Ecological restoration and connection to nature

Ella Furness

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Summary

There is concern that social and technological changes mean people are increasingly disconnected from nature. Initiatives that involve participants carrying out practical work in nature are hypothesised to remedy this disconnection. In particular 'hands-on' participation in ecological restoration is claimed as a way of enabling participants to develop a sense of connection with nature. This thesis examines the claim, investigating hands-on restoration as a practice and the kinds of relationships with nature that it produces among those who participate. Ethnographic methods were used to examine a case study of hands-on ecological restoration in the Scottish Highlands that specifically aims to enable groups to a feel a 'connection to nature'.

The research extends our existing knowledge in a number of key respects. A connection to nature among restoration participants is most commonly articulated as a sense of belonging to a wider community of nature, wherein 'nature' is understood as an all-encompassing abstract entity. This connection to 'nature' is enabled by entities that are representative of 'nature'. These entities can be abiotic, degraded and humanised forms of nature, which suggests that a sense of connection to nature is not necessarily associated with living non-human nature. The physical 'doing' of restoration facilitates an embodied intimacy and positive affective experience of nature. The narrative of 'restoration' enables participants to feel their actions are making meaningful reparation to nature. This is felt most clearly when attached to symbolic tasks such as tree-planting, but less clearly to other more ambiguous tasks. In addition, the encouragement of curiosity and use of mindfulness, meditation and ritual helps participants observe nature and elevates the significance of the experience. A key paradox, however, is that feelings of connection to nature facilitated by such exceptional immersive experiences are unlikely to endure beyond that experience, into everyday life.

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"But how could I have the experience of the world as an actually existing individual, since none of the perspectival views that I have of it exhaust it, since its horizons are always open, and since, on the other hand, no form of knowledge – not even science – gives us the invariable formula of a facies totius universi? How might everything ever be presented to us definitively, since the synthesis of it is never completed, and since I can always expect to see it break apart and pass to the status of simple illusion? And yet, there is something rather than nothing."

Maurice Merleau-Ponty

"… you don't feel out of place. You're not some alien species… But I think it's because we're interacting and …when you come here you see the broken ecosystem and landscape…you're playing your role in building it and you're just… it's like you're fitting into the ecosystem in a way. You're planting a tree, you're sowing the seed of life. You're generating it, like…You know that by doing what you're doing, other species can try and live, you're creating an opportunity."

Participant GA8

"Wise societies provide means of belonging to family, to tribe, to community, to the Earth."

Tara Brach

Acknowledgements

1. Introduction

We are living at a time of substantial anthropogenic disruption to nature, with rapid change in climate, nutrient cycles and ecosystems (Joint Nature Conservation Committee 2014; Intergovernmental Panel on Climate Change 2018). Simultaneously, there is concern among some academics, environmentalists, Non-Governmental Organisations (NGOs), and governments that social and technological change means people spend less time in nature. This lack of contact with nature is thought to embed understandings of nature which overlook human dependence upon nature, and diminish feelings of empathy and responsibility towards non-humans, creating a "cycle of disaffection towards nature" which enables ongoing environmental destruction (Soga and Gaston 2016, p. 94). In response to these concerns, scholars from disciplines across the natural and social sciences and humanities have argued that creating connections between humans and nature is urgent work which can facilitate pro-environmental attitudes and behaviours, and provide the impetus needed to protect and restore threatened nature (Zylstra et al. 2014; Restall and Conrad 2015; Ives et al. 2017). Initiatives that involve people spending time in nature, particularly those that involve participating in practical work in nature, are hypothesised to remedy disconnection and enable people to feel connected to nature (Soga and Gaston 2016; Schild 2018).

This opening Chapter of the thesis begins with some background about these issues. It describes how human understandings of nature have come to be seen as important when considering environmental problems, and how the idea of 'connecting to nature' has arisen as a response to concerns of environmental crisis. It then gives an outline of how the idea of 'connection to nature' has been considered in research, the central questions that are raised by this work, and the problems that the thesis intends to address. Finally, the overall aim, research questions, and the logic and structure of the thesis itself are presented.

1.1 Environmental crisis

Across the natural and social sciences and humanities, there is literature that understands nature as profoundly threatened and in need of protection from far reaching human activity. This literature often uses the term 'environmental crisis' to convey the severity and extent of the problem (Bragg 1996; Miller 2005; Barry 2007). The term 'environmental crisis' refers to climate change, deforestation,

desertification and pollution, and the consequences of these, in terms of biodiversity loss and the disruption of biophysical processes (Barry 2007). The environmental crisis emerged in the 1960s, and since then it has evolved and changed, both in terms of the scope and scale of environmental impacts, but also in the ways in which is it discussed and attributed to aspects of social life (Buell 2004; Barry 2007). Environmental crisis is a chronic problem, and the observation that we are living at a time of environmental crisis is almost a truism. The unprecedented scale of the problem is reflected in the neologisms with which it is described. Terms such as the 'great acceleration' are used to describe the rapidity of environmental degradation (Rockström 2016, p. 4), Earth is said to be in the middle of the 'sixth great extinction' (Wake and Vredenburg 2008; Barnosky et al. 2011), and the ubiquity of human influence (e.g. global dispersal of pollutants and climate change) is such that many claim that Earth has entered a new epoch, that of the Anthropocene (Steffen et al. 2007; Lewis and Maslin 2015). The 'environmental crisis' is a crisis of ecology and nature, but the term also implies that the crisis has a social dimension. This social dimension is not only about how humans themselves are impacted by environmental destruction. It also implies that a crisis exists because there is something wrong in the way many humans think about nature (Buell 2004; Foster and York 2004): there is a proposition that environmental crisis is linked to 'disconnection from nature' (Hamilton 2011).

The assertion that 'disconnection from nature' is linked to the environmental crisis stems from the perspective that, fundamentally, environmental crisis is a crisis of human relationships with the natural world, which should be of interest to social scientists. Yet, it was not until the 1970s that the social sciences began to consider the relationship between society and environment. Before the 1970s, many social scientists saw the natural world as the concern of science and technology, the assumption being that environmental constraints felt by society could be overcome with technological solutions. At this time, there was no need for social science to comment on nature, as nature was not seen as social (Dunlap and Catton 1979; Schultz 2002; Hannigan 2014). However, the consensus that the environment was a matter for science and technology began to break down as voices emerged from the natural sciences that told of the unintended environmental consequences of technology. In particular, Rachel Carson's Silent Spring (originally published in 1962), which documented the ecological costs of pesticide use, is often cited as a book which triggered widespread reconsideration

of the role of science and technology in environmental problems (e.g. Pretty et al. 2007, p. 3). Alongside the work of Carson, the ecological consequences of industrial scale resource extraction and agriculture raised concern among environmental publics and motivated emerging environmental movements (Hannigan 2014). It was against this backdrop that social scientific examination of society's relationship with nature, aimed at improving understanding of how society and nature interact, became established. Since this period, interest has grown in the social sciences and humanities about interactions between humans and nature and the role of belief, choice and values in human-nature relationships.

The argument that the environmental crisis is a technical problem remains, and continues to be made (see discussion in Spaargaren and Mol 1992; Korhonen 2008). Nevertheless, Marxist, feminist and radical ecological approaches to understanding society and the environment have developed which see environmental problems as, at their root, social problems (Berkhout et al. 2003; Benton and Redclift 2013). A number of salient criticisms have arisen from these perspectives, which see technological solutions as partial at best. Firstly, while technological approaches may seek to address environmental symptoms, they are limited in their ability to solve them and often create new unintended consequences (e.g. Huesemann 2001; Bellesi et al. 2005; Korhonen 2008). Secondly, in failing to consider social questions, technological approaches can fail to look beyond environmental symptoms to the malaise that is causing them: thus they can excuse underlying social or institutional causes of degradation and entrench existing unsustainable cultures and institutions (Scott 2011; York and Clark 2013; Blühdorn 2017). Finally, there is a justice issue at play. Scientific and technical solutions often ignore inequality, which weakens the ability of disadvantaged groups to fight against the environmental destruction that disproportionately affects their land and livelihoods (Adger 2002; Gould et al. 2004). Thus, in failing to consider accessibility of resources or social justice, technological solutions can perpetuate environmental harms (O'Connor 1998; Blühdorn 2000; Gibbs 2000; York and Clark 2013). Social approaches to environmental problems help bring these issues to the foreground, and play a role in suggesting ways in which they may be overcome.

Understanding environmental problems as entwined with the social world has enabled their consideration from multiple viewpoints, with work examining the

role of individual and societal ethics, attitudes and behaviours, economic arrangements, governance, and institutional and policy forces in human-nature relationships. These have enabled nuanced understandings of how social ideas, discourse and behaviours are bound up with environmental degradation. The myriad ways that society and nature interact and co-exist have been and continue to be discussed across the social sciences, in geography, anthropology, sociology and Science and Technology Studies (STS). Although some disciplines, like sociology, have been quite fragmented in their response to environmental questions (Lidskog et al. 2015), others, like geography, have developed a large and rich literature contending with fundamental ontological and epistemological questions that are raised when nature and culture are considered together (e.g. Lorimer 2007; Castree 2014). It remains common for theoretical work that considers important human-nature questions to be initially published in one discipline and subsequently developed in others, with influential approaches influencing multiple disciplines (e.g. Macnaughten and Urry 1998). This thesis rests in this place of overlapping disciplines, using aspects of work from philosophy, sociology, anthropology and geography to scrutinise and develop work that examines human understandings of nature that reside in psychology, across the social sciences, and in environmental studies (Ives et al. 2017).

1.2 From environmental crisis to connecting to nature

The idea that environmental degradation is entwined with how people think about and relate to nature came to the fore when Lynn White's 'The historical roots of our ecologic crisis (1967) was published. White contended that the strict nature/ culture dichotomy that prevailed in Western[1] discourse was partly to blame for anthropogenic environmental degradation, thus, he argued that the origin of environmental problems was ontological rather than technical. White demonstrated that human destruction of nature was enabled by ideas about nature, and that these could be traced back to the adoption of Christianity and the scientific and enlightenment revolutions of the 16th, 17th and 18th centuries in

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[1] The term "Western" is used here to refer to the culture and philosophical tradition that has its historical roots in Europe: in Greek, Roman, German, Judaic and Christian and Enlightenment thinking (cf. Zylstra et al. 2014, Birken 1992).

Europe. He argued that these changes in thinking cast humans as separate from nature, stripped nature of its agency and removed social norms of restraint which had tempered human exploitation of nature (White 1967). Although there is debate about the roles played by science and religion in the changing relationships with nature at this time (cf. Minteer and Manning 2005), the logic of White's argument, that destruction of the environment is a consequence of how society thought about nature, is influential. From this perspective, the solutions to environmental problems are in how people think about, and relate to, nature.

Thus, White's request to rethink and 'refeel' our relationships with nature (1967, p. 1207) can be seen as a precursor to today's calls for people to 'connect with nature'. To paraphrase Plumwood (2006, p. 141), "western dualistic conceptions of nature and culture... tend towards hyperseparation of nature and culture and represent nature as an absence of the human...". These dualistic understandings of nature and culture[2] are seen to have the effect of distancing humans from the truth of their dependence upon nature, numbing them to environmental destruction, and supporting an erroneous idea that humans are in control of nature (Catton and Dunlap 1978). Thus, multiple voices from the natural and social sciences argue that protection of nature relies upon the breaking down of dualistic understandings of humans and nature (e.g. Pyle 2003; Miller 2005; Balmford and Cowling 2006; Saunders et al. 2006). From this standpoint, it is hoped that when humans view themselves as a part of nature they will behave in ways that will sustain nature (Vining et al. 2008).

Against a back drop of environmental crisis, this critique of dualistic ideas of nature and culture has combined with concerns about reduced human contact with nature (e.g. Moss 2012), and evidence that links contact with nature to improved human health (e.g. Lovell et al. 2015), to intensify calls for people to rediscover their connection with nature. This has created a context in which 'connection to nature' is increasingly discussed in discourse surrounding sustainability and conservation (Zylstra et al. 2014; Ives et al. 2017), with

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[2] While there is a large body of work discussing nature/culture dualisms, further treatment would take the discussion beyond the scope of this thesis.

numerous calls for policymakers to support environmental activities which are seen to foster a connection to nature and benefit public health and environment (Bratman et al. 2012; Soga and Gaston 2016; Fletcher 2017).

1.3 Connecting to nature in practice

In response to these calls from a range of disciplines, there has been a recent flourishing of research that considers connection to nature. The kinds of questions asked by this literature are: what is a sense of connection to nature? What enables a sense of connection to nature? Moreover, how is a sense of connection to nature associated with decisions to 'protect nature'? (Restall and Conrad 2015; Soga and Gaston 2016).

To date, research has examined a range of practices that are anticipated to enable a sense of connection to nature; these include a diverse range of activities that can take place in nature, which require varying degrees of attention to one's surroundings. Examples of these include: walking (Roberson and Babic 2009), hunting (Tadie and Fischer 2013), fishing (Urquhart and Acott 2014), gardening (Hale et al. 2011), farming (Natori and Chenoweth 2008), wilderness travel (Grimwood et al. 2015), birdwatching (Cammack et al. 2011), surfing (Hill and Abbott 2009), extreme sports (Brymer and Gray 2010), environmental education initiatives (Ernst and Theimer 2011), and even smoking cannabis outdoors (Moffat et al. 2009). Research examining associations between recreational activities and connection to nature have shown mixed results (e.g. Lumber et al. 2017; Schild 2018), suggesting that activities that take place in nature are not consistently associated with heightened awareness of that nature, and that more 'active participation' in nature is necessary to stimulate consideration of human-nature relationships. One response to this has been to focus on "physically active environmental enhancement or conservation activities" (Lovell et al. 2015, p. 2), whether in urban or rural areas, in which participants engage in active immersion in nature whilst 'improving' the environment itself. This kind of practical work in nature is of particular appeal because it is often seen to have potential as an activity which can improve the health and wellbeing of participants, produce practical environmental outcomes and nurture sustainable behaviours, addressing multiple public health and environmental concerns simultaneously (O'Brien et al. 2010; Lovell et al. 2015). These are practices that involve a range of activities,

from planting certain species and removing others, to building infrastructure, or carrying out ecological surveys.

