuvenate this material in the context of current struggles is at the core of the organisation's practices. Growing out of concerns about the way in which both virtual and physical space has been – and is still being – colonised by neoliberal politics and organisations, and ways in which city spaces are regulated through private interests or vastly distorted municipal principles, MDR exists as a charitable educational trust. Funding and support come largely from the Glasshouse Trust,¹⁴³ and it is run as a flat structure, with a collective of six core staff who each contribute different expertise. Decision-making takes place with the support of various outside groups, individuals and organisations – local, national and international – as a way of maintaining a continuous process of developing radical references and distribution methods. Groups and individuals that have contributed to this process include MayDay West in San Francisco and Azsociates.¹⁴⁴ The key regular users of the building are also organised as a collective in order to manage the use of the building effectively. This collective includes Cesura//Acceso, Independent Workers of Great Britain (IWGB), London

¹⁴³ This is being reduced from April 2016 and the organisation will have to find further sources of funding. (Author conversation with Howard Slater of MDR, January 2016)

¹⁴⁴ See: <http://maydayrooms.org/about/> (accessed 16-01-16)

Branch of Industrial Workers of the World (IWW) Migrant Workers Education Group, and STRIKE! Magazine

MDR is housed in the former London offices of the Birmingham Daily Post in Fleet Street. The overarching trajectory that guides its activities is not one of ‘protecting’ the archives per se, but is one that aims to ‘to be an active social resource more than a repository; a place where, amidst the austerity-driven threats to education and spaces of dissent, the future can be produced more than the past contemplated’.¹⁴⁵ In that sense, the project attempts to resuscitate Derrida’s claim that the destruction of the archive represents a failure of the present in its responsibility to the future, where the archive acts as a ‘pledge’ a ‘token of the future’ (Derrida, 1995, p.18).

4.5.2 Archival care

In many ways, MDR connects to conventional curatorial roles as carers for a collection. The organisation is responsible for a physical archive that requires attention in terms of the conditions in which materials are kept, how they are logged and registered and the vocabulary of its registration. It can also be seen as part of a much broader tendency within critical artistic practices of re-thinking archival practices, processes and ontologies.¹⁴⁶ As

¹⁴⁵ See: <http://maydayrooms.org/archives/> (accessed 12-03-16)

¹⁴⁶ For example see: Walid Raad, *Scratching on Things I Could Disavow: A History of Art in the Arab World*; IRWIN, *East Art Map*; the work of Centre For Land Use Interpretation in Los Angeles; Lia Perjovschi, *Contemporary Art Archive*, 1990- .

well as the artist practices that have engaged with notions of the archive, there are many radical archival practices. These might focus on histories of social or labour movements such as the Interference Archive which has a continuous activation programme of its materials;¹⁴⁷ the Lucy Lippard-initiated Political Art Documentations/Distribution archive of politically agitational art,¹⁴⁸ or the Labour Movement Archives in Malmo which as well as being an archive of the formally organised Swedish Labour Movement, also includes related organisations that organise in non-traditional ways.¹⁴⁹ Another example is the Sun Ra archive held by the Creative Audio Archive in Chicago which also acts as a commissioning platform for new music based on the material held, with the aim of broadening the debate around Sun Ra's work and its politics.¹⁵⁰

In summer 2015, *Archive Journal*¹⁵¹ dedicated an issue to radical archiving and what this might mean. In its introduction, editor Lisa Darms points out an apparent contradiction in the phrase 'radical archives'. She suggests that while the term 'radical' can refer to drastic or violent change, the basic job of the archive is to preserve. While this may seem to be an irreconcilable situation, this can be mitigated by the Latin origins of the term radical,

¹⁴⁷ See: <http://interferencearchive.org> (accessed 15-01-16)

¹⁴⁸ For a complete list of the archives newsletters see: http://www.darkmatterarchives.net/?page_id=72 (accessed 15-01-16). The archive was donated to the MoMA New York library in 1989, see: http://www.moma.org/learn/resources/library/faq_library_collection#padd (accessed 15-01-16).

¹⁴⁹ See: <http://www.arbark.se/en/> (accessed 15-01-16)

¹⁵⁰ <http://www.creativeaudioarchive.org/xml/sun-ra-el-saturn.xml>

¹⁵¹ Journal available online at: <http://www.archivejournal.net/issue/5/archives-remixed/> (accessed 26-06-16)

radicalis, which is understood as ‘having roots’, and also refers to ‘root causes’.¹⁵² Radical here therefore has a dual meaning that encompasses movement for change and a rooted fixity.¹⁵³

Amongst this wider and very relevant narrative around so many other forms of experimental archive practices how can MDR be understood in different terms? And how can it be understood as being a form of the ecological-curatorial? To address this question I will first describe the organisation’s practices, before discussing how they intersect with the ecological tools and the socio-political forms that these produce.

4.5.3 Embodied cultural memory

MDR can be thought of as place where collective memories exist and are activated in the present with a eye on the future, in the sense that Boris Groys argues that the ‘past is not memory, but the archive itself – something that is factually present in reality’.¹⁵⁴ Thus the holdings kept at MDR are cultural fragments and narratives from the past that have existed throughout many temporal forms, and may have been referred to during those temporalities, just as they exist under present conditions in MDR. Here they are designated space where they can be revisited, drawn on and engage with present realities. In a document collectively authored by the founding

¹⁵² See: <http://www.oed.com/view/Entry/157251?rskey=lkXokl&result=1#eid> (accessed 26-06-16)

¹⁵³ See: <http://www.archivejournal.net/issue/5/archives-remixed/> (accessed 16-01-16)

¹⁵⁴ See: Groys, B. 1999. The Logic of Collecting, in Art Margins[online] available at: <http://www.artmargins.com/index.php/component/content/article?id=436:boris-groys-the-logic-of-collecting> (accessed Jan 6 2017)

members of the organisation, it is described as a ‘supportive infrastructure for radical histories and communities, particularly those under threat’.¹⁵⁵

Established to respond to a crisis, the activation of its materials has a particular aim, of destabilising crisis and the circumstances that it produces by occupying and articulating psychic and physical space. In so doing, it aims to open up spaces that can counter the privatisation of mental and physical space – what Sarah Schulman calls ‘the gentrification of the mind’ (Schulman, 2012) – to create conditions out of which alternative activities can be initiated that respond to and are located in current needs and dependences. Its name reflects the urgency of these tasks, but also presents an intimacy and immediacy – it is a place where the job of ‘putting historical material to work’ takes place¹⁵⁶ and where anyone with shared concerns can get involved.

In terms of their roles as curators, the organising committee of MDR do not treat the archive as material just to be preserved and activated as historical memory of past events. Rather MDR engages in notions of caring on two broad levels: firstly at a level of welfare provision, in that the MDR space provides a controlled environment where the physical materials can be looked after and maintained to minimise deterioration. Secondly, caring is undertaken in a curatorial sense, in the advocacy and facilitation of frameworks through which materials can be repositioned in relation to, and as part of current assemblages. As a result, the materials held at MDR

¹⁵⁵ See: <http://maydayrooms.org/a-brief-history/> (accessed 28-06-16)

¹⁵⁶ See <http://maydayrooms.org> (accessed 23-03-16)

transform into ‘live’ contributors and become active participants in wider discussions about current movements and struggles that are attempting to activate new modes of maintaining and organising value-free openings for occupation by individuals and groups. The key thing to take into account – and the way in which this archive differs from those mentioned above - is the fact that the archive is not organised as part of a museum or *a priori* system of organisation; there are no pre-set conceptual parameters that govern type, form or mode of material permitted to be collected. Rather, it operates as an open structure, rooted in a relatively stable environment with strong connections to related remote organisations.

These include 56A Info shop, The Feminist Library, Crisis Archive, and the History Workshop Journal. It also supports on-going research, acting as a participatory host and ‘advisory companion’ to Jakob Jakobsen’s research into the Anti-University of London.¹⁵⁷ But while this porous nature of its activities produces an overall structure which is, as it states, an organisation in progress, as an ‘active social resource’,¹⁵⁸ rather than a storehouse, the archive material is maintained for more than the sake of its historical value. Through activation, the material takes on different ‘roles’ as theoretical and practical tools and information that can be drawn on and discussed in relation to current conditions.

Despite having no parameters and being heterogeneous by nature, a number of broad themes have been identified as emerging from the material:

¹⁵⁷ See: <http://maydayrooms.org/a-brief-history/> (accessed 23-03-16)

¹⁵⁸ See: <http://maydayrooms.org/archives/> (accessed 23-03-16)

counter-educational initiatives such as A-course at St Martins Schooling and Culture, a collaboration between radical left educationalists and working class school students (for image see appendix v., fig. 1); social protest movements such as Poll Tax Rebellion, Jubilee 2000 Afrika Campaign, counter culture like Queeruption, and activist groups like Big Flame and East London Big Flame (for images see appendix v., figs. 2 & 4). The continued potency of the material is maintained and amplified therefore through the on-going activation activities and events, which I shall briefly outline.

4.5.4 Activations

Activations are ways of bringing the archive into the flows and circuits of everyday realities, by setting up dynamic social situations, like discussions, forums and research projects that brings about new connections and frameworks within which the archive material can be understood. They take the form of events and activities that animate deposited materials and documents. These activities also often involve the depositor of the material and other people involved in the original activities to which the archive relates and take the form of forums and research projects, which engage in processes of reading, investigation, and discussion around specific materials. The aim is to create and generate further discussion, to ‘allow the latencies of the past and the future to meet in an open field beyond the enclosures of official knowledge’.¹⁵⁹ Resonances that are initiated through

¹⁵⁹ See: <http://maydayrooms.org/activation/> (accessed 03-03-16)

these activities can then initiate new activities and events, but this is always contingent on the activators themselves and what their interests are as MDR comments: '[w]happens in that field cannot be predicted; it is up to those who gather around material to set it resonating'.¹⁶⁰

The subsequent resonances that emerge from the various activation events are diverse, and are also dependent on the particular engagements that take place with the material. As the archive is in a process of continuous formation, its incomplete nature is played out through the ongoing processes of these activations (casting a different type of politics on the notion of the archive). The urgency of this task of restoring, protecting, and most importantly, activating the material animates the discussions across temporalities, reminding us that maintenance and repositioning of the archive always suffers the perpetual threat of being forgotten.

In this constant struggle to prise apart gaps and to find spaces for counter-narratives and their connectivities, an order emerges where the organisation and the material both become understood through the processes of its activities. Here actors and the materials might interrelate through a process described by Bruno Latour as 'interagitive' (Latour, 2013, p.5). Interagitive relationships refer to a 'capacity of relating agencies with one another without passing every time through the obligatory passage point of the object-subject....to begin to draw lines of agreement and dissent totally different from a [subject-object] frame.' (*Ibid.*, p.5). In this way, it is the

¹⁶⁰ *Ibid.*, note 23

interrelationship of both the activities and the material that produces the structure of the organisation itself. Such an interagentivity allows for an idea of equality between the material and its stewards so they are seen as acting equally, rather than in an authoritative tension between keeper and kept, where keepers activate the objects in the archive. It is here that we start to see points of intersection with the tools of the ecological, in that forms produced through these interagentive relationships are not exterior to either the organisers or the material. The relationships, forms and entities exist in a complex tension that has no 'outside' as such.

This relationship between subjectivity and objectivity is central to discussions about archives, as John Ridener has pointed out in his book, *From Polders to Postmodernism* (2007) not least because in the past archives were seen as being impartial records. MayDay Rooms is an exercise in eliding this relationship, aiming to generate a dynamic temporality with the relationships, and conversations that happen between material, structure and actors, while remaining fully aware of the socio-political positions that the material holds.