The significant aspect of these activities is thought to be their use of "hands-on participation" by lay publics in physical tasks outdoors (Keenleyside et al. 2012, p. 11), literally enabling people to 'get their hands dirty' and immerse themselves in nature. Work may be understood as 'conservation' (Guiney and Oberhauser 2009), 'ecological restoration' (DiEnno and Thompson 2013), 'environmental volunteering', or 'practical work in nature' (Lovell et al. 2015). The tasks that make up these various hands-on environmental practices are similar, but the aims and discourse surrounding the tasks can differ (Jordan 2003). For example, ecological restoration aims to "assist the recovery of ecosystems which have been degraded, damaged or destroyed" (Society for Ecological Restoration International 2004), whereas (in-situ) conservation emphasises the maintenance and recovery of viable populations of species in their natural surroundings (Convention on Biological Diversity 2010). Of these activities, ecological restoration is particularly interesting because the practice has long been claimed by advocates as a way of enabling participants to develop a sense of connection with nature (Jordan 1993; Cairns and Heckman 1996; Higgs 2003; Greenwood 2017). While it is common for advocates of ecological restoration to make such bold claims as "restoration in the twenty-first century is restoring our connection with our planet" (Leigh 2005, p. 13), declarations such as these rest on little evidence and remain under examined in research.

The use of ecological restoration as a management technique is expanding. The Convention on Biological Diversity agreed the Aichi Targets in 2010 which include a global commitment to restore 15% of degraded ecosystems by 2020 (Convention on Biological Diversity 2010). Many governments require restoration projects to be implemented in order to mitigate for continuing ecological impacts of infrastructure development and extractive industries; for example the Cardiff Bay Barrage in the UK or mountaintop removal mining in the Appalachian mountains of the USA (Cowell 2003; Palmer and Hondula 2014). Restoration is also tied into climate change negotiations and thought of as a tool for adapting to and mitigating climate change impacts. The UN New York Declaration on Forests arising from the 2014 Climate Summit saw governments committing *to* "restore 150 million hectares of degraded landscapes and forestlands by 2020 and significantly increase the rate of global restoration thereafter, which would

restore at least an additional 200 million hectares by 2030" as part of ongoing climate change negotiations (United Nations 2014, p. 3). Although much of this expansion of ecological restoration will likely not involve the hands-on participation of lay publics, at a time when the practice of ecological restoration is becoming widespread (Higgs et al. 2018), the possibility that the practice may enable people to re-think their relationships with nature has inspired a fresh surge in the claims made for its efficacy in facilitating human-nature relationships, even as there has been very little examination of these claims in empirical research (examples include: Keenleyside et al. 2012; Suding et al. 2015; McDonald et al. 2016a).

Certainly, the fresh surge of claims for ecological restoration as a method of encouraging connection to nature comes at a time when concern is prevalent among scholars and practioners of restoration that if expanding restoration efforts fail to involve lay participants, an opportunity for re-examining human-nature relationships will be lost (McDonald et al. 2016a). There has been long standing concern that ecological restoration will lose its lay participatory roots as schemes are scaled up and professionalised (Light 2000b). Given this context, there are currently many examples of practioners and scholars of restoration claiming that the practice has valuable social as well as ecological outcomes. For example, the Society for Ecological Restoration International (SER), the central institutional body advocating for ecological restoration worldwide, has published 'International Standards for the Practice of Ecological Restoration' that emphasise the potential for restoration to foster connections between people and nature, describing restoration as "A powerful vehicle for encouraging positive and restorative attitudes toward ecosystems and the natural world in general" and linking the practice to "the relationships [that] exist between humans and the living biota and landscapes of the world...and the values and behaviours of humans" which "dictate the future health and condition of ecosystems" (McDonald et al. 2016a, p. 23).

Thus, research examining the supposition that restoration can enable participants to develop relationships with nature is salient at time when environmental damage and restoration practice are both on the rise. Indeed, there are repeated calls for societies to develop "public acceptability" of "wide scale behaviour changes" which are required to minimise future environmental damage (Intergovernmental Panel on Climate Change 2018, p. 30), and a sense of urgency

underlies much support for participatory restoration practice as vehicle for enabling such changes in public perception (e.g. Suding et al. 2015). The environmental crisis of the 1970s that inspired social science to begin examining the relationship between humans and nature has continued, and is showing very little prospect of waning. Hands-on environmental practices may offer a way for publics to think about nature and address the dualistic understandings of humans and nature that White thought of as the roots of the environmental crisis. However, without evidence, it is hard to know whether it is important to 'connect with nature', or, indeed, what this connection is, or what may enable it. The objective of this research is to examine these uncertainties.

1.4   Aims of the thesis

This thesis aims to build upon, and extend, existing work concerned with human-nature connection. To do this, it investigates ecological restoration in particular as a practice that may enable participants to feel connected with nature. The core ontological assumption of the thesis is sociological in its formulation, and after Macnaughten and Urry (1998), it is based on a foundation that multiple (often contradictory) understandings of nature exist that arise from the social practices in which people engage. It assumes that the embodied sensation of carrying out particular practices and the discourses that frame and surround these practices lead to particular understandings of nature and relationships with nature. Thus, it is in this way that hands-on ecological restoration practices may influence participants' ideas of nature and their relationships with that nature.

Accordingly, the thesis aims to scrutinise the claims made for ecological restoration by identifying the ideas of nature that are produced by the practice, examining what sorts of human-nature relationships are produced by the practice, and clarifying and extending knowledge about the aspects of restoration that may facilitate participants' understandings of nature and connection. Ultimately, by exploring restoration practice and its outcomes, the thesis aims to comment upon the wider issue that this Chapter considered: that connecting people with nature will enable society to resolve environmental crisis.

To this end, the thesis is guided by the following research questions, which emerge from the literature review in the following Chapter.

1. What aspects of hands-on ecological restoration are important in mediating participants' understandings of nature and their connection to it?
2. What natures are produced by hands-on ecological restoration?
3. What sort of human-nature relationships are produced by hands-on ecological restoration?

1.5 Structure of the thesis

Leading on from this introduction to the broad themes that the thesis discusses, Chapter two reviews existing literature on the central problem of the thesis, the claim that society is increasingly disconnected from nature and that practical work in nature, specifically ecological restoration, can enable people to feel a connection with nature. The Chapter begins by considering the literature that has emerged from multiple disciplines which concerns 'connection to nature'. In particular, it examines how existing empirical research understands the concepts of a 'connection to nature' and 'nature', and examines the practices that that are hypothesised to foster a connection, drawing on theorists to clarify and develop this discussion. It then looks in more depth at the practice of ecological restoration and the claims made by ecological restoration's proponents that it is a practice that enables a connection to nature. Subsequently, the elements of the practice, that advocates of ecological restoration ascribe casual power to, are laid out.

Chapter three discusses the research approach chosen: a qualitative study of an "crucial case" (Mitchell 1983) of hands-on ecological restoration that specifically aims to enable connection to nature. It looks in more depth at the research questions and explains the rationale of the research design, as well as why and how this case study was chosen. The Chapter explains the choice of an ethnographic approach, and the methods of data collection used to document the practices, embodied experiences, discourse and reflections of participants. The Chapter goes on to discuss ethical issues and access as well as positionality and reflexivity, before detailing the types of data collected and the way the data was managed and analysed.

Chapters four to eight answer the research questions through detailed description, analysis and discussion of the case. They are structured as follows:

Chapter four gives some background information about the case where the research took place. It describes the organisation that is managing the initiative, and explains how the restoration work is organised in order to give the reader an overview of the social situation that the restoration work took place. It describes the role of the group leaders in facilitating the experience of restoration, and describes the demographics of the volunteer participants who carry out the work.

Chapter five is guided by the first research question (What aspects of hands-on ecological restoration are important in mediating participants' understandings of nature and their connection to it?), it is concerned with describing the physical activities of hands-on restoration and their role in facilitating participants' understandings of nature and their connection to it. This Chapter begins this task by giving an overview of how the practice is organised and restoration tasks are carried out. From here consideration moves to the detail of the different restoration tasks that are carried out, what these tasks consist of, and what participants talk about when they are asked to give their thoughts about them. Subsequently, the Chapter looks at the how the work is done, with a focus on the embodied and affective aspects of the work.

Chapter six is also guided by the first research question and is concerned with the ways in which the 'doing' of restoration is accompanied by methods that guide participants' attention. It examines the role of focal attention, education and knowledge sharing, and ritual in fostering a connection to nature.

Chapter seven again is guided by the first research question, and examines restoration with a focus on the group bonding and social connection that develops. It is concerned with how social arrangements mediate participants' understanding of nature and their connection to it. To do this it uses the theoretical lens of 'communitas' to examine the social experience of participants by describing the material circumstances in which the participants find themselves, and the ways that groups develop social bonds in these circumstances. It then explores the limits of creating social connection: the reasons why a group can fail to bond, and conflicts and norms that can develop which prevent group connection. The Chapter then explores what happens once the restoration experience ends, how the participants reflect on their experiences of restoration, and finally, how and if their experience has any lasting impact on their understandings of nature or their sense of connection with nature.

Chapter eight addresses the second and third research questions: What natures are produced by hands-on ecological restoration; and what sort of human-nature relationships are produced by hands-on ecological restoration? It examines what it means to be connected to nature as an outcome of restoration practice and the different aspects of hands-on restoration practice that were significant in facilitating participants' understandings of and relationships with nature. To do this, it initially describes the different ways in which participants understood nature, the Chapter then discusses the experience of being connected to nature and how it relates to participants' understandings of nature. Finally, the Chapter examines whether the experience of feeling connected to nature transformed participants' perspectives on their everyday practices and their environmental consequences.

Chapter nine is structured around the research questions and presents the conclusions of the research. It emphasises the themes and areas that are most important or contribute the most to existing research, and explores the wider implications of the findings. It also describes the limitations of the research, and suggests future research that this thesis indicates may be fruitful in order to deepen this analysis, or to establish whether the findings in this case may be applicable elsewhere.

2. Connection to nature and ecological restoration

2.1 Introduction

This Chapter opens by giving some background to the claim that disconnection from nature is a social problem (Spector and Kitsuse 2017), which can be remedied by connection to nature. It then examines the multidisciplinary body of work that has developed in response to this, which is concerned with the concept of human connection to nature and the ways in which it may be encouraged. The Chapter first examines empirical research that aims to better understand the concept of connection to nature that has developed in psychology. Upon ascertaining that multiple unanswered questions remain about idea of connecting to nature, the Chapter traces the idea of connecting to nature, as it is used in this empirical research, back to writing in environmental philosophy and ecology. Drawing on work in sociology and geography, which looks at human-nature relationships, the Chapter considers perspectives from these disciplines that can help better understand the idea of connecting with nature. These perspectives raises subsequent questions about the notion of connecting to nature as it relates to peoples' ideas of nature itself, as well as providing some potential ways of examining these issues. Following this exploration of the concept of connection to nature and different ways that nature can be understood, the Chapter then details activities that have been hypothesised to foster a connection to nature. Subsequently, it focusses on the aspects of these practices that are thought to play a significant role in facilitating these closer relationships with nature.

The second half of the Chapter looks specifically at the practice of ecological restoration as a way of fostering connection to nature. It defines the practice of restoration, details the history of the practice as it relates to connection to nature, and examines the theme of nature within the practice. It then describes the claims that have been made for ecological restoration's efficacy in creating closer relationships between humans and nature. After which it lays out the particular aspects of restoration that are hypothesised to play a role in creating a connection to nature. The Chapter then finishes by reiterating the gaps in research that were found during the review, and the research opportunities that these gaps present.

2.2 The rise of disconnection from nature as a social problem

In the introductory Chapter, we saw that growing awareness of an ongoing environmental crisis over the last 50 years has stimulated substantial interest in human-nature relationships in several disciplines. We begin this second Chapter by examining some context behind this issue, looking in some detail at factors that have combined with environmental crisis to stimulate interest in the idea that humans can connect with nature. Scholars from a wide range of disciplines have observed that humans are more disconnected from nature than they were in the past (e.g. Turner et al. 2004; Restall and Conrad 2015; Marczak and Sorokowski 2018). Indeed, many such scholars of connection to nature are motivated to examine the idea because of the reduction of time spent in nature (particularly among children) over the last five decades as described by Louv (2009), and the idea that successive generations are losing their 'connection with nature' (e.g. Brymer and Gray 2010; Beery 2013; Bruni et al. 2017).

Shifting global economies are stimulating rapid urbanisation and changes in the surroundings in which people live their everyday lives (Grimm et al. 2008), and these changes are leading many people to experience less contact with non-human nature (Turner et al. 2004; Soga and Gaston 2016). Population density is increasing, and more people live in environments where green space is absent or degraded (Samways 2007). Simultaneously, social fragmentation and changes in forms of mobility have resulted in an increase in the perception of risk from unknown strangers and increases in traffic volume which deter people from allowing children to explore unsupervised (Moss 2012). Technological change is also playing a role in changing human-nature interactions, with an increase in the prevalence of sedentary pastimes which take place indoors (e.g. Seddon 2011; Natural England 2015). Indeed, technology is often accused of distracting human attention away from the natural world (Higgs 2003; Moss 2012; Hailwood 2015), with scholars suggesting that as more attention is focused upon virtual worlds (e.g. internet and social media, TV and videogames), experience of the 'actual' world of material nature is reducing.

While more people are spending less time in nature (Pyle 2003; Soga and Gaston 2016), there is rising evidence of a relationship between increased contact with nature and improved health and well-being (Lovell et al. 2015). The consequences of spending time in nature are extensively researched in medical and

psychological literature, and contact with nature is well established as a way of improving physical health outcomes (Kahn 1997; Takano et al. 2002; Bowler et al. 2010; Calogiuri and Chroni 2014). Mental health is also increasingly understood to be linked to contact with nature, with improvements in emotional wellbeing, self-reported stress and cognitive performance all associated with increased exposure to nature (respectively: Kaplan and Kaplan 1989; Ulrich et al. 1991; Bratman et al. 2012). Separation from nature is not uniform across societies, and there is growing understanding of how lack of contact with nature interacts with income inequality and race. For example, in the UK people in the D and E social classes[3] are less likely to access green space often, due to poverty, ill health and lack of opportunity. Non-whites in the UK often feel isolated from nature in their daily lives (The National Trust 2012), meanwhile, in the US, African American girls are least likely to have access to green space (Larson et al. 2018). When poorer populations have access to green space, there are improvements in health, and a reduction in overall health inequalities across populations (Hartig 2008; Mitchell and Popham 2008). This widespread recognition of the link between health inequalities and contact with nature has lent weight to calls to connect with nature, as nature based experiences are framed as health promoting activities (Lovell et al. 2015).

Interest in the changing relationship between humans and nature has also grown outside academia, where it is the subject of significant lay comment and debate (e.g. Challenger 2011; Monbiot 2014). The current rise in public concern about the environmental and social consequences of lack of human contact with nature can be understood to have its roots in the ideas of the Romantic movement of the 18th and 19th centuries (Hartig et al. 2011; Zylstra et al. 2014). Both can be interpreted as reactions against rapid social and environmental change. The Romantics were responding to mercantile and agricultural expansion, as well as the industrialisation which centralised production in cities and lead to rapid urbanisation and pollution (Pepper 1986). Similarly, contemporary concerns about

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[3] D being the 15% of the population who are semi-skilled and unskilled manual workers and E being the 8% who are casual workers or who depend on the welfare state for their income.

lack of contact with nature are a response to large scale demographic changes, some of which can be seen as a continuation of these processes that began in the 18th and 19th centuries. The Romantic movement catalysed a re-evaluation of human-nature relationships. Mountains which had, in the 17th century, been thought of as 'barren deformities', 'warts', 'boils', 'monstrous excrescences' and 'rubbish of the earth' would become objects of aesthetic appreciation (Berger and Luckmann 1984), and communion with nature became a pastime. It remains to be seen whether today's proliferation of interest in the role that nature plays in human lives will play a similarly significant role in changing attitudes.

The rise in public interest has occurred alongside some influential authors who blame a lack of contact with nature for a wide range of modern ills. Louv (2009) coined the journalistic term "nature deficit disorder", defined as the "human costs of alienation from nature, among them: diminished use of the senses, attention difficulties and higher rates of emotional and physical illnesses" (p. 5), which has subsequently been absorbed into public health and environmental education research (Palomino et al. 2016; Fletcher 2017). In response to both the growing evidence base and public concern about disconnection from nature, governments and state environmental agencies have commissioned reports to encourage engagement with nature, and begun compiling their own data to monitor levels of engagement (e.g. Scottish Natural Heritage 2014; Natural England 2015; Des Moines County 2017; Poelman 2018), with the majority of existing research coming from high income countries (Restall and Conrad 2015; Ives et al. 2017). Emphasising the public concern about lack of contact with nature, Beery (2013, p. 82) refers to Barack Obama's speech of 16 April 2010 in which he said "We are losing our connection to the parks, wild places, and open spaces we grew up with and cherish. Children, especially, are spending less time outside running and playing, fishing and hunting, and connecting to the outdoors just down the street or outside of town." Conservation NGOs have also been quick to participate in this discourse, linking health and time spent in nature with environmentally protective behaviours, and commissioning research that measures human engagement in nature and what they understand as consequent attitudes towards it (e.g. Moss 2012; Royal Society for the Protection of Birds 2013). This concern about disconnection from nature, the development of evidence of the health benefits of contact with nature, and the premise that a felt sense of connection to nature is associated with pro-environmental behaviour have given rise to a large and diverse body of research which is concerned with the

phenomenon. It is this body of work that is of central concern in this thesis. The following Section describes this work and the gaps within it that this thesis aims to address.

2.3 The concept of connection to nature in empirical research

Ives et al. (2017) and Zylstra et al. (2014) point out that empirical research concerning connection to nature is fragmented and spread across disciplines, predominantly psychology, geography and sociology. Thus, research concerning connection to nature has developed from a range of disciplinary perspectives that use a plurality of methods and research approaches. This thesis uses the term 'connection to nature' to unify this body of work, but a number of other terms exist within the field, such as 'connectedness with nature' (Mayer and Franz 2004) and 'nature relatedness' (Nisbet et al. 2009).

Many existing research papers understand a connection to nature as a "psychological construct" (Bruni et al. 2017, p. 44), or what Ives et al. (2017, p. 107) term "connection as mind", which is conceived as having affective, cognitive, and experiential aspects (Tam 2013). As would be expected, research in this group predominantly originates from psychology, typically has an objectivist epistemology, and uses quantitative methods. It is the most cohesive and fastest growing body of work that concerns connection to nature (Ives et al. 2017). Some of this research is primarily interested in how contact with nature can improve health outcomes (e.g. Bowler et al. 2010; Hartig et al. 2011; Lovell et al. 2015), and seeks to examine the human health benefits of various activities undertaken in natural environments. Other research sees environmental crisis as stemming from human disconnection from nature, and is primarily interested in connection to nature as a potential motivator of pro-environmental behaviour (Schultz 2002; Mayer and Frantz 2004; Nisbet and Zelenski 2013; Lokhorst et al. 2014). We look in more depth at psychological research into connection in the following Section, and look at how this work may be enriched by perspectives that have developed in sociology and geography.

2.3.1 The development of a connection to nature as a psychological construct

Work in psychology about connection to nature is primarily concerned with establishing what a 'connection to nature' is as a state of mind, and how it interacts with other variables (Zylstra et al. 2014; Restall and Conrad 2015).

Models of connection to nature are commonly used to measure the construct in different populations, and to assess the effectiveness of interventions that are hypothesised to increase a sense of connection to nature in a given population (e.g. Royal Society for the Protection of Birds 2013; Barton et al. 2016). Currently, there are almost 20 different ways of operationalising and measuring what is hypothesised to be a connection to nature, and they all have slightly different ways of conceptualising a connection to nature. An early example was 'Emotional Affinity with Nature' (Kals et al. 1999), which understands a connection to nature as love for nature and a feeling of oneness with nature. This early model was inspired by the authors' observation that previous models that aimed to predict pro-environmental behaviour overlooked the role of emotion in human relationships with nature. Other models have developed since then, which follow a similar approach such as The 'Love and Care for Nature Scale', which aims to reflect a primary construct of love and deep caring for nature (Perkins 2010). Other work is concerned with how a connection nature relates to peoples' self-identity. For example, the 'Environmental Connectivity' or 'Connectivity with Nature' model (Dutcher et al. 2007) is based around the notion that a connection to nature is about seeing oneself and nature as the fundamentally the same. Whereas the 'Allo-inclusive identity scale' is concerned with how individuals incorporate the social and natural worlds into their sense of self (Leary et al. 2008).

The field has evolved over time via the ad-hoc publication of isolated papers, many slightly different conceptualisations of a connection to nature exist, and there is little consensus about the definition of the term, which arguably hampers theoretical development and causal explanation. The most influential conceptualisations of a connection to nature in the field are the 'Inclusion of Nature in Self' approach (Schultz 2002), the 'Connectedness to Nature' approach (Mayer and Frantz 2004), and the 'Nature Relatedness' approach (Nisbet et al. 2009). Each is associated with psychometric scales which have been widely used to measure connection to nature (e.g. Frantz et al. 2005; Barton et al. 2016; Marczak and Sorokowski 2018). Others, such as 'The Environmental Identity Scale' (Clayton 2003), which focuses on identity formation, and Chawla's (1998) work, which examines how people become 'sensitised' to environmental concerns, are also significant contributions to the field. In addition to this array of models, implicit measures have been developed to avoid social desirability bias (which is prevalent in research concerned with environmental attitudes and behaviours),

such as the Implicit Associations Test (Schultz et al. 2004). In the absence of one authoritative model of connection to nature, it is common for empirical studies of connection to nature to use more than one of these models when they aim to measure a connection to nature (e.g. Duffy and Verges 2010; Howell et al. 2011; Geng et al. 2015).

Many of these models and scales are highly associated and overlapping, meaning that they are often measuring the same (or a very similar) construct. Tam (2013) demonstrates that this is the case for the models used in Mayer et al. (2009) and Nisbet et al. (2011) for example. The lack of cohesion in the field means there is a proliferation of measures, and some suggest a need to explore more holistic conceptualisations of connection to nature to bring this work together (Restall and Conrad 2015). A more parsimonious and unifying concept of connection to nature would allow for more integrated consideration of research findings (Tam 2013; Restall and Conrad 2015), consolidating findings and better enabling research to inform environmental policy and practice (Zylstra et al. 2014; Restall and Conrad 2015). Tam has used a quantitative approach with the aim of bringing this work together by identifying associations between measures (Tam 2013), and studies have attempted to distil existing research findings (Restall and Conrad 2015; Ives et al. 2017) and create conceptual frameworks to coalesce this work (Zylstra et al. 2014). However, the volume and variety of concepts and ideas that exist in the connection to nature literature frustrates attempts to do so (Zylstra et al. 2014).

Another way of approaching this problem would be to bring a more expansive inductive qualitative approach to the issue by returning to the central ideas that underlie the different conceptualisations of connection to nature and then to use qualitative approaches[4] to clarify empirically which of these ideas arise in peoples' lived experience of connection to nature. This approach finds support from recent reviewers of the connection to nature literature who recommend that qualitative

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[4] Of course, qualitative approaches have been used to examine connection to nature before, from scholars in sociology and geography, and we will look at how this existing research can inform this approach in Section 2.3.3.

techniques be used to broaden and deepen understanding of the experience of connection with nature as it is lived (Zylstra et al. 2014; Restall and Conrad 2015). However, one of the challenges in trying to 'unify' the field is that research draws on rather different underlying theoretical conceptions of what a connection to nature means, the following Section gives an overview of these main ideas.

2.3.2 biophilia, the ecological self and membership of a biotic community

There are three key underlying ideas that various conceptualisations of connection to nature draw upon, which originate from environmental philosophy and ecology. Often, scholars define a connection to nature as being the outcome of a process of awakening "biophilia", (Kals et al. 1999; Clayton 2003; Dutcher et al. 2007; Nisbet et al. 2009; Perkins 2010). They may also define it as the maturation or development of an "ecological self" (e.g. Chawla 1998; Nisbet et al. 2009, p. 717) or similarly, as a state where one sees nature as part of oneself (Schultz 2002; Mayer and Frantz 2004). Finally, a connection to nature is commonly understood to be an awareness of oneself as a member of a wider biotic community (e.g. Schultz 2002, p. 64; Dutcher et al. 2007; Mayer et al. 2009, p. 610; Perkins 2010). Researchers frequently incorporate more than one of these ideas into a single concept. For example, the concept of 'Nature Relatedness' (Nisbet et al. 2009) draws upon both biophilia and the idea of the ecological self. While the 'Nature in Self' model (Schultz 2002) sees a connection to nature as "the extent to which an individual includes nature within his/her cognitive representation of self" (p. 67), as well as the extent to which one regards oneself as a member of a wider biotic community. Despite the prevalence of empirical research that draws upon Wilson (1984), Naess (1987), and Leopold (1966) to conceptualise a connection to nature, there has been very limited examination or evaluation of their ideas as they relate to the lived experience of connection to nature.

First used by Fromm to mean a love of life (Fromm 1964; Eckardt 1992), the term biophilia was popularised by Edward O. Wilson, a biologist whose "biophilia hypothesis" proposes that humans have an innate tendency to affiliate with life and lifelike processes, meaning they are predisposed to feel an affinity for nature (Wilson 1984; Wilson 1993). For Wilson, enhancing feelings of affinity for nature (biophilia) is key to stimulating pro-environmental behaviour. In Wilson's description, biophilia is innate, and though it can be latent, it can be 'awakened'

by experiencing hands-on visceral contact with nature and by learning about nature through this contact (Nabhan and St. Antoine 1993, p. 233).

The basic premise of the biophilia hypothesis has been challenged by evidence that although people may feel an affinity with living nature some of the time, at other times they may not. Humans respond to nature in a multiplicity of ways, these responses may include desires to subdue or dominate nature, fear of nature, feelings of aversion towards nature and feelings of alienation from nature (Kellert 1993). Studies have also produced evidence that people do not have a consistent preference for environments dominated by living nature (Schultz and Tabanico 2007; Duffy and Verges 2010; Hand et al. 2017). In fact, recent work suggests that humans are frequently drawn to built environments over more 'natural' surroundings (Hand et al. 2017). In a study by Schultz and Tabanico (2007), which used implicit measures to gauge preference, a quarter of people often preferred built environments. This tendency is amplified in cold seasons and inclement weather (Duffy and Verges 2010). In the light of the apparent wide range of responses to nature, and preferences for built environments over natural environments, scholars have questioned the idea that an affinity for nature is innate in humans, suggesting that these findings may destabilise or contradict the biophilia hypothesis (Kahn 1997; Van den Berg and Ter Heijne 2005). Despite these challenges, it is striking that the notion of biophilia has captured the imagination of scholars, and continues to underpin research into connection to nature (e.g. Marczak and Sorokowski 2018). Thus, the concept of biophilia is retained in this research with the aim of scrutinizing its suitability for describing the lived experience of connection to nature.

The second idea that scholars often draw upon to describe a connection to nature is that of the 'Ecological Self', a concept developed by philosopher and deep ecologist Arne Naess. Naess sees human connection with nature as possible through an ontological shift in one's understandings of one's self in nature. Naess (1987, 1989) sees this as a maturation, or developmental process, whereby one makes a psychological shift from a lack of identification with the non-human to seeing all species as part of oneself, extending one's field of empathy to incorporate non-humans. Through this process, one is said achieve 'self-realisation' and to develop an 'ecological self'. Naess is explicitly offering an 'ontological practice' whereby humans incorporate the non-human into their self-image with the aim of developing a sense of connection to nature. Naess argues

that if humans feel empathy for non-humans, they will take greater care of non-human nature. He suggests this phenomenon occurs via the development of identification with non-humans which results in humans "*delighting in the well-being of non-humans*" and experiencing "*sorrow when harm befalls them*" (Naess 1989, p. 174). Naess posits that if one expands one's concept of self to include other people, species and nature itself, then altruism becomes unnecessary. Naess argues that there would be no need for environmental ethics, because caring for non-humans would become an opportunity to care for oneself. Lead by Bragg (1996), this idea has filtered into conceptualisations of connection to nature and tends to be referenced in studies with limited analysis or reference to its origins (e.g. Kamitsis and Francis 2013; Richardson and Sheffield 2015). Naess' idea of the expanded sense of self provides another way of understanding the experience of connecting to nature, and thus is another idea that can be taken forward with the aim of scrutinizing its suitability for describing the lived experience of connection to nature.