4.5.5 MayDay Rooms and the tools of the ecological

I will conclude this section by examining how the ecological-curatorial is being articulated by MDR. As described elsewhere, the processes initiated through the tools of the ecological aim to excavate and mobilise multiple

conjunctions that happen between and in the spatialities, temporalities and entities of existing assemblages and configurations, creating new spatial possibilities for the socio-political, environmental and temporal positions of its entities. The term spatial possibilities is used to refer to the shifts in political parameters that the tools of the ecological aim to establish. In another sense, the ecological can be understood as a kind of expanded archaeology and anthropology that excavates the social, political, environmental and epistemological contexts of entities and the produced assemblages, with the aim of opening up new possibilities for activities of making and doing that can shift the positioning of entities and assemblages. This process is underpinned by an inherent instability in the assemblages that are produced, and it is crucial to remember that any spatio-temporal position that becomes claimed by an entity is always already temporary and porous. The on-going questioning of experimental archival form and the socio-politics of the activations and dialogues taking place between the materials and groups within MDR, mirror in many ways the questions underpinning the tools of the ecological, and the articulation of its forms are characterised by a temporal porosity that can be understood as being at the heart of the MDR project.

Unlike many archival projects, MDR does not start from the position of questioning what the archive is or with an aim of creating a particular archive as such (e.g., an archive that rearranges multiple narratives, or is an index of the disappeared, or makes claims as being a space for liberation, although it touches on all these things.). Rather it starts from the position of

simply being a ‘safe haven’,¹⁶¹ not an archive as such. It is a space where things can go.

In addition to the activations and archive, partner organisations use the spaces of the building to hold events. These include things like language lessons for low paid workers whose first language is not English, closed discussion groups focusing on contemporary art, politics, the economy and issues relating to everyday living, open public events that discuss existing realities, impacts/meanings of and around cultural objects, language lessons, as well as regular meetings of the members of the building collective and their related events. The space also hosts one-off conferences and symposia, such as Girl Con in the summer of 2015.¹⁶²

The activities of MayDay Rooms can therefore be summarised as on-going processes of establishing spaces where critical mediations, analysis and activism of effects of cultural, social and political practices of everyday life, can take place within the context of a wider mobilisation of social and cultural histories. They can be understood as exemplifications of effects of the tools of the ecological in that they act upon conventional parameters of the archive to allow a process of questioning into these parameters themselves. What is central however is that the archive does not become the

¹⁶¹ See <http://maydayrooms.org> (accessed 23-05-16)

¹⁶² Girl con was a conference to celebrate ‘teenage girls, young women and non binary folk’. It was a two-day event featuring discussions on a variety of issues relating to sexuality, gender, self care, and mental illness as well as DIY workshops on zine production, poetry, craft, make up, and a clothes swap. The event’s blog can be found at: <http://g1rlcon.tumblr.com/tagged/info> (accessed 21-05-16).

object that is being cared for. Rather, it is in the sum of carefully articulated activities that are generated by the material that in turn produce the parameters of the organisation, transforming its constituent archival materials into points of entry out of which dialogues can emerge. So the curatorial takes place through a sustained articulation of conversations, ideas and forms that both comes out of existing activity and generates new activity. It is a process that continually reinvents itself as both the activation and stewarding of multiple histories and spatio-temporalities of activities of social transformation and the communities that were generated through these, at the same time locating itself as a community in process which is driven by on-going discussions about its own struggles to facilitate its own survival.

4.6 The Showroom/Communal Knowledge

In contrast to the other case studies in this chapter, Communal Knowledge is a programme of activities rooted in a tradition of gallery education and has a curator at its helm. It operates from within the structure of an existing art organisation, The Showroom. In an interview with Andrea Phillips as part of the *How to Work Together*¹⁶³ consortium, Showroom director Emily Pethick describes the overall organisation as a different form of organisation from a gallery space. She says: ‘one could see the organisation as a kind of project, in the sense that it is continually in development and in process. It is

¹⁶³ How to Work Together was a three-year project between three London-based not-for-profit spaces: The Chisenhale, Studio Voltaire and The Showroom. See: <http://howtoworktogether.org> (accessed 15-01-16)

an enabler.¹⁶⁴ This process of enabling is underpinned by a commitment to giving artists and collaborators time to incubate and nurture ideas, relationships and practices. So while the organisation has a programme of regular exhibitions and events, it fosters long term relationships and creates space for these to grow into exhibitions, rather than generating a cycle of artists continuously producing new work with short lead times. As Pethick says, ‘this is something that has remained a core focus of the Showroom since the early days, the principle of giving time and space to artists.’¹⁶⁵

As a whole therefore, The Showroom is a space that aims to continuously question the conventional uses of space in relation to ways in which art is produced, engaged with and presented. It acts as a mediator between virtual and physical spaces so that artists and non-artists can have space to explore the critical potential of activities that produce art, knowledge, discourse and communities, activities that raise questions around the structures that define concepts of a gallery alongside other artists and practitioners who share these concerns. To achieve these aims the space operates on a number of levels: as an expanded gallery space in which exhibitions, activities and events take place and are displayed; as a discussion space where discourses relating to various aspects of the programme are explored and analysed; and as a space where activities relating to long term projects are planned and carried out. It is also embedded within a wide range of partnerships and

¹⁶⁴ See: http://howtoworktogether.org/wp-content/uploads/htwt-think_tank-andrea_phillips.pdf/ (accessed 15-01-16)

¹⁶⁵ *Ibid.*, note 24

networks – local, national and international – and where relationships between individuals and organisations are continually produced. This is as much a support network of organisations with similar practices or set ups, as it is a way of forging ways of enabling work to have a wider reach. The main networks are firstly, Common Practice, which is an advocacy group for small-scale arts organisations specifically in London; secondly How to Work Together, a three-year commissioning programme in collaboration with Studio Voltaire and Chisenhale; and thirdly, Cluster, a network of eight arts organisations in Europe and Israel connected by the fact of their location in residential areas in urban peripheries. These partnerships create strong consortia that can leverage greater funding potential and social reach in terms of realising ambitious projects with presence across multiple sites. Aside from these networks, the organisation’s core funding comes from a range of diverse sources, including Arts Council England, Friends, charitable trusts, individual donors, venue hire and sponsorship.

The space also operates as an archive and library, both of which operate in continuous development. It constitutes a record of its activities as well as a library of material related to the organisation, its activities and concerns. The material comprises interviews, conversations and essays that have taken place as part of the projects. They might be conversations between a number of practitioners, talks by artists about their practices, interrogations of concerns, documentation of events, or works that have been produced through a project.

4.6.1 Supporting the emergence of new practices

Prior to Pethick's appointment, the space focused on providing emerging artists with a platform to realise a significant new work, but Pethick has shifted this emphasis away from working with artists at a particular career stage, turning its attention towards an exploration of the wider possibilities for emerging practices, as well as working with artists at all stages of their careers to provide greater visibility for these practices. As a result, the organisation develops projects with various partners including artists, community groups and other organisation, often a result of an on-going dialogue, where interests and concerns dovetail with those of the organisation, often on a long-term basis. Engagement with the organisation also takes place through an organisation's, artist's or practitioner's long-term engagement with a community related to the gallery or a particular aspect of the gallery's location. As Pethick comments, the organisation is committed to 'following a process and seeing it through' as well as being committed to building long-term relationships and dialogues with artists that can continue beyond the timeframe of an exhibition or particular project.¹⁶⁶

The Showroom therefore becomes a space where communities can be formed through individuals and groups being involved in common discussions that generate collective processes of making and doing. This long-term approach to artist relationships and collaboration invests in practices and relationships that often work outside of normative structures and which are not always focused on points of resolution or tangible products.

¹⁶⁶ *Ibid.*, note 24

An idea of autonomy also exists in an expanded form through its projects, exhibitions, networks and commissions in the sense that ways in which projects are developed can also be thought of as processes of attempting to generate autonomous micro-social forms that run counter to presiding conventions of organisation and production. This can be understood in terms of Franco Berardi's idea of autonomy as being produced through 'self-organised knowledge that can create a social frameworks containing infinite autonomous and self-reliant worlds' (Berardi, 2003, p.6). The projects themselves emerge out of porous structures that unfold through discussion and negotiation, intermeshing the realities they bring together, while at the same time circulating around a common focus that enables the creation of new, but equally contested parameters of sociality.

4.6.2 Collaborate, unlearn, reorganise

Within the context of the Showroom's variety of forms, the aspect of their work I want to examine more closely are the practices and projects that emerge out of Communal Knowledge. The programme constitutes collaborative projects where artists and designers work with community groups, organisations, schools and individuals on long-term projects. These collaborations might arise out of existing commissions and projects, or more usually they emerge out of conversations between artists and individuals or groups from the community. In many ways Communal Knowledge sets itself up as an exploration of the expanded possibilities of what a gallery's

education and community engagement programme might be, but it is not an education programme. It is better seen as a model for finding ways to open up discussions around the possibilities that exist for a project space to engage with existing groups and individuals in its locality, and to question existing ways in which artists, curators and arts organisation often engage in these contests. It also opens up a discussion that explores the impacts of wider social and political concerns and how they feed back into local areas and populations. As it states: ‘the emphasis is on finding ways to re-think or ‘unlearn’ established norms, values, codes, roles and relations, to create visibility, and to produce an alternative body of knowledge gained through communal activity and experience’ (ref showroom.org). On a more fundamental level, Communal Knowledge also operates as a conversation about the position of a semi-publicly funded cultural organisation within a specific residential setting, what role it plays and the manner in which it becomes part of that community. To explore these practices in greater detail, I will describe two exemplary projects, *(In)visibilities* and *Fourth Feathers TV*. First of all, I will give some background detail as to how Communal Knowledge proceeds with its activities and what they might mean in a wider context of the ecological-curatorial.

Two key ideas coalesce around the name Communal Knowledge. In communal, the term embodies the idea of something being for common use, or alternatively might define doing activities together. The term knowledge encompasses firstly the competence for, and experience and facts acquired about an area that has been studied, and secondly it can stand for a wider

awareness of a situation. Together, the two terms can be understood in a number of ways. Communal knowledge might stand for collective activities focused on a specific area, or it might be used to describe knowledge and experience that is brought together for shared use, or it might exist somewhere between the two, where shared knowledge and experience is distributed again through the involvement of wider parties and individuals. In this sense, the naming of the project moves away from the concept of education with its connotations of hierarchical knowledge-power structures, towards an idea of shared practices of discovery that set up reciprocal relations between the organization, parties involved and areas of focus. To examine how this takes place and how its practices can be seen in relation to the tools of the ecological, I will look at the project *(In)visibilities*, and of this, I will give *Invisible Spaces of Parenthood* most attention.

4.6.3 (In)visibilities

(In)visibilities was a Communal Knowledge project from summer 2012 that investigated questions around ways in which different social structures and conditions in everyday life are acted out, and their corresponding levels of visibility. It was made up of two separate, but complementary projects, *Hidden Curriculum* by Annette Kraus and *Invisible Spaces of Parenthood* by Andrea Francke.

Hidden Curriculum looked at the forms of unintended knowledge that is transmitted through the day-to-day process of learning by school students.

Working with local schools, Kraus produced a number of videos that examined ways in which knowledge emerges as assumed values and beliefs and how these influence outlooks.