The third idea that scholars commonly draw upon to describe a connection to nature is the ability to see oneself as part of a wider biotic community. This is the idea of ecologist and philosopher Aldo Leopold. Leopold's ideal of connection to nature is that humans should understand themselves as part of a community of non-humans: "soil, waters, plants, and animals, or collectively, the land." (Leopold 1966, p. 219). In his 'Land Ethic' Leopold describes one who is connected to nature as one who understands "*land as a community to which we belong*" (Leopold 1966, p. x). Leopold ventures that time spent among non-human nature is valuable because it reminds us of our particular history (and, he says: nation), our dependence upon the non-human, and the necessity of ethical restraints in our use of nature (Leopold 1966, p. 196). Leopold also believed that humans would be ethical in relation to something they can "*see, feel, understand, love and otherwise have faith in*." (Leopold 1966, p. 230). Although there has been discussion and interpretation of the implications of Leopold's ideas in terms of environmental ethics (e.g. Callicott 1989; Des Jardins 2012), there has been limited exploration of the detail of what Leopold meant when he proclaimed that humans should see themselves as part of community, and, confoundingly, his work tends to be poetic rather than specific. It is clear though, that he thought humans should have no special privilege over other species, as he specified that what is (ethically) right is right for the whole biotic community, not just the human (Leopold 1966; Des Jardins 2012). Leopold's ideas give another construct to

scrutinize in terms of its suitability for describing the lived experience of connection to nature.

All three of these ways of theorising connection to nature provide engaging conceptual lenses through which to examine this phenomenon. What may be more problematic is the fact that the field has tended to distil these concepts into psychological constructs and to assess 'connection to nature' without any specific consideration of the material practices by which connections could be made, and how they are in fact interpreted. More in-depth research and analysis, that takes these factors into account, may enable a greater understanding of the extent to which the ideas that Wilson, Naess and Leopold offer emerge from empirical observation. Examining how people describe and interpret a connection to nature would enable both an investigation of these concepts that that psychological literature draws upon, and a broader investigation of the experience of connection to nature more generally. Certainly, Ives et al. (2017) recommend that existing quantitative work developed in psychology be better synthesised with qualitative perspectives so to give a richer description of the phenomenon of connection to nature. As was suggested at the end of Section 2.3.1, a way of developing a deeper and more holistic understanding of the concept of connection to nature may lie in the approaches of existing research in which a connection to nature is understood to be a subjective experience. Accordingly, we look at some examples of these approaches below.

2.3.3 Connection to nature as lived experience

Empirical research originating from sociology and geography takes into account social and cultural context in human relationships with nature, and places more emphasis on human interpretations of their surroundings, looking at what they represent and how people understand them. These studies tend toward a constructionist ontology, looking less at linear relationships and causality and more at how particular human – nature relationships develop. As an example, Angelo's (2013) work brings a different perspective to the concept of connecting to nature by examining how historical context and social norms affect two groups of people engaged in nature, and how they come to know and feel connected to nature in different ways. In this study, Angelo documents one group of people who kill and collect birds, and another group who watches birds through binoculars, and how their divergent experiences create different experiences of connection

to nature. Angelo finds that there is substantial empirical variability in the experiences that enable people to feel a connection to nature, and that the experience of the connection itself is varied and dependent upon what people interact with, and the different understandings that they create through these interactions. Thus, the experience may be more varied and context specific than measures of connection to nature may show.

Other studies have also shown that a connection to nature can be felt in a multiplicity of ways that may converge or deviate from Wilson, Naess or Leopold's descriptions. In a study of extreme sports, a connection to nature was experienced by participants as a fleeting, transcendent, and momentary sensation of being part of 'something bigger' while in a dangerous situation (Brymer and Gray 2010). Whereas in a study of wilderness guides, a connection to nature was contingent upon their perception of risk. Once they felt safe, the guides experienced a connection to nature as awe, love, admiration and joy (Grimwood et al. 2015). Through these examples, we can see that there is likely a wide, and potentially inconsistent, range of ways of feeling connection to nature. As Vining et al. (2008) conclude, conceptualisations of connection to nature may be enhanced by acknowledging that human – nature relationship are complicated and fluid. Acknowledging this, and using qualitative methods to capture the experience of connection nature may help review and consolidate the diffuse concept that has developed in the field, evaluating the relevance of the ideas of Wilson (1984), Naess (1987, 1990) and Leopold (1966) and enabling us to better understand human-nature relationships.

Other gaps exist in current understandings of connection to nature. The existing focus on the experience of individuals has also led to recent reviewers to highlight a need for "exploration of how groups of people, initiatives and organisations within society are connected to nature..." (Ives et al. 2017, p. 110). In addition, it is often assumed that a connection to nature is a stable state (e.g. Zylstra et al. 2014), but the approach taken by Angelo (2013) demonstrates the extent to which context can shape connection to nature, a finding that indicates that the sense of connection may in fact be continuously in flux as circumstances change. Looking at the characteristics of connection to nature over time using qualitative longitudinal approaches may help elucidate this phenomenon by examining how is experienced in different contexts, whether is it enduring, and how it interacts with peoples' actions over time (Beery and Wolf-Watz 2014; Restall and Conrad

2015; Ives et al. 2017). Devine-Wright and Clayton (2010), suggest that the dynamic nature of human-nature relationships needs to be examined and there is a need for studies which do not assume that a connection to nature is a static phenomenon.

2.4 Connecting to 'nature'

A major difficulty with the empirical research literature concerned with connection to nature, is that the word 'nature' is usually left entirely undefined. There are many examples of this (e.g. Bragg (1996); Frantz et al. (2005); Stern et al. (2008); Guiney and Oberhauser (2009); Ernst and Theimer (2011); Howell et al. (2011); Beery (2013); Nisbet and Zelenski (2013); Lokhorst et al. (2014); Geng et al. (2015); Restall and Conrad (2015); Richardson and Sheffield (2015); Barton et al. (2016); Bruni et al. (2017); Marczak and Sorokowski (2018)). This list is far from exhaustive, but should give an indication of the prevalence of a lack of definition of nature in the field. It is possible, however, to deduce to some extent what scholars are assuming nature is by looking at how the term nature is being used, even if its meaning is not made explicit. For example, research participants may be asked to sit in a park (Schultz and Tabanico 2007), or may be attending multiday 'wilderness' excursions (Barton et al. 2016). Of these examples, we can deduce that for Schultz and Tabanico a sufficient proxy for nature is a municipal park, while for Barton, nature is perhaps found in remote areas with little infrastructure and few amenities like those in which the wilderness excusions took place. Extracting such implicit nature meanings only reveals the diversity of ways that existing research understands nature.

Ives et al. (2017, p. 110) recommend that "future research…must specify the characteristics of nature that people are connected to". To date, there have only been a small namber of studies which have attempted to discuss or identify what nature is in reference to any connection people may have. For example, Kamitsis and Francis (2013) use an 'exposure to nature scale' which gives examples of exposure to nature as being in, with, or seeing city parks, plants and animals (native or non-native), natural geography (e.g. hills, mountains, deserts, beaches, marshlands), and natural water courses and waterscapes (e.g. rivers, streams, lakes, ponds, ocean) (p. 141). Pragmatically, we can infer from this attempt to specify what nature is and is not, that nature is generally understood not to be the built environment, such as houses, buildings, roads, cars and cities created by

humans. Rather it is understood to be 'natural' objects and environments such as "flowers and forests" (Duffy and Verges 2010, p. 724; Kamitsis and Francis 2013). Despite these attempts to itemise nature, the literature usually assumes an abstract, generalised, and non-specific definition of nature (Gould et al. 2014; Ives et al. 2017), which tends towards phenomena that are not completely dominated by people, and include non-human organisms, species and habitats (Beery and Wolf-Watz 2014).

The absence of more in-depth considerations of nature means that it can be challenging to interpret the findings of research, as it is difficult to know to what participants in these studies feel they are connected. Restall and Conrad (2015) note that both urban dwellers and people who live in rural places feel disconnected from nature, which suggests that perhaps neither urban nor rural areas are quite 'natural enough' to enable a sense of connection. Perhaps peoples' idea of nature is 'wilder' or 'more exceptional' than the non-human nature that they may come across in everyday life. However, other work suggests that the opposite may be true, and that people do not need anything that is particularly non-human to feel connected to nature. For example, Soga and Gaston (2016) postulate that people may connect to nature via direct personal experience of a ditch. Although they do not raise this point, we can assume that a ditch is usually created by humans, thus they are likely talking about a sense of connection with nature that is gained via what could be considered to be a human artefact. Thus: How natural does nature need to be to enable connection? Are people feeling a connection to particular non-human natures, to a broader and more abstract idea of nature, or something else entirely?

A way of responding to this gap in the literature, and exploring these potential lines of enquiry, is to draw upon work that has examined the idea of nature. As Zylstra et al. (2014) point out, "nature'' is largely a social-cultural construction and its conceptualization will vary across—and inevitably be influenced by—such contexts, including disciplinary epistemologies" (p. 121). Accordingly, the lack of exploration of nature in the existing literature is an outcome of circumstances in which most empirical work concerning a connection to nature originates from psychology, which tends to see nature as the objective knowable world 'out there' that affects the human mind. 'What nature is' is therefore not of primary relevance to an analysis of a connection to nature understood as a psychological construct. In other disciplines, analyses of what nature is understood to be are

important. It is well established in geography and sociology that 'nature' as a concept is plastic and mouldable, and claims of what 'nature' is and what it represents are shaped and reshaped by social conditions, daily practices and discourse within societies. From this perspective, what nature is thought to be is highly relevant to the idea that humans can feel connected to nature. Bringing this perspective to the connection to nature literature could enable the synthesis that Ives et al. (2017) are suggesting is necessary, and reveal more about what a connection to nature is, and what it may enable.

Making progress here faces challenges. It has been said that nature as an idea is so malleable and central to how humans understand and interact with the world that any complete history of the uses of nature would be a history of most of human thought (Williams 1976). There are many treatments of the concept of nature which explore ways which humans come to understand nature (Cronon 1995; Soper 1995; Hinchliffe 2007; Castree 2014; Hailwood 2015; Vogel 2015). Some of these perspectives are drawn upon below to look at how different understandings of nature can help to create nuanced understandings of the idea of a connection to nature. Castree (2014) sees the term 'nature' as being composed of a number of different ideas which he refers to as 'collateral concepts'. Firstly, there is an all-encompassing idea of nature, which has been conceptualised as 'the natural world' (Hailwood 2015), or what Vogel (2015) refers to as 'Nature', and Castree (2014) refers to as 'universal nature')[5]. This concept of 'the natural world' encompasses everything in the universe, which stems from the idea that nature is everywhere, rather than solely external to humans. In this conception of nature, humans are considered to be 'natural' animals, as much as they are embedded within culture and society (Castree 2014). As humans are as much nature as any other entity, human actions cannot render anything less natural. Another way of understanding nature is as the 'non-human world', this is what Castree refers to as 'external nature', and what is often termed 'nonhuman' or 'non-human' nature in geography (Lorimer 2007). Non-human nature is 'everything that humans are

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[5]This thesis uses the terms 'the natural world', 'non-human nature' and 'humanised nature' when it refers to these different concepts of nature.

not' and 'is not the embodiment of human will (Hailwood 2015)'. Thus, we can see that whereas humans are always part of 'the natural world', they are always separate from 'non-human nature', so, confusingly, humans are both always connected and always disconnected to 'nature'. Finally, in Hailwood (2015), there is a sub category of non-human nature that is 'humanised nature' which is, at least in part, the product of human practices. These collateral concepts of nature raise interesting possibilities for research. We can ask, do people feel a sense of connection to the natural world, to all, or some, non-human natures, or to humanised natures? Thinking of nature in these ways can help tease apart the contradictory and messy idea of connection to nature and understand in a more nuanced way what understandings of nature underlie the idea that humans can connect with nature.

Considering the role of nature in the connection to nature literature again raises the issue of dualistic understandings of nature and culture that were touched on in the Introduction. These collateral concepts of nature co-exist within the larger term 'nature' and lead to misunderstanding within scholarship of connection to nature. For example, the premise that humans can be connected or disconnected from nature relies on an understanding of nature from which it is possible to be disconnected (Beery and Wolf-Watz 2014; Restall and Conrad 2015). Presumably, this would be non-human nature or humanised nature, since humans are always part of the natural world. However, an assumption that 'nature' refers to 'the natural world' has led to Fletcher (2017) describing the thinking behind claims that people can be connected to nature as 'oxymoronic': his logic being that if nature is everything, then humans cannot be apart from it. The confusion arising from these co-existing but distinct ideas of nature suggests there is a need to examine them in greater detail when discussing connection to nature.

Dualistic understandings of nature and culture are seen to reinforce human disconnection from nature, and form much of the motivation for pursuing connections with nature (Zylstra et al. 2014). Yet, research into connection to nature perpetuates the conceptual divide between humans and nature by assuming it can be a dichotomous relationship (Zylstra et al. 2014). Both Naess (1990) and Leopold (1966) argue that the illusion of separateness between nature and culture should be broken down, yet work which explores how this might happen may re-inscribe our separation from nature. Indeed, tensions about separation and connection are ever present in research concerning connection to

nature, but they are rarely considered in any depth. Vining et al. (2008) carried out a study that established that their research participants often defined nature as an absence of humans, and yet described themselves as being part of nature. They too suggest that different understandings of nature may be the origin of this contradiction. An in-depth examination of how people become connected to nature, and the ideas of nature to which they feel connected, may reveal more about these tensions and how they are experienced. It seems beneficial therefore to examine not only how people conceive of their relationship to nature (whether connected or otherwise), but also what they understand nature to be.

In fact, ideas of what nature is can be even more varied than these collateral concepts suggest. Macnaughten and Urry (1998) argue that there are multiple contested ideas of what nature is present in society at any one time, which are produced by different social practices. They claim that what people think about nature will change according to the practices in which they are engaged. As would be expected, some studies of connection to nature that originate from geography and sociology do examine relationships with nature from this constructionist perspective, demonstrating how pluralistic understandings of nature are. For example, this work has demonstrated that people participating in rock climbing may regard nature as a "playground or battlefield, and as a means to test physical prowess and human capacity", at the same time someone working in a domestic garden may regard nature as a mouldable entity that can be used to express creativity, whereas for a wilderness guide, nature may be temple, purity, teacher, and home (Brymer and Gray 2010, p. 361; Cammack et al. 2011; Grimwood et al. 2015).

There are two important observations that arise from Macnaughten and Urry's claim that ideas of nature are produced by what humans do. Firstly, that being 'connected to nature' may not be a simple, unchanging, stable or easily recognisable status that can be observed by researchers in isolation from the practices in which people are engaged. Rather, it is more likely that a sense of 'connection with nature' is related to what people are doing, and the particular ideas of nature that are created by what they are doing. Thus, a feeling of connection to nature is likely nuanced, linked to actions and discourse surrounding these actions, bound by circumstances and related to various social and cultural understandings of nature itself. Thus, we can see that any examination of the concept of connection to nature needs to consider not only what people think

about nature, but also the practices that may lead them to have particular ideas of nature as an entity with which one can be connected. Secondly, because ideas of nature are so thoroughly embedded within the complex social world, it suggests that there is no unmediated or pure connection between humans and nature that can be attained, from which unproblematic and benign actions towards the non-human world will spontaneously arise. Rather, it suggests that both feelings of being connected to nature, and people's behaviour towards nature are influenced by the practices that people are engaged in and the wider social and cultural understandings in which these practices are embedded. Macnaughten and Urry's ideas suggest that there is not only a need to examine experiences of connection to nature and ideas of nature itself, but also the practices with which these ideas are associated. With this in mind, the following Section looks at some ideas that may help understand how relationships with nature are related to practices that facilitate corporeal experience of the world, knowledge of environmental history, and a sense of ownership.

2.5 Connection via intimacy, knowledge and ownership?

In this Section we first look at some of environmental philosopher Simon Hailwood's work (Hailwood 2014, 2015), which gives some suggestions of the aspects of human experience that may be important for understanding connection to nature. Hailwood's descriptions of estrangement, reification, and a loss of ownership of nature are all useful for understanding the processes by which humans lose connection with the natural world, and by extension, how they might connect, giving us a lexicon for describing aspects of how people may learn to connect to nature, and the practices that might generate positive effects.

The idea of estrangement from nature relies on an understanding of nature that encompasses everything: the natural world. Estrangement is an ignorance of humankind's ultimate embeddedness within the natural world, and it primarily concerns a loss of knowledge that is usually gained through the body due to a lack of physical engagement with the non-human nature. To be 'estranged' (Hailwood 2014, 2015) is to be 'cut off' from the wider world in body and in mind. After Merleau-Ponty (2012), disconnection is due to 'inadequate' participation in the 'fleshy' 'perceptual' world: the physical world of relationships between and with non-human entities. From this perspective the natural world is known by via the interaction of the body, humans are thought to discover the world first through our physiology (Merleau-Ponty 2012). This 'embodied knowledge' of the natural

world can be learned through forms of corporeal engagement with non-human entities (Hailwood 2015, p. 209). Thus, estrangement from the natural world is a lack of bodily immersion in the natural world, and a disengagement with non-human realities (Hailwood 2015). Estrangement is a term that resonates with the many claims that lack of direct physical experience is causing disconnection with nature (e.g. Turner et al. 2004; Moss 2012; Soga and Gaston 2016).

Whereas estrangement is a lack of embodied knowledge of human embeddedness in the natural world, reification is an ontological misunderstanding: a confusion about what non-human nature is, which originates from the misidentification of humanised nature as non-human nature. The term reification has been considered predominantly in Marxist thought (Pitkin 1987; Feenberg 2011; Feenberg 2015), with a smaller amount of consideration in sociology (Berger and Luckmann 1984) and psychology (Morgan 2014). In this case, reification is a situation whereby people treat human made things or processes as if they are "facts of nature, results of cosmic laws, or manifestations of divine will" (Berger and Luckmann 1984, p. 89). Disconnection from nature in this way is an inability to identify non-human nature, and the role that humans have had in modifying the natural world. In this sense, one is disconnected from non-human nature when one cannot identify it. Reified understandings of non-human nature stem from ignorance of environmental history or inaccurate readings of history, Rotherham calls this form of ignorance 'cultural severance' from nature (Rotherham 2011). A similar phenomenon has been described by ecologists as 'shifting baseline syndrome', whereby each generation greets the world as though it were a product of non-human agency, failing to see much of the modifications made by previous generations (Pauly 1995; Vera 2010). As Hartig et al. (2011) point out, environments that people might consider to be natural, because they contain trees or vegetation and appear different from more obviously human made buildings and roads, may have been curated and planted by unseen humans. Thus, disconnection from nature as it manifests in reification raises interesting questions about what is natural, and to what extent this matters in terms of human relationships with nature. Usefully, for any investigation into connection to nature, through drawing on these ideas, we can see that can see that humans may become better connected to nature both through bodily experience and through their knowledge of environmental history.

Finally, Hailwood suggests that people may become connected to nature via ownership. There are two ways of thinking about ownership that are important for discussing how people can come to feel that they are in a relationship with nature, these are formal legal ownership and a psychological sense of ownership. The work of John Locke has done much to define how ownership of nature is viewed as a moral question and how an instrumental understanding of nature has become embedded in in Western understandings of nature. Locke saw ownership as obtained through labour as well as legal means, for him, non-human nature was given value through modification by humans. The man who modified nature could lay claim to it. Locke said "Tis labour then that put the greatest value upon the land, without labour it is scarcely worth any thing" (Locke 2014). Locke regarded "nature and the earth" to be "almost worthless" in themselves (p. 29). Locke's treatise argued that the world was given to man by God and that there was a moral imperative to use it productively (by which he meant agriculture) and without waste (waste being untilled land).

These ideas - that land was only justly owned by those who tilled it, that untilled land was worthless, that to not till land was to waste it, and that nature had no worth but instrumental worth - were influential when Locke was writing in the 17th Century, and still are prevalent today (Arneil 1994). Hailwood (2015) argues that to become connected to nature one must renounce Locke's idea that reduces non-human nature to resources that must be worked. However, he argues that legal ownership is not necessarily undesirable. Indeed it can allow right of entry to landscapes, and access to nature is fundamental to building a relationship with nature. Moreover, the owner (whether private or collective) is able to say whose meaning is recognised and bestowed upon nature (Hailwood 2015). Absent legal power, it is common for a psychological 'sense of ownership' of land to develop, based upon a feeling of moral entitlement that is often predicated by living close to, or using, the land (Dickinson et al. 2010).

2.6 Practices that create a connection to nature

Having reviewed the idea of connection to nature, and ways of understanding nature itself, this leads us to a key question: how can estrangement be remedied, how can we develop knowledge of nature and feel a sense of ownership of belonging to the natural world? In short, what practices may be employed to develop a sense of connection to nature? Drawing upon Hailwood, we can

hypothesise that corporeal experience in nature, knowledge of the history of our surroundings, and a sense of ownership of nature are all important aspects of the human ability to feel connection to nature. If we go back to the writing of Leopold, Wilson and Naess, we can gain some more initial avenues for consideration. There is little in Leopold's work to suggest how to see oneself as part of a wider biotic community, aside from his instruction 'live closer to the land', ('the land' being a metaphor for ecological processes). 'Living closer' likely means observing and being physically present in non-human nature, as a way of developing intimacy. He gives some clues as to what practices he imagines may reduce the distance between oneself and other species. For example, he pointed out that interdependence with other species can be remembered by growing and hunting one's own food. Leopold also saw ecological restoration as a route to connecting to nature (Greenwood 2017). Naess also offers very little in terms of instruction, he asks rhetorically, how can (the development of an ecological self) be brought about? He answers himself: "The question needs to be treated in another paper! It is more a question of community therapy than community science: a question of healing our relations to the widest community—that of all living beings." (Naess 1995, p. 236). In their edited book 'The Biophilia Hypothesis', Kellert and Wilson (1995) bring together more suggestions: hands-on immersion in nature, contact with animals, observation and learning about non-human nature are all proposed to be ways of stimulating biophilia.

In addition to these preliminary suggestions, there are a diversity of approaches taken across the empirical research literature which give some indication of the kind of activities it may be worthwhile examining in terms of their ability to foster a connection to nature. An overview of these is given in Table 2-1, and they are discussed below.

Table 2-1: Activities that are hypothesised to enhance connection to nature

Activities that are hypothesised to enhance connection to nature	Associated literature
Walking or hiking, surfing and extreme sports	Hill and Abbott (2009), Roberson and Babic (2009), Brymer and Gray (2010)
Hunting, fishing, foraging and collecting foods	Leopold (1966), Chawla and Cushing (2007), Tadie and Fischer (2013), Urquhart and Acott (2014)
Wilderness travel and camping	Bragg (1996), Grimwood et al. (2015), Barton et al. (2016)
Birdwatching, ecological surveying, citizen science and research	Kellert and Wilson (1995), Cammack et al. (2011), Schultz (2011), Angelo (2013)
Gardening and farming	Leopold (1966), Natori and Chenoweth (2008), Hale et al. (2011), Elsey et al. (2014)
Caring for animals	Kellert and Wilson (1995), Vining (2003)
Conservation	Guiney and Oberhauser (2009), Lokhorst et al. (2014), Zylstra et al. (2014)
Ecological restoration	Leopold (1966), Higgs (2003), Jordan (2003), Pyle (2003), Miller (2005), White (2012), DiEnno and Thompson (2013), Zylstra et al. (2014)
Rituals and seasonal festivals	Bragg (1996), Meekison and Higgs (1998), Higgs (2003), Jordan (2003), Grimwood et al. (2015)
Individual therapy and reflective diary writing	Roszak (1995), Richardson and Sheffield (2015)
Group therapy and reflective workshops, meditation and mindfulness activities	Howell et al. (2011), Cohen (1993), Naess (1995), Higgs (2003), White (2012), Macy and Brown (2014)
Unstructured play, environmental education and alternative schooling	Chawla and Cushing (2007), Louv (2009), Ernst and Theimer (2011)

Each of these activities have qualities or aspects to them, or afford particular experiences, that are hypothesised to facilitate a connection to nature. In terms of activities that are thought to stimulate a connection to nature, some research simply refers to 'nature encounters', 'nature experiences', or 'direct experience in nature', all of which involve participants spending some time in generalised 'nature', or undergoing some form of 'nature exposure'. 'Nature exposure' often involves seeing images of nature, and can consist of activities such as watching videos, looking at pictures or playing computer games (e.g. Mayer et al. 2009; Richardson and Sheffield 2015; Bruni et al. 2017). Direct experience in nature varies, both in terms of the places in which participants spend time, and the amount of time that is spent. As we've seen, the experiences can be as brief, such as sitting in a park or natural setting for 5, or 15 minutes (Schultz and Tabanico 2007; Mayer et al. 2009), or more lengthy as in examples where participants take part in multiday 'wilderness' excursions (Barton et al. 2016).

Whereas some research is interested in the cognitive response to short experiences in nature, others studies have found that that a connection to nature requires long term or repeated time spent in nature (Ernst and Theimer 2011; Grimwood et al. 2015).

To return to the point, in reasoning behind claims that we are increasingly disconnected from nature, disconnection from nature is often understood to be produced by a lack of bodily experience in nature (Jordan 2003; Moss 2012; Hailwood 2014), thus it is logical that time spent in nature is thought to remedy disconnection. Outdoor recreation activities such as walking or climbing often provide the possibility of direct contact with nature, and Zylstra et al. (2014) suggest that physical gratification plays a role in enabling a sense of connection to nature that people can experience through a variety of outdoor sports or adventure activities. For some, the immersion in nature afforded by walking, surfing, climbing or other activities may be central to their experience of feeling a connection to nature. While for others the surroundings may be passed over in the pursuit of different aims (Hill and Abbott 2009; Roberson and Babic 2009). In many leisure activities the surroundings that activities take place in can be a means to an end, and there is not a strong or consistent relationship between outdoor recreation and affinity with nature (Schild 2018). It may be that in many cases forms of outdoor recreation are engaged in as an expression of individualism, and as such, are primarily about reflexive self-expression rather than embedding oneself within the natural world or directing one's attention towards the non-human (Cloke and Perkins 1998; Scott et al. 2017; Schild 2018). Thus, as many researchers have observed, simply being in nature is not always enough to stimulate a feeling of connection to nature. It may be that the lack of 'embodied knowledge' that leads to disconnection is more reliably remedied through forms of intentional action which emphasise kinship and reciprocity with non-human entities (Jordan 2003; Hailwood 2015, p. 209). Indeed, other research findings suggest that care for the non-human does play a role in enabling people to feel connected to nature (Vining 2003; Hale et al. 2011).

Emotion is also thought to play a role in facilitating a sense of connection (Kals et al. 1999; Müller et al. 2009; Lumber et al. 2017). For example, in describing how wilderness leaders performed private ceremonies of thanks to nature, Grimwood et al. (2015) hypothesise that the intense emotion that accompanied the rituals solidified the meaning and value that the guides had invested in nature during

their excursion. DiEnno and Thompson (2013) also see emotion as an important factor in their study of ecological restoration, guiding volunteers' decision to become involved in initiatives. Frantz et al. (2005) posit that how and what people pay attention to whilst they are in natural environments is important in enabling a sense of connection to nature. Activities like birdwatching, hunting and fishing incorporate observation and learning about non-human nature. For some, these activities can enable a connection to nature (Urquhart and Acott 2014), but for others the activities are wrapped up in other social concerns (eg. their status or appearance to others) which means, again, that nature is only peripheral to their practice (Cammack et al. 2011; Tadie and Fischer 2013). Rituals, seasonal festivals, individual and group therapies, reflective workshops and journaling, and meditation in nature are also ways of directing people's attention, and have all been widely hypothesised to influence relationships with nature (Cohen 1993; Naess 1995; Roszak 1995; Bragg 1996; Higgs 2003; Jordan 2003; Macy and Brown 2014). There has, however, been very little research into these activities (Zylstra et al. 2014), although researchers have found associations between spirituality, mindfulness and self-awareness and connection to nature (Frantz et al. 2005; Howell et al. 2011; Kamitsis and Francis 2013).