Invisible Spaces of Parenthood on the other hand was a much broader endeavour, exploring issues surrounding childcare and collaborating with local nurseries, childminders, children's centres and parent groups. The project took on a number of forms including discussion groups about the relationship between the art world and parenting; a set of conversations that explored the history of childcare in art colleges, and gallery workshops where participants were invited to test out DIY proposals for furniture and play, eventually published in a manual – *Invisible Spaces of Parenthood: A Collection of Pragmatic Propositions for a Better Future* – in late 2012

Invisible Spaces of Parenthood operated on two broad levels. Firstly it represented a hollowing out of hidden relationships and ways in which socialities, social norms and hierarchies are produced. Through an exploration of the complex relationships of care that are established between child/parent and educational institution/child, the project started to reveal how these hidden relationships produced the affective connectivities of lasting structural bonds. Secondly the project acted as a critical unpicking of the relationships, crossovers and points of intersection between the contexts of art production and contexts of parenting and educating. This was particularly highlighted in the case of parenting, where The Showroom itself became a visible space of parenting and the gallery was filled with regular activities with local nurseries, parent groups and individuals. The space

acted out an exploration into the challenges and critiques of the social reproduction that takes place through the institutions of parenting and education. Their constituent routines and rituals were both brought into visibility and critiqued. Within this visibility, the clearest questions that came to light related to the production of the next generation of artists – and the roles of the mothers (as it is mostly so) – who are undertaking this task and the social conditions under which they happen.

The gallery became a space that existed in tension between the often uncertain relationship that young children might have with an art space and artworks in general, and its role a space where routines and rituals of parenting in relation to carrying out work (art or otherwise), and ensuring healthy happy children were being questioned. Here, norms of parenting were both explored and challenged, facilitated by discussions around the idea of what constituted transformational activity in this area and what relationships it had with wider socio-political structures. As an exploration of the common relationships of day-to-day life it produced a temporary experiment that explored histories of parenting and its possible futures, highlighting the temporariness of existing mainstream structures.

4.6.4 Fourth Feathers TV

Beginning in 2013, *Fourth Feathers TV (FFTV)* is an on-going project by artist Anton Kats that has set up an open, community-centred TV station, in collaboration with members and visitors of Fourth Feathers Community

Centre. The project aims to give the young people who use the centre a space of discussion, where the ways in which social and political issues manifest in their neighbourhood can be explored and questioned. Through an evolving series of episodes, the production team operates collectively, with the roles of camera operators, commentators, filmmakers, journalists and audiences being taken up by all members alternately. The space of the youth centre is therefore transformed into both an open TV studio and into a platform for learning and artistic activity.

Three episodes of *FFTV* have been produced so far. Episode #1, produced in Summer 2013, explores the community centre itself and interviews some of its users as they take part in the communal activities. Episode #2 investigates the Lisson Green Estate and uses a miniature model of the estate produced by the team to look at its composition. The model acts as both a set and a platform that is used to explore issues relating to housing in the estate and asks what kind of community action can get involved in dealing with these issues. In this way, *FFTV* has opened up a space where the participants can explore methods of collaborative research and artistic investigation in ways that can feed back into local organisation.¹⁶⁷

However, *FFTV* is more than just a participatory platform for artistic engagement with the young people who are involved in the youth centre. Rather, it needs to be seen in a wider context as an unfolding of temporalities and existences that assemble and record ‘forgotten’ forces of

¹⁶⁷ Videos are available at: <http://www.theshowroom.org/projects/anton-kats-fourth-feathers-tv> (accessed 23-02-16)

the social, through the actors within this social. The activities of the project are not prescribed and the young people who become co-researchers get involved as a result of an open invite, taking on fluid and interchangeable identities within the project. There is a dynamic interchange, with uncertain outcomes, similar to Ilya Prigogine's notion – described in chapter two – of the dynamic origin of dissipative structures (where energy is lost through each reaction in a chain of events) which always produce uncertainty and probabilities. In these structures and movements within and across structures, Prigogine and Stengers asserted a correlation between the movement of contingent nature of both human and matter activity by saying that 'there is a flow of communication in society, just as there is a flow of correlations in matter' (Prigogine & Stengers, 1997, p.79).

Prigogine and Stengers argue that individual level behavior had uncertain and far-reaching consequences that could not be predicted. As such, time could only be considered as humans' 'existential dimension' (*Ibid.*, p.13). In this way the activities of *FFTV* can be seen as expressions of this existential dimension, unfolding through the shape-shifting parameters of the project, both in terms of the roles that the young people take on and activities they engage in. This existential dimension is also evident in the subjects that they tackle, which examine socio-political issues relating to the local area and which touch on the young peoples' lives. In all these ways the project can be understood in terms of what kind of impact the tools of the ecological might have on a gallery education programme. As with other case studies in this chapter, the project is an ongoing activity, it has no

outcome and does not consist of programmed moments of objectifying reality for an audience outside the youth centre or for a gallery audience. It is being produced for the purposes of discussion, and transmission of discussion, within the groups involved, their peers and local organisers. The material produced embeds its activities and interventions in a wider discussion about and with young people and issues within the area. This is a discussion they are having among and for themselves.

4.6.5 A new relational specificity

These activities of Communal Knowledge that seek out ways to connect and find common practices with groups, organisations and individuals in the Showroom's immediate locality, contrasts with the wider global connections that the organisation engenders. Working with, and connected to artists and arts organisations from all over the world, the Showroom exists as part of a global network with its own specific socio-political parameters. Communal Knowledge, on the other hand, is to a large extent oriented by its situation and takes on the task, as Miwon Kwon says, of 'demarkating the relational specificity that can hold in tension distant poles of spatial experience.' (Kwon, 1997, p.88). For Kwon, as for Communal Knowledge, such a task means 'addressing the differences of adjacencies and distances *between* one thing, one person, one place, one thought, one fragment *next* to another, rather than invoking equivalencies via one thing *after* another' (*Ibid.* p.110, emphasis in original).

The timescales and space for exploration that are afforded within the activities of Communal Knowledge, allow artists to build up long-term working relationships with people and groups who are interested in getting involved in their proposals. Longer commitments give space for the work to have what Kwon would call ‘relational sensibility’ (*Ibid* p.110), to allow communities to form around the work, and for lasting social effects to be produced. This might allow for projects such as *FFTV* and some of the outcomes of *(In)visible Spaces of Parenting* to have a discursive life of their own outside the initial space in which the project was inaugurated.

4.7 Ultra Red

4.7.1 Articulating the social through curatorial interventions

Ultra Red differs from the other case studies in this chapter in a number of ways: firstly in the sense that it is produced by artists, and secondly in that it does not start from a position of having a singular geographical location. Rather, it is a diffuse and porous, geographically-fluid collective of artist-activists. The members of the collective begin from a position of being equally both artists and activists embedded in social and political struggles, using sound recording as a strategic device to articulate and spatialise those struggles. Conceptually, the group sets out to explore and enunciate the possibilities that emerge from collective engagement with the spatio-temporalities of ambient and composed sound through the medium of ‘organised listening’ performances, which I describe later. They take their intellectual and conceptual inspiration from the radical pedagogy of

Brazilian educator Paulo Friere, as well as the musical experiments of artists like John Cage, Cornelius Cardew, Pierre Schaeff and Pauline Oliveros. Projects also navigate a terrain that is in continuous dialogue with the notion of what constitutes a public, and begin from a categorisation that sets the parameters of the investigation in relation to the term public, and which proceed by asking how a community becomes spatialised in relation to particular issues.

Their work is complex and sprawling, so in the interests of clarity I will start here with a contextualising introduction that outlines its breadth, origins, and examples of their practice. I will then focus more closely on their practices of organised listening as a critical operation that produces potential for radical reconfigurations and understandings of assemblages by rethinking ways in which both spatial practice and subjectivities are brought together. Finally I will describe a couple of projects that demonstrate the practices, trajectories and discussions that emerge out of organising, and performing organised listening.

4.7.2 Background to the collective

Ultra Red emerged in 1994 out of AIDS activism and the electronic music scene in Los Angeles, and was founded by two AIDS activists Marco Larson and Dont Rhine – with Rhine remaining in the organisation today. In their earliest activities, categorised as public health, the collective organised around issues to do with AIDS and queer politics, working with the needle

exchange in Los Angeles, Clean Needles Now. These activities formed the basis of the project Soundtrax,¹⁶⁸ which produced performances, installations, audio mapping and other actions alongside the group's involvement in the day-to-day activities of the needle exchange. Other early work in this area was focused on issues in and around the Los Angeles area, and included concerns relating to public sex in Griffin park in the project *Second Nature*;¹⁶⁹ the effects of economic policies on public housing, played out in the project *Structural Adjustments*,¹⁷⁰ and work with the LA anti-sweatshop movement to improve workers' conditions. This resulted in *Social Factory*, a series of projects presented through performances and installations across the US and Europe.

The group has not grown in a strategic or planned way, rather, it has evolved with new members becoming involved on a project-by-project basis. At the time of writing the group is comprised of 12 members based in the US and across Europe, who are variously artists, activists, researchers and organisers from different social movements including those relating to migration, anti-racism, community development and sexual oppression.

4.7.3 The protocols of listening

By contrast to the group's evolution, the group's practices are highly strategically developed. One of its key practices, organised listening, is a

¹⁶⁸ Available at: www.ultrared.org/ps01a.html (accessed 12-06-16)

¹⁶⁹ Available at: <http://www.ultrared.org/ps02b.html> (accessed 23-05-16)

¹⁷⁰ Available at: <http://www.ultrared.org/ps03a.html> (accessed 23-05-16)

tactical activity used across much of the group's practice, operating as a grounding device, and as a mapping tool in activity development. It is a particular response to the politics behind the production of sound, as Dont Rhine said in his presentation at the 2011 Creative Time Summit, 'sound is the object cause of the desire to listen. Every encounter is organised by the politics of listening.'¹⁷¹ In other words, the action of listening, as it is equal to the action of making a sound, is produced through a politics. Listening, or the relationship between a sound and the listening subject, becomes an exercise in producing a politics, not least because it is arguably under-recognised in terms of its militant possibilities and the ways in which it can transform relations of solidarity. As the group outlines in their text, *Five Protocols for Organised Listening* (2012), 'learning to listen is the intentional task of solidarity.'¹⁷²

The protocols for organised listening developed through both long term and short-term interventions between 2009 and 2011. There are a number of ways and circumstances in which listening takes place and these form and inform the protocols. Firstly they are tools for organising, in which a group can be constituted around a number of concerns. Secondly they can be used to assess the field of enquiry, thirdly they can be used for reflection on the field, and finally they can be facilitators for action. Procedures for organised listening vary and take on a number of forms, but overall aim to produce what the group calls a 'dialectical rapport between open attentiveness and

¹⁷¹ See: <http://creativetime.org/summit/2011/09/23/ultra-red> (accessed 30-03-16)

¹⁷² http://www.ultrared.org/uploads/2012-Five_Protocols.pdf (accessed 30-03-16)

intentional commitment'.¹⁷³ This rapport is embedded in the first protocol that runs through all the forms of enquiry, which takes the form of the question 'what did you hear?'

As the first protocol, the question provides a space of reflection for the respondent, and at the same time activates the listening that precedes it. The listening is in response to a sound object, to a representation of a politically situated set of relationships and as a result the listener enters into an encounter with the sound object. The second protocol, fieldwork, is where a group comes together to define the field of the enquiry through a collective thematic encounter. The third protocol, sound walks, draws on ambulatory practices to enable a group to engage with and reflect on the multi-layered perspectives and histories during a specific route with its familiar patterns of movement. In the fourth protocol, a listening session brings a group together in a physical space, to navigate a terrain or a field through its representation in sound object. Finally, the fifth protocol looks at the form of sound and more specifically the sound objects that are produced for listening engagements. Objects take three broad forms – collage, language and sound.

4.7.4 Three projects

These protocols form the basis for the different forms of listening activities within the contexts of key projects, three of which will be outlined here. *We*

¹⁷³ *Ibid.*,

*Come From Your Future*¹⁷⁴ was a 2008 project that was produced as part of the Triennial Prologues for Nicholas Bourriaud's 2009 Tate Triennial, *Altermodern*, at Tate Britain. The project set out to explore migrant struggles in the UK, posing the question: what is the sound of anti-racism? It was made up of two key parts. Firstly the production of a set of dispatches – sound objects and their accompanying field reports. The second part was an event at Tate Britain, where audiences were invited to add their own reflections on these dispatches, which were then performed for a wider audience. Another set of dispatches was produced by people involved in anti-racism and migrant organising in the UK, where they each named a historically significant site in terms of their work and a relevant question. Field recordings of the site were carried out by Ultra Red, and were published online, along with the question and a description of the issues at stake.¹⁷⁵ Out of these activities a wider question emerged: how do we bring diverse critical pasts into the present in order to understand the art(s) of future organising?

This project connects with another on-going investigation into rural racism in the south west of England, *Rural Intavenshan*, that is part of a series of projects organised by anti-racism activists, the Monitoring Group.¹⁷⁶ The project was built on a number of interventions in the region that made up the

¹⁷⁴ Available at: <http://www.ultrared.org/pso7h.html> (accessed 12-06-16)

¹⁷⁵ The sound objects and questions from this project can be found here: http://www2.tate.org.uk/intermediaart/ultra-red_episodes.shtm (accessed 19-06-16)

¹⁷⁶ See: <http://www.tmg-uk.org/tmg-arts/diverse-pastures-project/> (accessed 05-05-16)

project *Bass Community*.¹⁷⁷ Here the group presented a series of performances where people discussed their experiences of racism, and during which elements of dub music was introduced to the on-going dialogue. The exhibition *Dub Grammar*¹⁷⁸ emerged out of another series of performances where in each one, four people who had experienced racist violence presented a pre-recorded sound that denoted a term relating back these experiences. The responses that were generated in the audiences were recorded and written down, creating a map of socialities and a particular social process. The person who had introduced the sound then read it over a reggae dub-inspired bassline performed by Ultra Red. Within the exhibition, the notations made during the performances were presented as works on paper with the dub soundtrack playing throughout the gallery space.

The final Ultra Red project to be described here is *Re:Assembly* – a collaboration between Ultra Red and the staff and students of St Marylebone Church of England School in London between 2009-2013, organised by the Serpentine Gallery's Edgware Road Project.¹⁷⁹ The activities of the group were embedded in the school's curriculum, and they worked with a diverse group of students across subject areas. Guided by the question - 'what is the sound of citizenship?' - each group explored questions of citizenship and migration, and issues of class and private property. On year 8's citizenship day, when the school would normally invite police officers, councillors or businesspeople to address the students,

¹⁷⁷ See: <http://www.ultrared.org/pso7f.html> (accessed 05-06-16)

¹⁷⁸ See <http://www.ultrared.org/pso7g.html> (accessed 05-06-16)

¹⁷⁹ See <http://www.serpentinegalleries.org/exhibitions-events/ultra-reds-reassembly> (accessed 12-06-16)

they invited trade unionists, housing activists and migrant rights organisers to be interviewed by students. In collaboration with invited artists and activists, the students produced a number of audio and visual works that took place in the school and its surrounding area as part of a wider audio tour.

4.7.5 Ultra Red's transversal practice

Out of all the case studies examined in this chapter, it is Ultra Red's processes and practices that most completely utilise the tools of the ecological. Their fundamental practices of organising around and against normative relationships that frame social realities (for example the complex relationships between regeneration, gentrification and art in relation to existing groups and individuals) both locate ignored and overlooked communities and temporalities, as well as starting from specific points of concern, unfolding through meticulous practices that are underpinned by a belief in the need for continuous organisation.

In terms of the tools of the ecological, what is particularly interesting about Ultra Red is that the practices that the collective undertakes as part of the organisation of its aims and intentions, mirror the slow, diligent work that the tools of the ecological set out to do. The processes underpinning Ultra Red's work are constituted through continuous activities of recording, questioning and writing-up of meetings and discussions, deploying the use of flip charts, and holding plenary sessions. These activities do not embody

a fetishisation of administration, rather they are the necessary kind of painstaking systems of activities that need to be undertaken to properly excavate the possibilities for acting upon existing configurations. In their systematic bridge-building, they also reveal possible ways in which the tools of the ecological can be used to set up activities.

These practices can be understood as transversal in the Guattarian sense, as heterogeneous ‘processes of continuous resingularisation’ (Guattari, 2000, p.69). They operate to install and reinstall subjectivities in social realities and assemblages, to produce - as Guattari proposes is required for the ‘escape from the major crises of our era’ (*Ibid.*, p.68) - environments ‘in the process of reinvented’ (*Ibid.* p.68). Gary Genosko also points out in his essay *The Life and Work of Felix Guattari: From Transversality to Ecosophy* that for Guattari, the transversal is characterised as signifying, ‘militant, social, undisciplined creativity’ (Genosko, 2000, p.151) - a description which might be equally valid of Ultra Red’s work.

The group’s work with sound, music and audio collage is necessarily both temporary and temporal, producing an engagement with sound that demands a commitment to listen as well as an awareness of the specific reality within which this takes place. The sources of sound and the social realities within which they are produced are as much a part of the process as the listening, establishing the act of listening as both a product of a politics and a political act, where socio-political relationships and audio-spatiality are equalised outside of the dominant structures of the visual. It creates what theorist and

psychologist Rudolph Arnheim calls an ‘acoustic bridge’ (Cory, 1992, p.335) that equalises the sources of the sounds, creating a new form that ‘now fits organically together: the human being in the corporeal world talks with disembodied spirits, music meets speech on equal terms’ (*Ibid.*, p.335).

4.7.6 Creating new realities

These ‘equal terms’ of the sound sources does not happen through the production of the sound ‘object’ as such, but in the unfolding of the recording within a particular spatio-temporal context and the relationships of the sounds with this and with those doing the listening. This simultaneous temporality creates a transversal assemblage in that the recording, its originating sounds and settings, and the circumstances of the recording’s playback communicate with each other, as a form of encounter setting up a spatio-temporal platform for the emergence of new subjectivities. The recordings trace critical trajectories that unfold out of sets of circumstances, opening up inquiries into both these trajectories themselves and the forms that become visible.

These assemblages therefore produce temporary arrangements of socio-political realities, both for the collaborating groups, as well as those groups and individuals involved in the activities of listening. Furthermore they also carry ethical responsibilities in that they articulate the parameters of a group or community, which both highlights and constitutes wider nuances, differences, omissions and uncertainties of the community. As Prigogine

and Stengers suggest in their theory of irreversible processes, this might outline ‘a more subtle form of reality that involves both laws and games, time and eternity’ (Prigogine & Stengers, 1984, p.310).

Guattari also argued in *Chaosmosis* that the transversal constituted a ‘bridge’ between, ‘on one side the machine of phonemic and syntagmatic discursivity of expression proper to language and on the other, the division of semantic unities of content (for example the way classification of colours or categories of animals is established)’ (Guattari, 1995, p.23). A transversal bridge therefore becomes the sum of the ethical pragmatics engaged with in order to make critical incursions into existing structures and assemblages. Guattari calls this transversal bridge a ‘deterritorialised machine, an abstract machine’ (*Ibid.*, p.23).

It might also be helpful to view Ultra Red’s work as an ‘abstract machine’ as proposed by Deleuze and Guattari. To briefly reiterate, Deleuze and Guattari’s abstract machine has no way of making a distinction within itself between a ‘plane of expression and a plane of content because it draws a single plane of consistency, which in turn formalises contents and expressions according to strata and reterritorialisations’ (Deleuze & Guattari, 2004, p.156.). In *Chaosmosis*, Guattari describes how it involves the ‘shattering of substance in a pluralistic manner and would promote the category of substance and expression, not only in semiology and semiotics, but in domains that are extra linguistic, non-human, biological, technological, aesthetic’ (Guattari, 1995, p.24). Simon O’Sullivan

emphasises this point by reminding us that ‘the abstract machine is the cutting edge, the point of deterritorialisation of any given assemblage’ (O’Sullivan, 2010, p. 205).

This deterritorialisation is constituted through the form and content of the expressions and material that are connected as part of the process. Furthermore, this process of deterritorialisation does not set out to represent something new. Rather, as Deleuze and Guattari point out it ‘constructs a real to come, a new type of reality’ (Deleuze & Guattari, 2004, p.159). In the specific activities that constitute the assemblages produced through their work, Ultra Red’s practice might be understood in these terms, as a melding together of expression and material that emerges in tandem, and which is inextricably tethered together. As new realities unfold, they complicate narratives and situations that circulate around existing assemblages. Guattari’s notion of ecological praxes looks for counter discourses and repetitions produced through these deterritorialisations that aim to form ‘new existential configurations’ (Guattari, 2000, p.45).

The existential configurations produced through Ultra Red’s practice navigates uneasily through the gaps between the structures of art and social realities, but at the same time they do so as assemblages that are formed through highly specific frameworks that are carefully used to demarcate a space of occupation. Their work is both embedded within the lives of the actors and at the same time explores possibilities for expression through the structures of art. What is striking about the work however, is that it is most

successful at rupturing dominant structures when it is within the social realities and communities of its inquiry, not when it is within art structures (for example, when viewed as exhibitions, or documentations of processes within an art context). Bearing this point in mind I will now conclude by looking at the relationship between the ecological-curatorial and art.

4.8 Clarifying the ecological-curatorial

Within the cultural practices described above, I have demonstrated how the tools of the ecological produce forms of the ecological-curatorial. Each project transpires through shifting configurations of processes that initiate the production of new constituent formats of the curatorial, which serve equally to destabilise and question both existing dominant structures of cultural production, as well as the dominant social, political and economic structures that are involved in the perpetuation of the systems of capitalism. These formats are not intended to be objectivised or idealised models of the ecological-curatorial, but they are in themselves, to borrow from Arjun Appadurai, ‘perspectival constructs, inflected very much by the historical, linguistic and political situatedness of different sorts of actors’ (Appadurai, 1996, p.296). These formats could be understood as originating out of states of what Bateson would call, ‘maximum flexibility’ (Bateson, 1978, p.473) which he understands as ‘*uncommitted potentiality for change*’ (*Ibid.*, p.473 emphasis in original), where the sequences of connectivities that emerge are not determined according to a pre-defined goal, but are ‘variable’ (*Ibid.*, p.475). This is to say that the formats emerge out of interests in ways that

are not beholden to dominant socio-economic functions, and furthermore actively seek to overturn or bypass such modalities.

All the projects above start from their own specific concerns, interests, and socio-political localities and proceed by critically navigating responses to these concerns and the activities emerge out of these investigations. The new assemblages that are formed are rooted in sets of politics defined by direct, collective investment in the assemblages themselves. So, to reiterate, the generative capacity of each project is not determined by external pre-set cultural and economic terms, but through multiple, co-produced 'lived experience' that perhaps can be understood as being characterised as 'points of clarity' where assemblages are disclosed, or brought into relief over time. In addition, the processes of production outlined above critique the range and contexts of the structures of dominant socio-economic connectivities by demonstrating the fault lines and points of juncture out of which these new forms of socio-political and spatio-temporal realities arise as critical responses.