Although conservation volunteering has been considered as a possible practice which may foster a connection to nature (Guiney and Oberhauser 2009; Lokhorst et al. 2014), the notionally similar practice of ecological restoration has a longer history of intentionally fostering connection to nature, and has many vocal advocates. There have been strong claims made for ecological restoration's potential as a practice which is conductive to rethinking relationships with nature (Jordan 1993; Higgs 2003; Jordan 2003; Keenleyside et al. 2012; White 2012; DiEnno and Thompson 2013; Zylstra et al. 2014; Suding et al. 2015). Some (e.g. Pyle 2003; Miller 2005), make explicit links between the practice of ecological restoration and humanity's ability to confront environmental crisis. The involvement of lay people in 'hands-on restoration' (Keenleyside et al. 2012) as a form of 'civic ecology' (Krasny and Tidball 2015; Schild 2018), is thought to hold potential for enabling re-examination of human-nature relationships (Grese et al. 2000; Shandas and Messer 2008; O'Brien et al. 2011; Schild 2018).

Hands-on ecological restoration is thought to be particularly relevant since it has many of the qualities that have been hypothesised to foster connectedness with nature. Lumber et al. (2017, p. 21) suggest that those interested in nature

connectedness should focus specifically on activities that involve contact, meaning, emotional attachment, or a compassionate relationship with nature, and ecological restoration often fits this description. It is physically active, offering potentially immersive and affective experiences of nature, and involves observing natural processes and learning about non-humans with the aim of benefitting them (DiEnno and Thompson 2013; Zylstra et al. 2014, p. 131). It has also been demonstrated that hands-on participation in ecological restoration is beneficial to the wellbeing of volunteers (Grese et al. 2000; Schroeder 2000). The involvement of laypeople in restoration draws interest not only for the potential direct benefits for both volunteers and nature, but also because lay participation is associated with wider concepts like democracy, empowerment, equality and citizenship (Light 2000b; Reed 2008). Thus, hands-on restoration can be seen to be drawing on ideas of ecological or environmental citizenship (Dobson 2003) or sustainable citizenship (Barry 2006), which see active involvement in nature as a step towards a more sustainable society. Despite hands-on restoration's potential for as a practice which that stimulates connection to nature, research that examines the ability of the practice to do so is scarce. With this in mind, the next Sections of this Chapter focus on ecological restoration in more depth, defining it, examining how the practice has interacted with ideas of nature throughout its history, and detailing the aspects of its practice that are thought to foster connectedness to nature.

2.7 Ecological restoration

'Ecological restoration' (often shortened to 'restoration') is a term currently used to describe a wide variety of environmental practices which aim to assist the recovery of ecosystems which have been degraded, damaged or destroyed (Society for Ecological Restoration International 2004). Today restoration is practiced across the world, but an arboretum established at the University of Wisconsin-Madison in the 1930s is generally regarded as the first example of intentional ecological restoration practice, and the beginning of restoration ecology as a field of study (Murphy and Allison 2017). Since its beginning, restoration practice has been associated with criticism of what practioners see as

society's disconnected or destructive relationship with nature (Martin 2017). The arboretum was instigated by Aldo Leopold who was a research director at the university at the time (Jordan 2003). At the opening of the project in 1934, Leopold committed to restoring the "original[6]" Wisconsin landscape and plant communities at the site (University of Wisconsin-Madison 2017a). From these beginnings, it took until the 1980s for the techniques and aims of restoration ecology to spread, and for a wider community of practioners and scholars to develop. In terms of scholarship and practice, ecological restoration is still a young experimental field which has been brought together by the international Society for Ecological Restoration (SER) for the past 24 years. The SER serves as a umbrella group for "restoration professionals that includes researchers, practitioners, decision-makers, and community leaders from Africa, Asia, Australia/New Zealand, Europe, and the Americas" (Society for Ecological Restoration International 2017). It has had a central role in establishing and defining the field, indeed the phrase 'ecological restoration' was not commonly used until the SER was established in 1988 (Martin 2017).

Restoration practice is of particular resonance when considering the development of connection to nature, because strong claims have been made for its 'transformative' impact upon participants (Jordan 2003). The idea that "direct participation" (Suding et al. 2015, p. 639) or "hands-on participation" in restoration (Keenleyside et al. 2012, p. 11) can foster a connection or re-examination of human relationships with nature can be traced throughout the development of ecological restoration, both as a practice and as a field of research. When the SER was formed in 1987, its mission was to "promote ecological restoration as a means of sustaining the diversity of life on earth and re-establishing an ecologically healthy relationship between nature and culture." (Nelson et al. 2017, p. 4). During his speech at the opening of the arboretum at Wisconsin-Madison in 1934, Leopold was critical of the environmentally destructive activities of society at the time and explicitly declared restoration as

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[6] Debates about the role of history and what can be considered 'original' in are ongoing today in ecological restoration.

a social as well as ecological project (Greenwood 2017). The arboretum still sees itself as "a model for restoring ecologically sustainable relationships between people and the land" today (University of Wisconsin-Madison 2017b).

2.7.1 Defining ecological restoration

The prominence of the idea of ecological restoration as a social tool to foster a closer relationship between humans and nature has fluctuated over time. Since its inception, the SER has worked to reach consensus among its members to agree a definition of ecological restoration. This definition too has changed over time and remains contested. Currently, since 2004, it has been broadly agreed that ecological restoration be defined as "the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed" (Society for Ecological Restoration International 2004, p. 3). When it was adopted, this current definition improved clarity, removing more imprecise concepts such as 'ecological indigeneity' and 'integrity' that had been incorporated into definitions previously (Cairns and Heckman 1996), but it has obscured the social aspect of the practice (Martin 2017). Until the current description was adopted, human agency was central to the SER's definition of ecological restoration, which tended to be more transparent in criticising anthropogenic environmental destruction and framing restoration as an alternative way of interacting with nature.

Today, researchers often augment the SER definition to explain the origins of degradation when laying out the context of their work. A recent example of an addendum to the SER definition is: "the theory and practice of attempting to reverse anthropogenic damage to natural ecosystems" (Jeffery 2014, p. 999). In the 1990s multiple definitions were present in the field, and it was common that the role of human societies in creating the degradation that restorationists were seeking to restore was acknowledged. For example: ecological restoration aims to "relieve acute *anthropogenic disturbances* and restore self-maintaining ecological systems" (Cairns and Heckman 1996, emphasis added). Earlier definitions often included greater recognition of the human choice and values that are present in the practice of ecological restoration, presenting it as a purposeful act: for example: "ecological restoration is an *intentional activity* that initiates or accelerates the recovery of an ecosystem with respect to its health, integrity and sustainability" (SER, quoted in Gross (2005), emphasis added). Debates about the role of human preference and values in restoration persist, most recently it has

been suggested that the SER should widen its definition to: "...the process of assisting the recovery of a degraded, damaged, or destroyed ecosystem to reflect values regarded as inherent in the ecosystem and to provide goods and services that people value." (Martin 2017, p. 670). Since its inception, ecological restoration has had a mission to restore ecosystems, but also to highlight the anthropogenic origins of degradation and change human relationships with nature. It is this emphasis that makes restoration of particular interest as a practice which may enable a connection to nature.

The perimeters of ecological restoration can be ill-defined in practice. It is made up of tasks which are carried out in similar practices such as remediation, conservation, habitat protection or 'effective management' (Cliquet 2017) . It is notable that in most international instruments (policy, agreements or conventions) restoration is often left undefined, and implicitly often understood as an activity carried out in order to further particular aims (rather than as an end in itself) such as the provision or development of ecosystem services, carbon sequestration, or biodiversity (Cliquet 2017). As such, the current definition includes an extensive range of practices carried out in any ecosystem which is understood to be "degraded, damaged or destroyed". Examples in the research literature include restoration of post-industrial areas such as mines, gravels pits, oil fields, disused roads, abandoned agricultural land, acidified lakes, depleted or polluted rivers, marine and coastal ecosystems, and deforested areas. As well as abandoned urban areas or urbanised ecosystems such as streams in cities, slopes on the side of roads or motorways and gardens and parks (for wide range of examples see Allison and Murphy 2017). Theoretically, restoration can be undertaken in any place that humans can access. To restore the ecosystem involves "assisting its recovery". Assistance often involves tasks such as the reintroduction of fauna or planting of native flora, eradication or control of invasive species, exclusion of damaging species in certain areas (such as deer), replacement and remediation of soil, removal or modification of infrastructure such as dams, drainage ditches or roads, re-creation of habitats, and re-creation of ecological processes or functions such as water or nutrient cycling. There is a considerable body of scholarship of the many natural science aspects of ecological restoration of all the types listed above, within which much work belongs to the field of 'restoration ecology' (a sub discipline of Ecology).

2.7.2 Nature in restoration

The question of whether the practice of ecological restoration can enable people to connect with nature interacts with other questions about nature and naturalness within the field. There are a number of debates within restoration ecology which are concerned with nature or the naturalness of the practice and its outcomes, many of which have been ongoing in different forms since the field emerged. For example, the role of history in ecological restoration has been contentious, with debates about the possibility of restoring to a particular historic baseline, or achieving historic fidelity (e.g. Jackson and Hobbs 2009; Higgs and Jackson 2017). The challenges and rationale of restoring ecosystems in a changing climate have also been brought to the fore (e.g. Harris et al. 2006). Other debates, such as one surrounding role of species substitution in order to restore ecological function (e.g. Hansen et al. 2010) are also important. All of these questions can be seen to then inform other debates within the field about whether the outcomes of restoration can, (or should be) described as 'restored' ecosystems or 'novel', 'hybrid' or 'designed' ecosystems (Higgs 2017), which all relate to an underlying theme which concerns the 'naturalness' of restoration practice and its outcomes.

In a nascent field, these debates provoke some scholars to ask whether 'restoration' is the most appropriate term to use at all, and consequently terms such as 'rehabilitation' are often used alongside restoration. For example, the recent Australian standards for ecological restoration regard rehabilitation as any restoration attempt which is "unable to adopt the target of full recovery" (McDonald et al. 2016b, p. S7). Whilst other scholars ask whether it would be more accurate to term the process 'renewal' ecology (Bowman et al. 2017). Other scholars have suggested integrating social concerns directly into restoration by changing 'ecological restoration' to 'biocultural restoration' (Janzen 1988) or 'ecosocietal restoration' (Cairns 1995) in order to preclude restoration being interpreted as 'a repair shop for ecosystems' (Cairns 1995) which neither helps to reduce rates of destruction nor provide opportunities for participants to question their relationship with nature. Choi (2007) argued that all restoration efforts are de facto unable to achieve full recovery owing to climate change, ecological and historical uncertainties and the under-acknowledged constraints and subjectivities imposed by social factors, and therefore all restoration efforts are more accurately understood as 'rehabilitation'. A similar argument is echoed by Rohwer

and Marris (2016) who repeat Choi's warning that the inability of restoration to deliver recovery risks losing public support for the field. Others argue that it is exactly this inability to fully deliver restoration that make it a fertile practice for re-thinking human relationships with nature (Jordan 2000). This point is discussed further in the following Section.

There is also tension within the field between positivist understandings of nature as something that can be objectively measured and separated from the social world, and more socially informed understandings of nature. Since the 1990s (e.g. Higgs 1997) there has been concern that the subjectivities and values present in restoration practices are discounted or obscured in the SER definitions in favour of presenting the natures that are produced by restoration practices as superior, constructed as they are as "preferred type[s] of nature … largely formulated and legitimized by experts, mostly ecologists" (Swart et al. 2001, p. 237). As has been argued elsewhere, all science can be regarded as a social and political activity (Jasanoff 1996) and the exclusion of questions of social preference from the 'official' definition of restoration can be seen as symptomatic of the 'boundary work' which the SER does to maintain and delineate the identity, authority and boundaries of the practice of ecological restoration (Gieryn 1983). As a relatively new sub discipline, restoration ecology can be seen as presenting its knowledge claims carefully, locating them within a sphere of authoritative knowledge to gain credibility and legitimacy (Lidskog et al. 2015). Thus, it has been suggested that the practice of ecological restoration as 'value free' lends restoration ecology an acceptability within the ecological sciences. As Weng (2015) has pointed out, such boundary work, which seeks to demark legitimate and authoritative science from 'non-science' is particularly intense in ecology, because of the uncertainty that often arises between theory and practical application of ecological science. As a consequence, there are ongoing tensions within ecological restoration between those who wish to present the practice as objective, authoritative and professional and those who want to acknowledge it as a profoundly social practice driven by particular values and who accuse others of trying to "disguise their values as science" (Davis and Slobodkin 2004, p. 44). Thus, the idea that ecological restoration has potential to be used as a social tool to foster connection with nature is not uncontroversial, interacting as it does with questions of naturalness and nature which persist in debate and scholarship.

2.8 Ecological restoration as a method for connecting to nature

For some scholars though, the practice of ecological restoration is of primary importance exactly because of the potential it has to resolve the problem of disconnection from nature.

> "*We are remiss if we box ourselves into evaluating restorations only at the level of the natural value. We must also consider the value of participating in projects that bring humans into relationships with nature.*" (Light 2000b, p. 169)

Indeed, some define restoration as "public participation in nature" (Light and Higgs 1996, p. 236). It is argued that participation in restoration can create positive feedback: that people who participate in nature tend to value nature more greatly, and public involvement in restoration projects can create a need in communities to become stewards of nature (Light 1996; Brunson 2000; Jordan 2000). These discussions within the field are the background to the persistent proposition that restoration practice is principally valuable as a tool which enables participants to develop a connection to nature.

The field of restoration is wide-ranging, and concern about a lack of consideration of the social aspects of the practice have arisen and receded multiple times. However, the idea of restoration as a vehicle to connect people and nature has remained fairly consistent in the discourse surrounding the practice. These claims have remained somewhat vague and overlapping, and despite their longevity and prominence, there has not been any concerted attempt to test or examine them. In restoration literature the idea of a connection to nature is generally described using Leopold's 'the Land Ethic' (1966), but remains indistinct and underdeveloped. A more connected relationship to nature gained through participation in ecological restoration is variously claimed to be one characterised by an 'awareness', 'knowledge' and 'understanding' of nature (Jordan 2003; Suding et al. 2015), with a 'closer', 'caring', 'positive' and 'restorative' attitude towards or relationship with nature (Higgs 2003; Jordan 2003; Van Wieren 2008; McDonald et al. 2016a).