While the projects demonstrate actualised forms that can be understood through the tools of the ecological, and are underpinned by theories and practices that support these forms, what remains to be clarified now is the constitution and format of the ecological-curatorial. This will enable the concept of the ecological-curatorial to establish a clear position that is distinct from other experimental curatorial forms, and also will demonstrate how the tools of the ecological have the capacity of agency in relation to

other spheres of experience and every day realities. This will finally demarcate the parameters between the eco-critical curating paradigm - where environmentalism and uses of the term ecology are illustrated as discursive forms - and the ecological-curatorial, which, as I have shown, is concerned with deploying processes that both destabilise and build structures, relationships, and ways of doing that bypass, undermine and critique dominant socio-political and environmental structures in order for heterogeneous actualisations of new forms to emerge.

In what follows, I will make two key claims for the ecological-curatorial. Firstly, I will argue, through the work of Maurizio Lazzarato, that the ecological-curatorial needs to be understood as constituted through cognitive, intellectual and physical effects and entities that happen through transversal processes of enunciation, as opposed to processes of discursivity, and that it is these refrains of enunciation, produced through collective activities, that shift everyday realities and enable the framing of new political subjectivities.

The second claim I will make is that the ecological-curatorial operates at a planetary level, where the questions it asks and interventions it makes arise out of concerns that have implications for all humans – i.e., questions around issues relating to the socio-economic and environmental organisation of globalised capitalism. This claim acknowledges that these issues are not equally caused by or affect all of humanity, but that the effects of the actions of specific groups of actors have consequences at a

planetary level. The conclusion I am aiming to reach is one that demonstrates how the curatorial operates as practices of organisation not solely concerned with art. Secondly I will conclude that the curatorial converges with the ecological - as understood through the tools of the ecological - producing assemblages through which political subjects can understand themselves as operating at a level that exists outside of the dominant economic system of global capital, i.e., at a planetary level, while at the same time responding to and connected to specific localised questions that can be understood as effects of the global economic system. Such planetary subjects connect with each other through points of commonality, in terms of concerns, practices, localities and conditions. The projects described in this chapter therefore can be understood as starting to form a collective of discrete projects that propose actualisations of alternative forms of escape from the dominant socio-economic system.

4.8.1 Mapping the political subject

To illustrate the claim that the forms of the ecological-curatorial can produce new political subjectivities, I am going to propose that, expressed through virtual collective forms, the ecological-curatorial must first be understood as what Guattari would call, ‘collective assemblages of enunciation’ (Guattari, 1995, p.5). Articulated through the pragmatics of his ethico-aesthetic paradigm, they exist at the level of the existential.

Before I continue, I will briefly reiterate the key points of Guattari's ethico-aesthetic paradigm. Firstly the paradigm is a processual paradigm in the sense it does not present a single model, but rather acts as a process for producing multiple models. Operating as 'the intersection of the actualisation of finite configurations and an always possible processual recharge' (*Ibid.*, p.116) it is always on the verge of reinvention. Secondly the paradigm is irreversible and constituted through a constant renewal of aesthetic boundaries. Finally the paradigm is presented by Guattari as a counter to the dominant scientific paradigm that is manifest in self-perpetuating dualistic power relationships, which he sees as being the source of all existential dissonance across social, economic, psychological and environmental spheres (Guattari, 2000, pp.36-37). With the phrase 'self-perpetuating dualistic power relationships', Guattari is referring to the ways in which paradigms from what he calls the 'hard sciences' (*Ibid.*, p.36) are appropriated as ways of 'reifying' or objectifying 'psychic entities' (*Ibid.*, p.36) denying the possibility of the construction of frameworks for the production of new subjectivities. By contrast, his aesthetic paradigm is presented as a way of addressing the multiple complexities of individual and collective subjectivity as well as being a way of devising strategies of dealing with the problems of what he calls International World Capitalism (IWC). This process produces existential territories – clusters of enunciations – that are linked by transversal connectivities. While the tools of the ecological begin from a more pragmatic position than Guattari's paradigm in that they issue a set of questions, they share similar aims.

4.8.2 Understanding the tools of the ecological as enunciators

To clarify how the curatorial-ecological produces these ethico-aesthetic forms it is necessary to understand how Guattari used the concept of enunciation. In unpicking this question I am going to refer to Maurizio Lazzarato's analysis of Guattari's approach to enunciation, in which he connects it to the notion of performativity. Lazzarato's analysis takes place in *Signs and Machines: Capitalism and the Production of Subjectivity* (2014), in which Lazzarato explores mechanisms for ways in which subjectivities can be produced outside the machines of global capitalism, when global capitalism is predicated on and sustained through the mass production of subjectivities. One of the devices he explores through Guattari's thought is that of enunciation, which he argues produces existential forms that take shape through constitutive processes, in contrast to the discursive, which simply replicates existing forms of relational power structures.

Lazaratto begins by outlining this difference between the discursive and the existential, pointing out that, for Guattari, the discursive exists at the point of representation. Through processes of linguistic competence, it apprehends and signifies a specific assemblage that is 'part of a system of extrinsic reference, in other words it always implies that every element is discursive relative to another element which constitutes its referent' (Lazaratto, 2014, p.207). By contrast, argues Lazzarato, the existential does not have a background against which expressions can be presented, it 'involve[s] a dimension of autonomy' (Guattari, 1995, p.13). It does not

communicate messages, but rather expresses ‘refrains’ that are both equally subjectivities and objectivities, and which ‘function as an interface between actualised registers of discursivity and non-discursive Universes of virtuality’ (*Ibid.*, p.27).

Guattari’s assemblages of enunciation are produced through the existential function, which acts, as Lazzarato points out, as the ‘creative force of the enunciation’ (Lazzarato, 2014, p.204). As a result, existence is produced, which for Guattari, produces subjectivation. This happens through the reconfiguring of actualised realities – the dimensions of the social, economic, political, environmental etc., – and begins from a specific focal point defined in the existential territory. It happens not through the production of rational knowledge, but through ‘ecosophic cartography’ producing ‘assemblages of enunciation, capable of capturing the points of singularity of a situation’ (Guattari, 1995, p.128)

Enunciation needs to be properly articulated as it is central to the processes of resubjectivation. ‘Collective regimes of enunciation’ refer to the order of language and signs that are assembled in a configuration, not in a discursive way but in an existential way. In this schema, forms of enunciation continually produce partial subjectivations and enact transformations in the positions and situations from which the subject enunciates. This contrasts with the concept of performativity, which enacts rituals and which presupposes the status of the ‘performer’. Lazzarato comments that performative utterances are like an ‘institutional rehearsal where the effects

are known in advance' (Lazaratto, 2014, p.234), '[t]hey fit their speech and subjectivities to the established forms of linguistic conventions' (*Ibid.*, p.174).

For Guattari, an assemblage of enunciation is produced and inhabited through ecosophic activities. The sum of all these connectivities is what he calls an 'ecology of the virtual' (Guattari, 1995, p.92) which acknowledges 'all possibilities of all human and non-human systems of organisation and power, and means that poetry, music, the plastic arts, the cinema - particularly in their performance or performative modalities - have an important role to play, with their specific contribution and as a paradigm of reference in new social and analytic practices (*Ibid.*, p.91). In this way he argues, the 'generalised ecology - or ecosophy - will work as a science of ecosystems, as a bid for political regeneration, and as an ethical, aesthetic and analytic engagement. It will tend to create new systems of valorisation, a new taste for life, a new gentleness between the sexes, generations, ethnic groups, races....' (*Ibid.*, pp.91-92).

This means that '[b]eyond the relations of actualised forces, virtual ecosophy will not simply attempt to preserve the endangered species of everyday life, but equally to engender conditions for the creation and development of unprecedented formations of subjectivity that have never been seen and never been felt' (*Ibid.*, p.91). Guattari is arguing, as did Gregory Bateson and Murray Bookchin among others, that human relationships with non-humans and the earth's biosphere can only

fundamentally change alongside wider changes in the socio-political structures that humans inhabit. These changes can only come about through what he calls the ‘militant’ activity, that aims to rebuild politics on different bases, and to ‘rearticulate transversally the public and the private, the social, the environmental and the mental’ (*Ibid.*, p.128). He then calls on the ecology movement in France not to focus on environmental campaigning, but to concern itself as a matter of priority, with its own social and mental ecology’ (*Ibid.*, p.129).

4.8.3 Inaugurated concerns

It is possible now to understand the case studies outlined above in relation to Guattari’s ideas and to clarify the idea of the ecological-curatorial. In the first place the projects themselves can be thought of as assemblages of enunciation. All case studies, Ultra Red, R-Urban, MayDay Rooms and Communal Knowledge start from a position of being inaugurated through or around a specific, clearly articulated, situated concern or concerns and begin by understanding their spatio-temporal relationships. Hereafter, they are produced through activities that are warranted through the socio-political urgencies that emerge out of these sets of circumstances. They are not discursive mediations on situations being explored precisely because their experimental practices start from a specific focal point. The structures of these assemblages, whether they are constituted through the organisation of sustainable urban agriculture, growing and managing of a radical archive, enabling of radical subjectivation through artistic projects and conversation,

or the creation of conditions, and connectivities for communities to engage with local concerns in tandem with an art gallery, are all constituted through their on-going activities and do not set out to simply initiate discussions about the issues that these activities touch on. Rather, they articulate their own existential territory that both interrogates their forms and proposes alternatives. Art is not being used to illustrate practices relating to knowledge or a set of knowledges, nor is it producing new knowledge objects within an existing field. Forms produced are enunciations that begin at a specific point and practices are allowed to unfold from there, without necessarily engaging with art.

4.8.4 The ecological-curatorial as forming planetary subjects

The second claim I will illustrate about the ecological-curatorial is that it operates on a planetary level. The term planetary here is used as a device to articulate a mode through which to understand subjective relationalities to the concepts and realities of a 'whole' of Earth - in so far as it is understood as a whole entity in terms of climate change and the organisation of 'natural' resources. The aim of this is to create a differentiation from the notion of the global and its relationship to the wider political agendas of globalisation, where globalisation is understood as involving, as sociologist Michael Mann has commented,

the extension of distinct relations of ideological, economic, military, and political power across the world. Concretely, in the period after

1945 this means the diffusion of ideologies like liberalism and socialism, the spread of the capitalist mode of production, the extension of military striking ranges, and the extension of nation-states across the world, at first with two empires and then with just one surviving (Mann 2013, p.11).

The global here therefore is taken to mean a particular set of socio-economic and political operations pertaining specifically to late capitalism. The planetary enables a differentiation, taking the ‘finitude’ of Earth as a key starting point, but not reducing it to a singular totalising system.

4.8.4.1 Planetary and planetarity

The starting point for understanding the term planetary is derived from Gayatri Chakravorty-Spivak’s notion of planetarity that she outlined in *Death of a Discipline* (2003). In a chapter entitled ‘Planetarity’, she proposes using the notion of the planet to ‘overwrite the globe’ (Spivak, 2003, p.72). As she says: ‘The globe is on our computers. No one lives there. It allows us to think that we can aim to control it. The planet is in the species of alterity, belonging to another system; and yet we inhabit it, on loan’ (Ibid., p.72). So planetarity seeks to find a way by which all humans can relate to the Earth as singular space, but without placing it within the system of globalised capitalism which obscures the specific conditions through which things like climate change, financial crises, and environmental issues have emerged. Spivak sums this up, ‘[w]hen I invoke

the planet, I think of the effort required to figure the (im)possibility of this underived intuition (*Ibid.*, p.72). For Spivak, therefore, to talk of the planet is a way of accessing an undivided ‘natural’ space where all possible conditions, interests, alterities and socio-politicalities can be accessed, rather than a undifferentiated universal systemic space of the global.

As a planetary subject, the possibility of accessing a totality is not accessible, all that is accessible is the ‘inexhaustible taxonomy’ (*Ibid.*, p.73) of alterity, which planetary subjects inhabit, exist as and revisit at all angles simultaneously. In drawing out this mode of planetarity, Spivak responds to global capitalism, aiming to counter it by keeping ‘responsibility alive in the reading and teaching of the textual’ (*Ibid.*, p.101). Here, the planet becomes a way of ‘inscribing collective responsibility as right. Its alterity, determining experience, is mysterious and discontinuous – an experience of the impossible’ (*Ibid.*, p.102).

The key point that emerges from Spivak’s text therefore is the idea that planetarity offers possibilities for negotiating the intricacies of the dichotomous relationships between the ontology of Earth as the planet inhabited by all humans, and the financial, environmental and climate change issues that affect humanity as a whole, and the totalising problematics of global capitalism. It attempts to find ways of conceptualising a separation between these two, very different, approaches

to a ‘whole’. This provides a space in which conceptualisations and contextualisations of possible ecological-curatorial practices can take place.

4.8.5 Refusing universalities: the production of the ecological-curatorial

In claiming the planetary as a founding principle, the forms that emerge as ecological-curatorial can be understood as sets of activities that attempt to ‘hold open’ the possibilities for ways of connecting with localities, conditions, alterities and identifications, in that no practice closes the possibilities for alternatives, or rather assumes the position of proposing a universalising subject. They might also be understood as creating spaces where the ties of global capitalism are severed momentarily, and where connections are not recognised within a global system of capitalism, but where a merging of conditions can be re-ordered/re-thought according to the questions that might be thrown up by the tools of the ecological as they aim to open up passages for an exit from dominant formats. The tools of the ecological therefore aim to articulate possibilities that refuse to reduce the whole of humanity to a unified actor, and refuse to reduce social relations to the production of capitalism and finally refuse to uphold the idea of nature as being independent from humans. The ecological-curatorial therefore deploys the connected practices of curating in order to develop actualisations of activities that are planetary.

4.8.6 Conclusion

Now we can begin to articulate more clearly how the ecological-curatorial might move forward as practices where intersections of knowing and doing take place and where alternative organisations of relationships between individuals, groups, and realities can be rescaled outside of the constraints of the dominant economic system, according to both local and international connectivities. The tools of the ecological become methods through which activities of inquiry, analysis and making in relationship to material and everyday realities are developed. In turn, the techniques and practices that are central to the emerging forms of the ecological-curatorial set in motion processes of analytic political work that aim to engender breaks with dominant organisational structures of groups and individuals, taking into account the multiple and fragmented spatio-temporalities of their settings, territories and environments.

It should be emphasised that while the ecological-curatorial might start from a position of exploring the layout or politics of existing assemblages, it does not start from a position of acting upon, or intervening in pre-existing configurations, rather it aims to set up new lines of inquiry that, while possibly bearing traces of originary or related configurations, begin from a position that evolves through spaces and gaps between these.

These two claims for the ecological-curatorial – that its formats operate at the level of the enunciation and the planetary – are inextricably entwined within the ecological-curatorial and form the backbone from which all its practices are hung. Together they create a space where practices that operate transversally are suspended by their condition as planetary. At the same time, this status of a format as planetary is rooted in specific sets of conditions that cannot be understood as an idealised form of practice. At best, these practices search out similar practices, connected by shared conditions, concerns, and socio-politics, and creating mutually supportive connectivities, which are fragile as they are dynamic.

Formats of the ecological-curatorial have no pre-destiny as such, and with no privileged adherence to art, as curatorial formats, they are released from their dependencies on display. On one level it seems that they could be understood as ways of locating what Irit Rogoff calls ‘alternate points of departure, alternate archive, alternate circulations’ (Rogoff, 2013, p.48) through the ‘kidnapping’ of knowledges and insights. But the logic of kidnap still remains located within the existing logics of the system that these activities are attempting to leave. A better starting point to understanding the formats of the ecological-curatorial would be as not being driven by a need to produce alternates within the existing system, but by a need to address concerns on their own terms as both connected to the wider concerns of the planet and finding ways around the logics of the existing system, with the aim of producing simultaneously free-floating and located assemblages of actions, affinities, forces and interests.

5.0 CONCLUSION

This research set out to examine the wider implications for curating practices when they engage and intersect with issues relating to climate change, environmentalism and forms and interpretations of the term ecology. It has been concerned with the ways in which a number of dominant modes of curating are apparently incompatible with the aspirations, necessities and agencies of the issues and ideas with which they become engaged in these contexts and has sought to find ways in which this problem can be overcome.

The project began by establishing a critical paradox that exists in practices of curating projects that address issues arising out of the term ecology and environmentalism, where the structures of curating both reinforce the status quo of exhibitionary practice while at the same time suggesting solutions to the issues. This was shown to produce a dichotomous position that, while it appears otherwise, offers limited possibilities for critical intervention into the 'real-world' issues that are addressed through the curatorial strategies. As I pointed out, there has been very little critical consideration to date of this tension between the real urgencies of issues relating to the environment and the structures of the art world, and the research set out to understand these conditions and to address this gap in knowledge.

5.1 From essay exhibition to structural action

Whether as research projects, commissions or exhibitions, the structures of visibility through which these projects are produced are engaged in the distribution of both knowledge and aesthetics that emerge out of, and occupy specific sets of socio-political circumstances. Equally, the concerns that are taken up in these exhibitions have their own specific sets of circumstances and socio-political requirements that often diverge from, and are at odds with, the structures of curating through which they are introduced. By this I mean to say that the integration of the core activities of curating, such as presenting and framing projects, ideas and artworks produce their own socio-political assemblages that are bound by an imperative of intercession between its components and participants, audiences and commentators. However, these acts of intercession within the forms of curating described in the early part of this thesis are not orchestrated to produce direct action related to the necessities of the realities in question within the curated forms, but serves to produce aesthetic forms within artworld contexts.

While activism, environmental issues and concerns relating to the concept of land have been part of art inquiry for many years, the situation I have explored here departs from the way in which these issues have often previously been addressed in art in that the curatorial projects outlined in chapter one make direct claims for social change through their activities. To address this, my research highlights the fact that these claims are antithetical to the structures within which they take place, and proposes, as an

alternative, more self-reflexive curatorial forms that intervene directly in the realities of the structures they inhabit, as well as realities they claim to support. This bypasses the need for essayistic forms of exhibition and discussions around structural action; the curatorial form here is structural action.

5.2 The eco-critical curating paradigm and the term ecology

To proceed with this enquiry the research took as its starting point a number of projects concerned with climate change and environmental issues and forms of the term ecology, and which had broad ambitions that included setting up experimental forms of organisation and introducing artists into specific settings such as the Arctic. Through an investigation into the undertakings of these projects I was able to identify key characteristics common to each project. Out of this, I sketched out a paradigm and set of logics that encapsulated these practices of curating dealing with environmentalism, and forms and interpretations of the term ecology.

What became clear in this process was that while research into environmental issues and ‘systems of living’ were clear throughout the projects, the term ecology was frequently deployed in various and ambiguous ways, and was often undefined. Given the centrality of the term in many projects discussed here and generally, as the focus of chapter two I undertook an analysis and historical overview of the term. The aim was to unpick the term ecology and explore the origins of its assumptions in order to critically assess what possibilities for political agency might still remain

within the term, and if so what forms these might take. The investigation uncovered key episodes that clarified its interpretations and traced how the term has shifted from a specific study of the relationship between organisms and environments within the discipline of biology, plotting its intersections with other academic disciplines, particularly cybernetics and systems theory. It also helped to break down the term's differing components and articulated some of its key forms from the academic to the activist.

What was uncovered during this chapter was the fact that the majority of the forms and interpretations of the term often used the word ecology in conjunction with another term, for example, social ecology, deep ecology, dark ecology, population ecology, cultural ecology. This has the effect of firstly setting ideological parameters through which a set of connectivities is articulated, and secondly, assumes that there is an ideal set of connectivities to work towards, meaning that specific interpretations of the term ecology become objects of knowledge in their own right.

This was evidently problematic when the wider implications of each set of connectivities are considered, and I wanted to explore how the term could be revisited in a way that focused on the possibilities and structures of the term as a mode of investigating how connectivities themselves were produced. Two key practices stood out for taking this type of enquiry into account and questioning both the connectivities inherent in the structures of assemblages as well as the assemblages themselves: political ecology, which is largely located within the field of geography; and environmental

justice. Each demonstrated a diffuse, process-based enquiry that focused on a specific concern, but without an overriding ideological framework. Their parameters were not based on an idealised goal or universalised notion of systems, but started from points of exploring positions, visibilities, justices, and the ways in which connectivities around these are produced.

5.3 Moving from ecology to the tools of the ecological

It also became evident that there were two theoretical approaches that took the wider parameters and implications of the term ecology into account: that of firstly Gregory Bateson and, influenced in part by this, the work of Felix Guattari. Bateson used the term both in an object form (with his concept of the ecology of mind) and also as part of a more fundamental enquiry into connectivities between mind, body, system and environment. He questioned the meaning of the concept of ecology as sets of connectivities and systems, and as I discussed, asked how this meaning might be used to ask wider questions about the ways in which human beings organise or are organised into relations of power, and the consequences for all existing structures and socio-political relationships. Bateson's concern started from the points of connection between human values, human arrogance in relation to the earth's biosphere and resulting political and social organisation of human beings. I also discussed how he was opposed to a 'means with ends' approach to development, instead believing in open-ended, ongoing, complex systems as a way in which mindful development could take place. This creates conditions whereby the term ecology can come to be understood as process, and as an instigator of tools to assist process, rather

than as an object of knowledge. Following this discussion I explored how this process-based integration of mind, environment and society was taken up by Felix Guattari in his texts *Chaosmosis* and perhaps most significantly in *The Three Ecologies*. Guattari's philosophical investigations into the notions of the transversal and the abstract machine recognises a debt to Bateson's work, and helped me to define more concrete possibilities in developing tools for a process that can be characterised through open-ended transversal inquiry.

The positions of Bateson and Guattari were therefore instrumental in my development of what I termed the tools of the ecological in the closing section of chapter two. The tools are articulated as abstract possibilities for process, or methods that serve to instigate enquiry. They do not begin from a position of establishing an idealised set of connectivities, but are open-ended methods for approaching specific concerns or starting points. They set out to establish an understanding of the ecological as ways of doing, making and knowing, rather than inaugurating a new ideological approach. One has to acknowledge that there might be ideological underpinnings to the type of investigations that are inaugurated through the tools of the ecological, but since such investigations are dependent on a process of continued questioning, this would include the assumptions that would have begun the investigation in the first place.

Therefore, the articulation of the tools of the ecological necessarily forced a rethink of not just the content of the exhibitions discussed in chapter one,

but crucially, the structures and contexts of exhibitions per se. As Guattari called for the environmental movement to address its own ecologies first, in this case, it becomes clear that it is the various incarnations of the artworld that need to equally address their own structures, as well as the content of their exhibitions.

The tools begin as a set of questions that instigate praxic and theoretical questioning about the socio-politics of structures and circumstances of specific concerns. To test them out I followed two paths of investigation. Firstly, in chapter three I revisited the case studies described in chapter one, exploring how they produced divisions between the realities they engaged with and their content. Secondly, in chapter four, an investigation was conducted into a number of experimental curatorial projects, which were analysed as exemplifications of the ecological-curatorial, resulting through the deployment of the tools of the ecological.