It was Leopold himself, whose ideas are still influential in restoration today (e.g. Nickelsburg 1998; Weng 2015) who first planted the seed of hope that hands-on participation in ecological restoration could lead humans away from

environmental degradation and towards a relationship with nature free of the trappings of modernity (Leopold 1966). Both Leopold in his inaugural speech in 1934 and the SER as the contemporary institutional representative of restoration promote the claim that restoration can change relationships with nature. As was mentioned in the introductory Chapter, the SER's recent first edition of their International Standards for the Practice of Ecological Restoration suggest that "restoration itself can provide a powerful vehicle for encouraging positive and restorative attitudes toward ecosystems and the natural world in general." as well as "opportunities for re-engaging with nature" (McDonald et al. 2016a, p. 23). Below, we consider other claims that have been made about the efficacy of restoration and examine the aspects of restoration are thought to be causative.

In terms of restoration literature, there are two key texts which contemplate how restoration enables participants to develop a connection to nature, Nature by Design (2003) by Eric Higgs who has a longstanding involvement with the SER, and The Sunflower Forest (2003) by William Jordan who is described as 'restoration's leading visionary' (Pollan 2003). From their perspective, ecological restoration is seen as an instrument which must enable social change in order to be valid: "restoration is successful only to the extent that the life of the human community is changed to reflect the health of the restored ecosystem." (Higgs 2003, p. 222), because, as Van Wieren (2008, p. 247) claims "[restoration] does in fact create restorative relationships between and among persons and land". For these advocates, restoration can play a key part in reconnecting participants with nature and each other:

> *"By restoring ecosystems we regenerate old ways or create new ones that bring us closer to natural processes and to one another. This is the power and promise of ecological restoration."* (Higgs 2003, p. 2)

In contrast to practioners and scholars who are interested in the involvement of lay people in restoration to maximise success measured in ecological terms, or policymakers who see restoration as a tool for maximising carbon sequestration (Cliquet 2017), this proposition sees restoration primarily as a practice which changes relationships with nature (Higgs 2003; Jordan 2003). From this perspective, direct ecological outcomes are secondary, and restoration is rather a way of participants entering into a relationship with nature without instrumental aims (Jordan 2003). Restoration is understood to be most valuable as an avenue

for mindful human participation in ecosystems, a practice which involves entering into an intentional relationship with the non-human.

Despite the long history of people who firmly advocate for restoration's transformational potential, evidence that supports the assertion that participation in ecological restoration enables a connection to a nature is sparse. The claims made for restoration's transformative power are often based on very thin evidence and attempts to locate the source of the claims lead do not always lead to solid ground. For example, a recent high profile piece authored by 13 prominent restoration scholars claimed that:

> "*Restoration engages people through direct participation and, thus increases understanding of ecosystems and their benefits and strengthens human communities*" (Suding et al. 2015, p. 639).

In support of this claim the authors cite an International Union for Conservation of Nature (IUCN) document about best practice in restoration (Keenleyside et al. 2012). However, the IUCN document itself offers nothing substantial in terms of verifiable evidence in support of the claim. Although the claim is reiterated throughout the IUCN document too, evidence for the claim is sketchy here as well. The best indication of where the claim may originate is found in a brief IUCN case study description of a restoration project on the West coast of Canada which reads as follows: "by engaging visitors, community members, and young people in hands-on activities, the project fosters an increasing understanding of the importance of ecological integrity…" (Keenleyside et al. 2012). Tracing this citation further reveals a two page briefing note produced by Parks Canada which, again, does not state evidence for the claim, but rather intention:

> "*By engaging community members and youth in direct participation in ecological restoration activities, and through engaging local schools in the salmon enhancement program, the project will foster an increased understanding of the importance of ecological integrity and the significance of Lyell Island to the people of Haida Gwaii and to all Canadians.*" (Parks Canada 2011)

We can see that the claim of Suding et al. (2015) is unsubstantiated, in that they do not cite any empirical evidence which suggests that direct participation leads to increased understanding of the benefits of ecosystems or the strengthening of

communities. Yet, these claims are being made with regularity in IUCN documents and guidelines for the practice of ecological restoration, so what aspects of restoration are seen as enablers of connection to nature and why? Despite the lack of direct evidence, a number of candidate causal mechanisms have been put forward.

In common with most scholarship concerned with connection to nature, and as is suggested by the immediacy of the phrase 'hands-on restoration', physical engagement is seen as central to the restoration experience. We have seen that physical engagement is seen as essential for creating a sense of connection to nature and remedying estrangement (Hailwood 2014), as well as creating different understandings of nature (Macnaughten and Urry 1998; Cater and Cloke 2007), so it is unsurprising that proponents of restoration see the physical engagement aspect of the work as important. It is claimed that the relationship between restoration participants and non-humans should be not be one just of observation, but one of action. Jordan claims there is value in this action: that action is disruptive: it is messy, conflicted and imperfect. It is in the embodied realm that Jordan thinks that "we communicate with nature at the deepest and most elemental level" (Jordan 2003). Engagement in physical work is seen as a method for becoming aware of what is and is not possible to restore, as well as a way of confronting "hard, present day realities" such as the inevitability of killing or the amount of labour and investment that is required to restore degraded land (Jordan 2003, p. 83).

This labour is variously referred to as 'action', 'performance', or 'physical engagement', all of which amount to the physical 'doing' of restoration. In a similar way to Hailwood's (2015) claim that estrangement can be overcome by physical, corporeal immersion in the 'flesh of the world', it is the physical participation itself which Higgs sees as the primary catalyst for participants' re-evaluation of their place in nature. Jordan (2003, p. 92) concurs, arguing that action is the 'language of nature' and that learning to 'speak' in this language enables a person to come closer to nature than is possible through more passive observation. For Jordan, this language is learned through 'mimesis': the deliberate imitation of the behaviour of non-human nature by restorationists, such as planting trees in small groups rather than uniformly across a landscape. It is argued that mimesis is a practice whereby humans attempt to interact with nature empathically.

Jordan offers a description of connecting to nature via carrying out the physical tasks of restoration whereby participants are: "liberated from the role of mere observer to become a participant in ecology" (Jordan 2003, p. 91). Phrases such as this draw deeply from restoration's lineage, alluding to Leopold's previously mentioned idea of humans being part of nature or a wider biotic community of non-humans. Indeed, Jordan says participants in ecological restoration can become "effective, knowledgeable, loyal and responsible members of the biotic community" (Jordan 2003, p. 176). It is in this entering into community with non-humans that Jordan sees most of the valuable social work of restoration taking place. Jordan discusses how the restorationist might be changed by their engagement with restoration, suggesting that it can play a role in enabling a "deepening awareness and caring" for nature (Jordan 2003, p. 133). It is claimed that this is particularly effective because it offers the opportunity to make amends to nature via physical intervention, and it advances the possibility of humans restoring some of what they have degraded (Jordan 2003). Thus physical participation in restoration is seen to give the participant a sense of connectedness as a form of "environmental homemaking" (Jordan 2003, p. 200 & 174). Higgs considers a similar approach to restoration practice which he develops as 'focal restoration', a meditative approach to the work which we explore in more depth in a following Section (Higgs 2003).

The possibility of restoring degradation and the physicality of the work alone are not seen as the only ways in which restoration stimulates a connection to nature. Proponents who claim its value also argue that the positionality and intention behind restoration carry particular weight. Whereas some within the field see restoration's persistent inability to meet ecological aims as a reason to change the aims (Choi 2007), Jordan sees this inability as a tool for stimulating critical thought amongst participants because it precludes 'easy answers', directing participants instead towards hard questions which prompt deep thought about human relationships with nature (Jordan 2003). From this perspective, restoration's bold vision provokes many questions to which there are no unproblematic or conclusive answers. It encourages participants think about what can and cannot be restored, what is valued, and the role of human agency in the natural world, which has the effect of undermining reified understandings of nature.

Restoration is seen as distinct from conservation or preservation efforts because it attempts to (imperfectly) re-make rather than conserve or protect. Jordan argues that a fundamental difficulty of human existence is that we are unable to control the non-human world. He contends that in order to deal with this overwhelming truth, societies often tend to seek to dominate nature. He argues that that both domination of, and submission to, nature are alienated ways of relating to the natural world, claiming that restoration's value is in that it "places us in this field of tension between these two extremes" (Jordan 2003, p. 75). Thus, participation in restoration is important for creating a "mature relationship" between humans and non-humans because it forces a reckoning upon participants in which the difficulties of the practice of restoration provoke participants to deeply observe non-human nature. The unstable nature of restoration promotes reflexivity and conscious thought in the restorationists' negotiation with nature. The argument being that participants are then able to reflect on the limits of their desires and contemplate responding to the perceived needs of non-human nature.

The idea of focal restoration is developed from Higgs' exploration of Borgmann's work (1984). Borgmann developed the 'device paradigm', which posits that human needs are increasingly met by complex technical devices which do not need or enable attentive maintenance or focus by the layperson who uses them, rather they are seen only as a means to an end. For example, the need for warmth could be met by a fire of wood, which needs simple routine attention and care during the period it is giving out warmth, or it could be met with a central heating system, which can be fully automated and must be maintained by an expert. Higgs uses this example to explain how a 'thing' becomes a 'device' and applies this idea to the practice of restoration. The fire, a 'thing' once central to the home and the heart of family life, becomes a 'device', which is peripheral to social life, although social life may rely upon it. He argues that in contrast 'focal practices' are wrapped up with social life and care, and their maintenance is both means and end. Thus, after Borgmann, Higgs' concept of 'focal restoration' is defined by an attentiveness similar to that necessary in tending the fire in a hearth. The doing of restoration is seen as both a means and an end within itself, it has a mindful quality and it is distinct from an outcome focussed action requiring little skill, thought, or attention: such as switching on a central heating system. Restoration is carried out not only for the possible ecological outcomes, but as a practice which is part of social life.

Higgs' focal restoration has a quality of focussed attention in common with the concept of mindfulness. Mindfulness itself derives from Buddhist psychology, it is a practice which aims to maximise an individual's awareness of their bodily senses and the thoughts of their own mind. Whenever a stimulus is strong enough that attention is drawn away from the 'present moment', mindful practice enables the practioner to observe this process whilst being aware of their own body and mind. Mindfulness is defined as "a state of being attentive to and aware of what is taking place in the present" (Brown and Ryan 2003, p. 822) or "a receptive attention to and awareness of present events and experience" (Brown et al. 2007, p. 202). It is powerful in shaping perception and meaning because it can be used to direct attention, which can affect the quality of an experience, and the memories and meanings that are taken from the experience (Brown et al. 2007).

Although the most research concerning the effects of mindfulness are focused on health outcomes, recently researchers have investigated the relationship between connectedness to nature and mindfulness (Howell et al. 2011; Wang et al. 2016), hypothesising that "the enhanced sensory impact of experiences in nature fostered by mindfulness may strengthen nature connectedness among mindful individuals" (Howell et al. 2011, p. 167). It may be that time spent observing nature is similar to mindful practice. For example Wilson (1984) describes the mind of a naturalist: ''He goes alone into a field or woodland and closes his mind to everything but that time and place, so that life around him presses in on all the senses and small details grow in significance'' (p. 103). Indeed, similarly, in 'focal restoration' attention should be focussed upon the work itself, not only upon the outcome. Restoration should be carried out "thoughtfully and attentively" (Jordan 2003, p. 133). For some scholars of restoration this can be seen as a spiritual practice (Van Wieren 2008), which has also been hypothesised as a factor in creating connection with nature (Kamitsis and Francis 2013). Thus, focal restoration can be seen to use physical and mental engagement to create meaning and memories, thus enabling participants to begin understanding the ecosystem "in its own right" (Higgs 2003, p. 241). Higgs' hope for focal restoration is that as a consciously enacted practice it can be successful in 'breaking the pattern' of the duality of nature and culture, where humans regard non-humans as 'other'.

Finally, both Jordan and Higgs view ritual as important in prompting re-evaluations of nature. Following Roy Rappaport (2002), Jordan defines ritual as a performance that is not entirely scripted or encoded by the performers, but that

follows a broadly similar sequence of actions or patterns of speech. Higgs sees ritual as spanning a wide range of types of activity from spiritually transformative experiences such as the Christian sacrament of communion to simple regularly practiced activity, he notes that some scholars use the term 'ritual' to refer to religious activities and some use 'rites' to refer to more secular ones. Following Rappaport's definition, ritual is used here to refer to both secular ceremony and those with spiritual or religious overtones.

Jordan sees ritual in restoration as fundamentally concerned with the tensions and paradoxes of human – non-human relationships, destruction and creation, shame and joy. He sees ritual as enabling of creativity and allowing communities and individuals to "examine, critique and change the deepest structures of its world view and system of values and relationships." (Jordan 2003, p. 148). Similarly, Higgs sees ritual as offering a "way of examining, expressing and even changing relations between nature and culture" (2003, p. 251). These rituals can be seen as a way of adopting a stance in which participants welcome non-humans and directly experience the non-human (Plumwood 2002; Pillemer et al. 2009). Rituals are also often seen as able to create moral virtue in participants though the habituated performance of certain righteous acts (Van Wieren 2008). Both Jordan and Higgs see a role for a performative or ritualistic element in the practice of restoration, and see ritual as potentially transformative. However, Higgs is concerned about the possibility of unsettling participants with "quasi-religious practice" (Higgs 2003, p. 250), and is aware of the possibility of unnerving restorationists who like their ecology to be unadulterated (Meekison and Higgs 1998).

One of the ritualistic, or certainly symbolic, acts that can be part of hands-on restoration, as Jordan sees it, is the act of 'gift giving'. Jordan ties together the idea of restoration as the building of a relationship with nature with the work of anthropologist Mauss (1954), who presented a theory of the creation and maintenance of relationships via the exchange of gifts. Jordan describes acts of restoration as the giving of gifts, symbolising a willingness to enter into a relationship with nature. However, as in Mauss' theory, the giving of gifts is always an act of symbolism, as it amounts to a guess as to the wants or needs of the other party, and is therefore somewhat performative and ritualistic. Similarly, in restoration one can never be sure that what has been planted will grow or wither and die in the place one has chosen, therefore the acts are always

somewhat figurative. For Jordan, the practice of restoration offers a site for negotiating and resolving ambiguity which arises as the restorationist becomes aware of their troubled relationship with other species and the gift giving aspect of it offers some form of release from this ambiguity. Through attributing gift giving significance to the quotidian acts of restoration they are elevated to the status of sacred and meaningful works and through which participants can make amends for human destruction of nature (Van Wieren 2008).