Chapter three's critique used the tools of the ecological to explore the limitations of the projects described through the eco-critical curating paradigm. It showed how practices operating within this logic did not move to dislodge or question structures and modes of aesthetic production and distribution. This established the key claims of my thesis: that the ambitions of curatorial projects produced through the logics of the eco-critical paradigm and which addressed and engaged with forms and interpretations of the term ecology and environmentalism are antithetical to the structures, exhibitionary forms and conceptual parameters of which they are

intrinsically a part, muting the inherent agency of these realities. The chapter also looked at the wider implications of the deployment of the tools on the question of experimental curatorial research, helping to clarify the importance of dissecting the structural foundations of curatorial practices that support the multiple ways in which experimental practices are produced.

5.4 The ecological-curatorial

Chapter four, the final chapter, started from a point of asking what kind of curatorial practices might be produced through the deployment of the tools of the curatorial, how they might be characterised, and in what ways they differ from practices outlined and analysed in chapters one and three. To do this I proposed understanding curatorial practice that happens through the deployment of the tools as the 'ecological-curatorial'. This can be clarified as process-based curatorial practices that are determined through their interrogation of the structures of their production, the structures of distribution as well as concerns with which they engage. Central to these practices is the fact that they are not engaging with concerns by illustrating them for an audience, but instead they are engaging in concerns through the making and production of structural responses at the level of their politics and economics. Four examples were offered as exemplifications of ecological curatorial: the working practices of the art collective Ultra Red, R-Urban, Communal Knowledge, MayDay Rooms. These examples demonstrated ways in which the tools of the ecological can be understood as

systematic devices that have the potential to open up structural questioning to existing concerns and assemblages.

To summarise, the characterisation of curatorial practice through the notion of the ecological-curatorial developed here can therefore be understood as emerging out of the four key strands of research carried out and documented in this thesis. Firstly, a critique of current exhibition practice and the development of what I called the eco-critical paradigm of curating; secondly, a philosophical investigation of the term ecology that unpicked and dissected its constituent strands of thought, assumptions and theories; thirdly, the development of the tools of the ecological as a set of theoretical methods, establishing the ecological as process, and finally, research into experimental forms of social organisation that uses art and curatorial practice to propose different ways of living, making and doing.

As well as supporting the claims outlined at the beginning of the thesis regarding the problems inherent in exhibitions themed around forms and interpretations of the term ecology and environmentalism, the research has also put forward a new framework through which to understand how the term ecology moves from a mode of knowledge-object to the ecological as a form of content-less process-based enquiry, which at the same time revitalises its potential for having a different kind of social agency.

This research therefore has produced a number of key findings. Firstly it resulted in a proposition for a critical re-consideration of the term ecology,

the outcome of which was a relocation of the term as a set of content-less structural tools. Secondly it helped to illustrate the need to reform curating and opened up a space through which to propose alternative formats of curatorial practice.

5.5 From the ecological to the ecosophical

What are the implications of these conclusions and findings and how are they important in terms of testing out future moves for curatorial practice? While the political relationship between art and its engagement with everyday realities is not a new debate - as outlined in chapter one - the proposal here moved the debate forward through its insistence on the necessity of exit from, firstly the dominant curatorial models within the circuits of the contemporary art world, but also through its broadening and clarification of the terms of culture in relation to the curatorial.

How the ecological-curatorial might proceed leads to a new area of research that will need to be addressed in future projects. In addition, a further question has arisen relating to the use of the term ecological and possible confusion that might arise in distinguishing the ecological-curatorial from the term eco-critical, which as I noted in chapter one is widely in use to define a type of cultural criticism relating to environmentalism. Furthermore, if one of my goals in this research is to try to overturn the classification of curatorial practices in relation to ideas attached to the term ecology, where an idea of 'ecology' becomes extracted from wider realities, perhaps the use of the term 'ecological' does not create sufficient

differentiation. There is a case therefore that a more successful shift away from the term ecological might take place through the use of the term ecosophical, drawing on Guattari's use of the term which proposes a reworking of processes of subjectivity as well as socio-political practices. To clarify, this use of the term is not the same as Arne Naess' use of the term, where the ecosophical is simply a conjunction of ecology and philosophy. As well as activating a clear move away from the term ecology, another reason for using the term might be that the ecological-curatorial arises out of conditions where activities are initiated and is underpinned by a philosophical approach that is based on rethinking the ways in which social process takes place.

The research also opens up new areas of investigation around the kinds of relationships curatorial practice that might have social agency, and an exploration of how can it be of use to both the curatorial community and the wider activist and academic community such as those engaged with STS, design, sociology, anthropology, etc., who may be involved the development of alternative formats and who might often work with artists. As such this research proposes a different framework within which work with artists can be understood. The possibilities for future research developing out of this work are underpinned by two distinct questions. Firstly, I think that there is a need for further research into how cultural practice can be extended to enhance the redistribution and reorganisation of socio-political, and economic realities, and what this might mean in practice. Secondly, in relation to this, there is also a need to explore what

curating culture outside art actually means, and what the implications of this are for art as well as for experimental practices.

This research has begun to define the terms for these future research strands, and it is my intention to pursue these questions as a progression of the work I have carried out during the production of this thesis.

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APPENDICES

i. Arts and Ecology

*Figs. 1 & 2: Jeremy Deller, *Bat House**

*Fig. 3: Heather and Ivan Morison, *Black Cloud**

*Figs. 4 & 5: Heath Bunting and Kayle Brandon, *Food for Free**

*Fig. 6: Tue Greenfort, *Untitled, installation of three transparent-sided Eurobins outside the exit ramp of Frieze Art Fair, London**

ii. *Radical Nature: Art and Architecture for a Changing World-1969-2009*

*Fig. 1: Agnes Denes, *Wheatfield: A Confrontation**

*Fig. 2: Robert Smithson, *Spiral Jetty**

*Fig. 3: Helen Mayer- and Newton Harrison, *Full Farm**

*Fig. 4: Henrik Håkkanson, *Fallen Forest**

*Fig. 5: Mark Dion, *Mobile Wilderness**

*Figs. 6 - 8: EXYZT, *The Dalston Mill**

iii. Cape Farewell

Fig. 1: Icebergs at Disko Bay, Greenland.

*Fig. 2: Myfanwy Macleod & Janna Levitt, *Beekeeping for All**

Fig. 3: The Noorderlicht in sea ice off the East Coast of Greenland

*Fig. 4: David Buckland & Amy Balkin, *Discounting the Future**

iv. R-Urban

Fig. 1: R-Urban Agrocité buildings

Fig. 2: R-Urban Agrocité

Fig. 3: R-Urban Recyclab

Fig. 4: R-Urban Agrocité compost

Fig. 5: R-Urban Agrocité

v. **MayDay Rooms**

Fig. 1: Schooling and Culture journal

Fig. 2: Big Flame Ford Special newspaper cover

Fig. 3: Reading Room at MayDay Rooms

Fig. 4: Big Flame newspaper cover

Fig. 5: Scratch Orchestra concert programme

vi. **Communal Knowledge**

Fig. 1: Schooling and Culture journal

Fig. 2: Big Flame Ford Special newspaper cover

Fig. 3: Reading Room at MayDay Rooms

Fig. 4: Big Flame newspaper cover

Fig. 5: Scratch Orchestra concert programme

Appendix i: Arts and Ecology



*Fig. 1. Jeremy Deller, **Bat House**, 2009.*
Image: Courtesy the artist

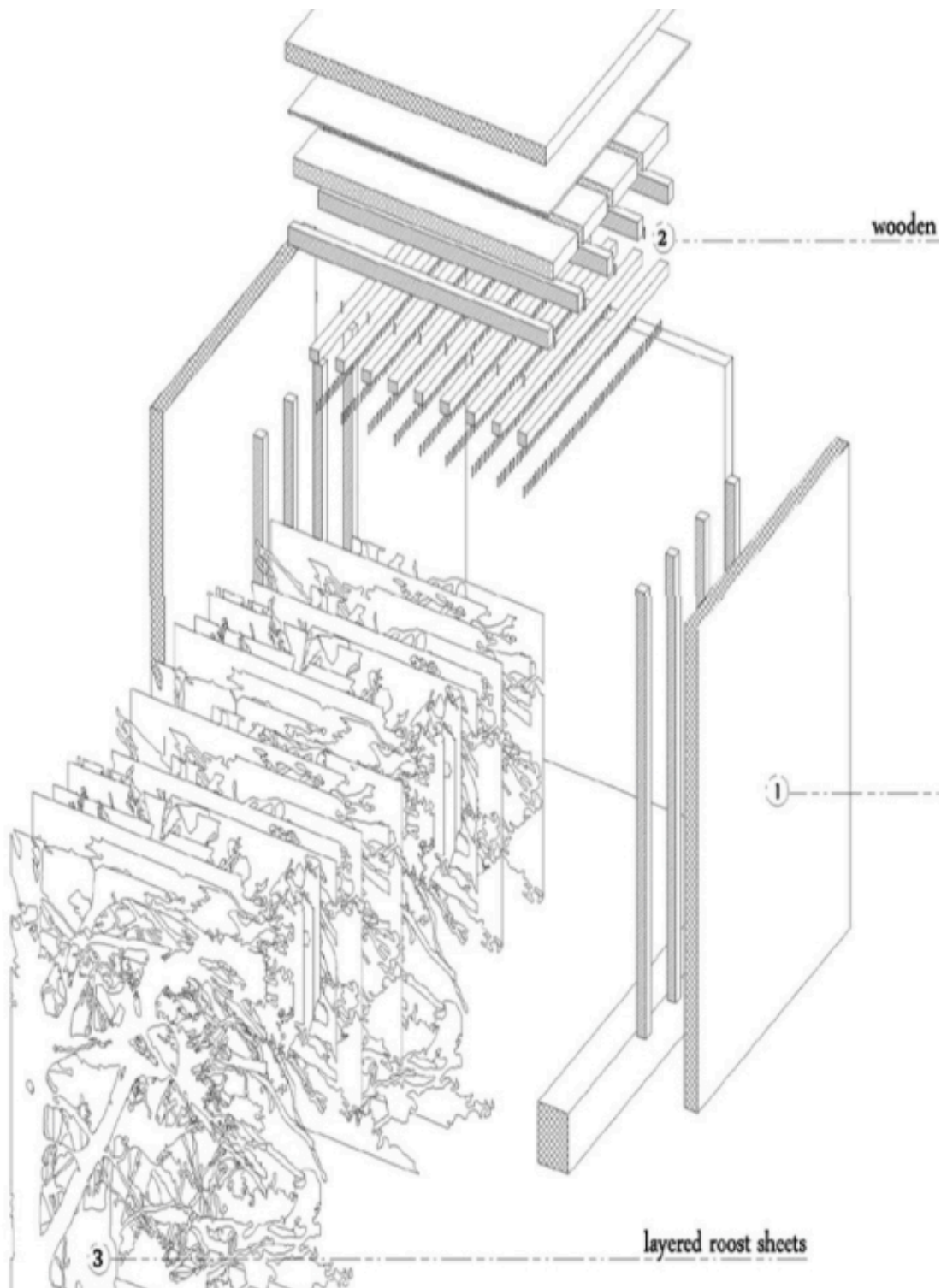


Fig. 2. Jeremy Deller, *Bat House*. *Architect Drawings*, 2009.
Image: Courtesy the artist



Fig. 3. Heather and Ivan Morison, Black Cloud, 2009
Image: Courtesy the artists



Fig. 4. Heath Bunting and Kayle Brandon, *Food for Free*, 2007 (Map detail)
Image: Courtesy the artists



Fig. 5. Heath Bunting and Kayle Brandon, *Food for Free*, 2007 (Map)
Image: Courtesy the artists



Fig. 6. Tue Greenfort, Untitled, installation of three transparent-sided Eurobins outside the exit ramp of Frieze Art Fair, London, 2008.
Image: Latitudes

**Appendix ii. Radical Nature: Art and Architecture for a Changing
World: 1969-2009**



Fig. 1. Agnes Denes, Wheatfield: A Confrontation, 1982.
Image: courtesy the artist



Fig. 2. Robert Smithson, Spiral Jetty, 1970.
Image: Nancy Holt



Fig. 3. Helen Mayer- and Newton Harrison, *Full Farm*, 1974-2009.
Installation shot from the Barbican Gallery, London, 2009.
Image: Lyndon Douglas



Fig. 4. Henrik Håkansson, *Fallen Forest*, 2006. Installation shot from the Barbican Gallery, London, 2009.
Image: Lyndon Douglas



*Fig. 5. Mark Dion, Mobile Wilderness Unit – Wolf, 2006. Installation shot from Barbican Gallery, London.
Image: Lisa Rastl for The Guardian*



Fig. 6. EXYZT, The Dalston Mill, 2009
Image: EXYZT



Fig. 7. EXYZT, The Dalston Mill, 2009
Image: EXYZT



Fig. 8. EXYZT, *The Dalston Mill*, 2009. View of mill from Dalston Lane

Image: EXYZT

Appendix iii. Cape Farewell



Fig 1. Icebergs at Disko Bay, Greenland, 2008
Image: Nathan Gallagher



Fig 2. Myfanwy Macleod & Janna Levitt, Beekeeping for All (detail).
Installation shot from Carbon 14 at Royal Ontario Museum Toronto, 2014
Image: Cape Farewell



Fig 3. The Noorderlicht in sea ice off the East Coast of Greenland during the 2007 Art/Science expedition.
Image: Nick Cobbing



Fig. 4. David Buckland & Amy Balkin, *Discounting the Future*. Ice texts series. 2010.
Image: David Buckland

Appendix iv. R-Urban



Fig. 1. R-Urban Agrocité buildings, 2014.
Image: R-Urban



Fig. 2. R-Urban Agrocité, 2014.
Image: R-Urban



Fig. 3. R-Urban Recyclab, 2014.
Image: R-Urban



Fig. 4. R-Urban Agrocité compost 2014.
Image: R-Urban



Fig. 5. R-Urban Agrocité, 2014.

Image: R-Urban

Appendix v. MayDay Rooms

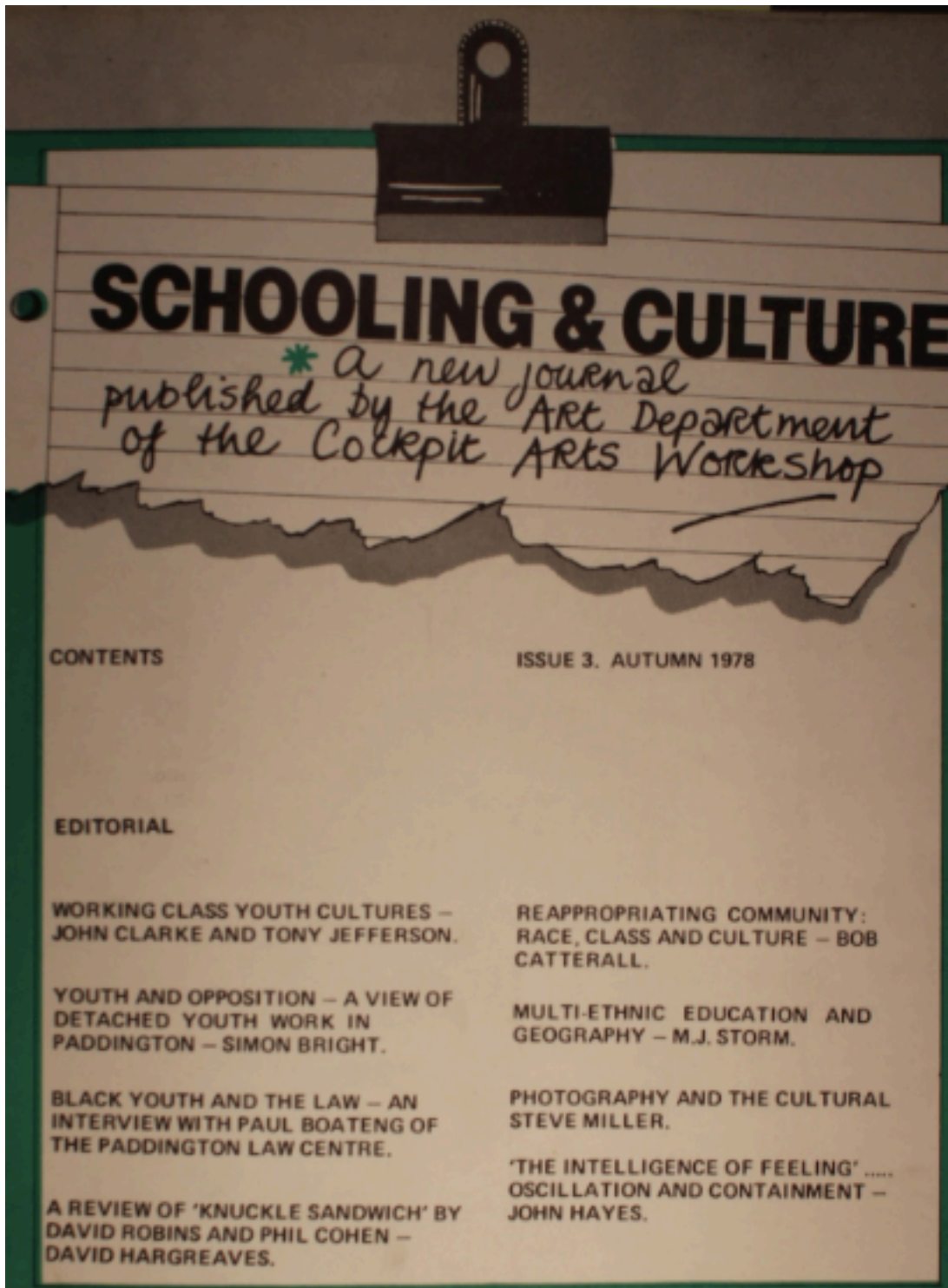


Fig. 1. *Schooling and Culture* journal
Image: MayDay Rooms



Fig. 2. Big Flame Ford Special newspaper cover
Image: MayDay Rooms



Fig. 3. Reading Room at MayDay Rooms
Image: MayDay Rooms



Fig. 4. Big Flame newspaper cover
Image: MayDay Rooms

scratch orchestra

RICHMOND JOURNEY

a day long concert as a journey throughout Richmond
SATURDAY 16th MAY

PROGRAMME

MEET	RICHMOND STATION	11am
node 1	George Street and Green	11.15
node 2	Vineyard Passage	12.30
node 3	Onslow road area	1.00
node 4	Richmond Park (east)	1.30
node 5	Richmond Hill view	2.30
node 6	Terrace Gardens	3.00
node 7	River Thames	3.30
foliage	Kew Gardens	5.00
dispersal		

GENERAL CONDITIONS

1. surreptitious playing
2. acute attention (listening should be a greater part)
3. give careful consideration to the position, meaning and status of audience. (acknowledgements or introductions?)
4. consider color dress appropriately
5. a trace should be left along the route by each player
this trace should have some quality of permanence.

NODE SCORE : each node has been scored and arranged by members of the scratch orchestra. this score is printed as a separate document and is distributed amongst the scratch orchestra. the arrangers of these scores will direct the pieces for which they are responsible. between scored pieces scratch music may be played.

NOTES : 1. the concert will continue in any weather.
2. musical instruments are not allowed in Kew or Richmond Park.
3. please bring food and masks for use at node 4.

Fig. 5. Scratch Orchestra concert programme

Image: MayDay Rooms

Appendix vi. Communal Knowledge



Fig. 1. Take Over: Fourth Feathers TV: Gallery as Neighbourhood Model.

Exhibition 29 March – 2 April 2016

Image: The Showroom



Fig. 2. Take Over: Fourth Feathers TV: Gallery as Neighbourhood Model.
Installation view
Image: The Showroom

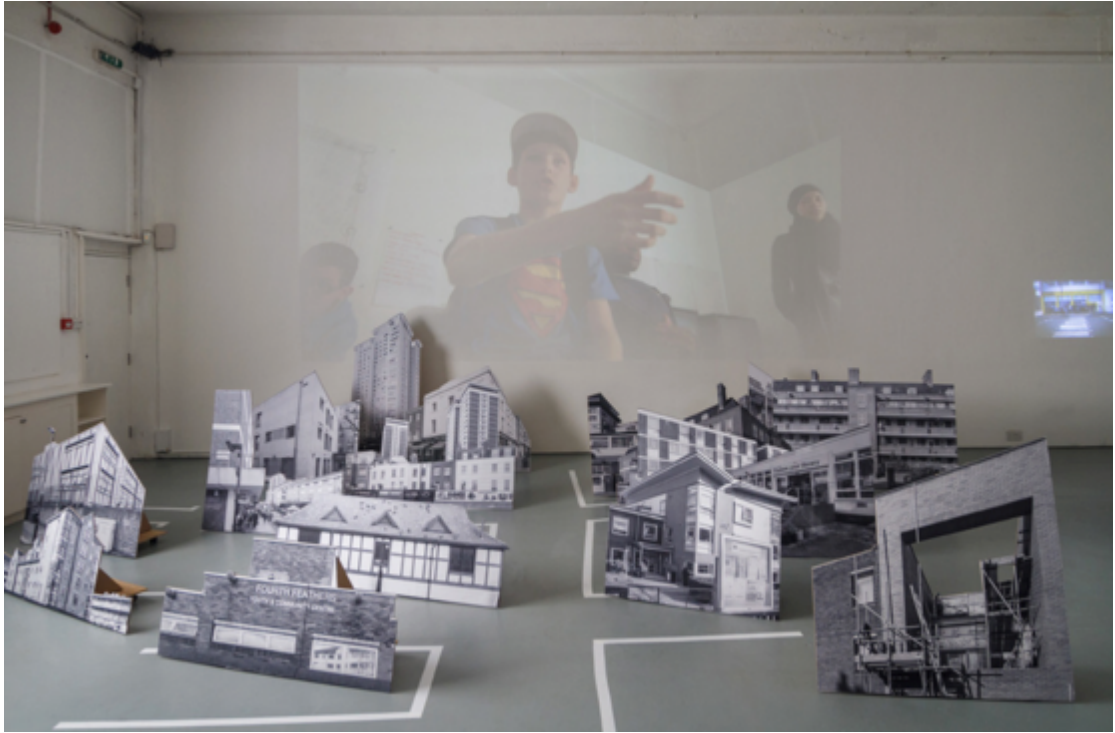


Fig. 3. Take Over: Fourth Feathers TV: Gallery as Neighbourhood Model.

Installation view

Image: The Showroom



Fig. 4 Andrea Francke, *Invisible Spaces of Parenthood*, 2012. Installation view

Image: Andrea Francke



Fig. 5. Andrea Francke, *Invisible Spaces of Parenthood*, 2012. Installation view
Image: Andrea Francke



Fig. 4 Annette Kraus, *Hidden Curriculum*, 2012. Installation view
Image: Annette Kraus