2.8.1 Communitas

As we saw in Section 2.6, scholarship suggests that people come to new understandings of their relationship with nature largely via bodily experience, immersive and affective experiences of nature, and observation of non-humans, which can be enacted in a range of ways from caring for animals to mindfulness practiced in natural surroundings. The mechanisms through which restoration is thought to be effective generally echoes those that the connection to nature research has emphasised. Embodied practice, focal restoration, and elements of ritual fit into this general perspective, and, overall, Higgs and Jordan concur with this loose multi-faceted model of mechanisms which may inspire changes in participants' understandings of nature and their relationship with it. However, the concept of communitas, which is not used in other examinations of connection to nature, is important for both Jordan and Higgs in accounting for how ecological restoration enables participants to develop closer relationships with non-human nature. Although restoration may enable participants to experience an individual sense of connectedness with nature, Jordan is keen to point out that building a relationship between humans and nature is not only a personal solitary activity, he sees it as a task for communities of humans: a relationship that is developed in groups rather than by isolated individuals, and he sees a situation of communitas as most conductive to creating a connection to nature. As communitas is thought to be an important facilitator of re-evaluations of human relationships with nature it is discussed in detail below.

Communitas is a concept developed by Victor Turner, who builds on the work of anthropologist Van Gennep (1960) who wrote about rites of passage. Van Gennep described a rite of passage as a process during which people are separated from wider society, go through a transitional period, and then return: changed, to society. Turner's work refers to wider society as 'structure', but he is primarily

interested in the transitional phase of the rite of passage which he refers to as 'anti-structure' or 'communitas'. Having carried out much of this work in tribal societies in rural Africa, Turner describes society or 'structure' in the school of Merton (1957), he sees society as composed of statuses and roles which individuals take on. Individuals can take on multiple roles (e.g. office worker or parent), and to do so they adopt a persona which satisfies social expectations of those roles. Merton, and Turner after him, see individual actions and relationships as emerging from the social status of the roles held by an individual. Turner holds that cultures are social structures composed of differentiated roles which tend to be hierarchically arranged (Turner 1974).

Structure exists in a dialectical relationship with communitas, healthy long established stable cultures must have communitas as an outlet and driver of change. Turner's 'communitas' is the opposite of structure, it is 'anti-structure': not as an antagonist to structure, but as a complement that works with structure and references it whilst allowing participants release from their everyday rank and role. This is key to understanding why Jordan argues that communitas is important in rethinking human-nature relationships, it is theorised to be a situation where people are able to think radically about their place in society. Perhaps in cases where communitas is experienced during ecological restoration participants are also able to think radically about their place within the natural world.

In communitas participants lose their status, they become more anonymous, their everyday obligations are shed and they lose the clothing and property that denote their everyday status, whether by occupation, wealth, gender, or expertise. The group as a whole tends toward homogeneity; there is often a minimisation of selfishness, and an acceptance of suffering, humility, simplicity and obedience or conformity. Communitas is found often in religious service, in monasteries and convents in the Christian, Buddhist and Hindu traditions or in pilgrimage, and it can be found in political movements: the 'happenings' of hippies in the 1960s and early 70s are understood to be moments of communitas. Later, communitas has been observed in sport, music and work, revolution and liberation (Turner 2012), although it is important to note that Victor Turner was assiduous in stressing that communitas is not just conviviality. Communitas is "...not the pleasurable or effortless comradeship that can arise between friends, co-workers or professional colleagues...it is a transformative experience that goes to the root of each

person's being and finds in that root something profoundly communal and shared." (Turner 1974, p. 138).

Within communitas people can find an exceptional bond that arises between individuals or groups that renders their everyday social standing momentarily irrelevant. Communitas is often utopian, intensely absorbing for those involved and emotionally and physiologically unsustainable. It has also been thought of as a form of joy (Turner 2012). This type of communitas may appear dangerous or anarchic to those outside, especially as it may seem unintelligible and potentially undermining of the structures which enable wider society to function. Communitas also seems appropriate in its association with ecological restoration if one is to think of restoration's potential as being in its use as a nature focussed spiritual practice (Van Wieren 2008). Communitas is often a mystical state, unconstrained by time and replete with appeals to nature. In many examples of communitas there is reference to mystical powers, the sacred and sacred instruction. Communitas is able to render actions, objects or people sacred. In a state of communitas, time is often less relevant, or the period of communitas is felt to be a moment "in and out of time" (Turner 1974), where participants are less aware of the passing of time, or less concerned about it. Often, the stripping away of status necessary for communitas occurs in a context of appeals to nature, or appeals to the 'natural order'. Turner, perhaps idealistically, claims that "in a sense when man ceases to be the master and becomes equal or fellow of man, he also ceases to be the master and becomes the equal or fellow of non-human beings" (Turner 1974, pp. 252-253), Turner goes on to say that the stratification of wider society is destroyed and regenerated during communitas: that participants "die *into* nature and are reborn *from* it" (Turner 1974, p. 253). There is the release of giving up status, the intense affect and bonding of communitas and the establishment of some structure and roles in order to sustainably manage the organisational details and resources of stable social existence. Jordan thinks engaging in communitas, this state of flux and change, helps enable restorationists to enter into a new relationship with nature.

Turner's idea has been criticised for glossing over multiple contested experiences that may occur within a state of Communitas (Eade and Sallnow 2000), and been accused of failing to account for these differences. However, with this caveat in mind, communitas retains its explanatory power for researchers attempting to describe intense religious (Croft-Dutton 2010), adventure or travel experiences

(Sharpe 2005; Cater and Cloke 2007; Hirsch 2015; Scott et al. 2017) in productive and vivid ways. Communitas often enables explanation of the unusual experience of stepping into a different social world which references, derives from and contrasts with a larger social world (Sharpe 2005). For Turner and Jordan the value of communitas is that it enables participants to create a different relationship to their world, which is why it is of interest here. Stepping out of the usual assumptions and norms of the social world, particularly everyday habits of thinking about nature, may be a useful catalyst for reimagining human-nature relationships.

2.9 Conclusion

There are three key gaps in the existing research which are apparent from this review. Firstly, there is an insufficiently unified concept of connection to nature within the field. Secondly, there has been a lack of analysis of the term 'nature' and accordingly, a lack of examination of how understandings of nature relate to understandings of connection to nature. Finally, despite the many claims for ecological restoration as a practice that fosters a sense of connection to nature, there has been an absence of empirical research that seeks to examine these claims. Below we look at each of these research opportunities in turn, giving a brief summary of the findings of this Chapter and a rationale for the chosen way forward.

We saw that a concept of connection to nature has evolved within the psychological literature through the publishing of plentiful, but somewhat disparate research which has resulted in a field which is scattered with overlapping ideas of a connection to nature. A more holistic, parsimonious conceptualisation of connection to nature would allow for a more cohesive application of research findings to inform future research. To this end, we returned to the core philosophical ideas that empirical research into connection to nature draws upon, which originate from Wilson (1984), Naess (1987, 1990) and Leopold (1966). We suggest these core ideas provide some initial indication of what a connection to nature to nature may be, thus, with these ideas in mind, we use qualitative methods with the aim of gaining a richer and more complete description of it as an experience.

We saw that it is common for research into connection to nature not to define the term 'nature', or to consider how research participants might understand the term. Drawing upon Hailwood (2014, 2015) and Castree (2014), we deconstructed 'nature' into the collateral concepts of 'the natural world', 'non-human nature' and 'humanised nature'. Through doing this we saw that different ideas of nature can include or exclude humans, and that a generic use of the term nature leads to misunderstandings about connection to nature within scholarship. We also saw that ideas of nature can be understood as pluralistic, plastic and mouldable. Thus, there is clear contribution to be made by carrying out research which begins from a perspective that nature as a concept is subject to the ideas of humans, and examines ideas of nature and how they relate to feelings of being connected to nature. We also examined the proposition of Macnaughten and Urry (1998) that particular practices enable particular ideas of nature and relationships to nature. This 'social practice' perspective gives a way of examining how ideas of nature arise from what people do, and in what way these ideas of nature enable particular understandings of human relationships with nature. Thus, we take this perspective into the following Chapters where it provides some of the structure within which we discuss ideas of nature and connection.

The Chapter also reviewed activities that are hypothesised to stimulate a sense of connection to nature and the aspects of these activities which are thought to be causative. Considering the many claims that have been made for hands-on ecological restoration as a practice that fosters connection to nature, it would be an appropriate activity within which to examine these themes. There are multiple factors which have been hypothesised to be important in fostering a sense of connection to nature. Some of these factors, such as contact with nature, have been subject to wider research, whereas factors suggested by Higgs (2003) and Jordan (2003) to be important in hands-on restoration, such as the use of focal attention, engaging in ritual, and the creation of situations of communitas, have received very little scrutiny. In addition, other aspects of restoration practice which are seen to be important, such as gift giving, are under examined. There is a need for in-depth study of these facets of hands-on restoration, teasing part their roles in creating particular ideas of nature, and the ways in which they may enable closer relationships to nature.

A number of other smaller gaps emerged from this examination of connection to nature and ecological restoration. Within existing research there is a focus on the

experience of individuals and a lack of examination of groups (Ives et al. 2017, p. 110). This, together with Jordan's suggestion that communitas may play a role in fostering a sense of connection to nature suggests a focus on groups may be a worthwhile contribution to the field. Despite existing research that suggests that context can shape connection to nature, implying that a connection may be fluid as circumstances change (Angelo 2013), there is a lack of research which investigates how relationships with nature change over time or to what extent a sense of connection to nature endures. This suggests there is a need for qualitative longitudinal examinations of connection to nature (Beery and Wolf-Watz 2014; Restall and Conrad 2015; Ives et al. 2017). These ideas are taken forward into the rest of the thesis and inform the research approach. The following Chapter sets out the methodology and research methods chosen to develop this research.

3. Methodology

In the previous Chapter a number of gaps in existing research became apparent, a number of questions were raised and a number of claims were described that warrant investigation. These are consolidated in this Chapter, along with the justification and logic for the methodological choices taken in response to them. The structure of the Chapter is as follows: it details the research problem and how this relates to other research, the aims of the research and the research questions that guide the study. It then looks at the research design, the choice to use an ethnographic research approach, and its appropriateness as a tool to explore the performance of practices and meaning making within groups of people. The use of the 'crucial' case study approach is described and justified. The central data collection methods of participant observation and interviewing are discussed, and reflexive practice is explained as a technique that acknowledges the position of the researcher in the process of producing data and analysis. Ethical procedures and access to participants are then detailed, as is the management of data and the analytical process.

3.1 The research problem

As we saw in the previous Chapter, within current scholarship there has been limited analysis of the idea of 'connection to nature'. There has also been very little consideration of how people who feel connected to nature conceptualise the term 'nature'. Hands-on ecological restoration has been chosen as the focus for this research since there have been many claims made for its efficacy in creating a sense of connection to nature, and limited examination of these claims. The foremost characteristics of the of ecological restoration are claimed to be the affective aspects of hands-on physical work in non-human nature, the encouragement of 'focal' attention upon the work, and the use of ritual. The stimulation of communitas is also claimed to be effective in predisposing participants to an open-mindedness and a willingness to entertain new ideas.

Thus, the aim of the research is to examine the natures and relationships to natures that are produced by the practice of hands-on restoration, and to refine existing claims for ecological restoration as a practice through which participants gain a sense of connection to nature.

3.2 Research questions

With this in mind three research questions have been developed:

1. What aspects of hands-on restoration are important in mediating participants' understandings of nature and their connection to it?

2. What natures are produced by hands-on ecological restoration?

3. What sort of human-nature relationships are produced by hands-on ecological restoration?

3.3 The research design

The research is a qualitative ethnographic study of a single case of ecological restoration. This Section explains the choice of subject and the approach taken to its examination.

3.3.1 Focussing on hands-on ecological restoration

As the aims and research questions imply, the phenomena of interest to the research is the physical practice of hands-on restoration and the perspectives and understandings of the people who are engaged in it. Many activities have been hypothesised to foster a connection to nature, and a case could be made that many warrant further research. However, the persistence of claims that have been made for ecological restoration as an activity that fosters a connection to nature make it of particular interest as a subject of research. Since the first restoration initiatives began in the 1930s, these claims have been made, and continue to be made today (Martin 2017). More recently, it has been claimed that hands-on ecological restoration can play a role in enabling societies to resolve environmental crisis, by both governmental and non-governmental organisations (e.g. Parks Canada 2011; Keenleyside et al. 2012; McDonald et al. 2016a), and scholars from a wide variety of disciplines in the natural and social sciences and humanities (Light 2000b; Higgs 2003; Jordan 2003; Pyle 2003; Miller 2005; Van Wieren 2008; White 2012; DiEnno and Thompson 2013; Zylstra et al. 2014). Thus, many have referred to ecological restoration as a method for creating closer relationships between humans and nature, but there has been very little empirical examination of the aspects of restoration that are thought to stimulate connection. Neither the types of relationships, nor the understandings of nature that may be generated by the practice of restoration, have received sufficient scrutiny in existing research.

3.3.2 An ethnography of restoration practice

This research takes the perspective that participants in hands-on ecological restoration may develop the kinds of understandings of nature described by the

claimants through their engagement in certain practices, the experiences that these afford, the ways in which they are discussed and the context within which the practices take place. It aims to gain a nuanced understanding of how participants in restoration understand nature, and connections to nature, and what aspects of restoration are important in creating these understandings. Its purpose is to comment on whether (and how) the physical 'doing' of restoration is important, the role played by focussed attention, and whether ritual and communitas are significant. To do this it makes sense to collect data in a wide ranging and unconfined way, allowing the research to capture novel information as well as using the ideas of Wilson (1984), Naess (1987) and Leopold (1966) to draw out a wide array of experiences of connecting to nature. It aims also to capture a variety of ideas about nature and what nature is (using the collateral concepts of the 'natural world', 'non-human natures', and 'humanised natures' detailed in the previous Chapter as a starting point) in order to analyse the different things that people think about nature. Qualitative methods are ideal for developing insight into the processes whereby experiences are given meaning (Denzin and Lincoln 2005), thus an in-depth qualitative approach seems most appropriate to discern more about the relationships with nature that people develop through engaging in hands-on restoration. This approach also addresses concerns that a lack of qualitative perspectives have been brought to the phenomenon of connection to nature. The process of deriving meaning from particular practices has both embodied and discursive aspects to it. Research in geography and sociology, which has examined the embodied practices through which people build particular ideas of nature (e.g. Macnaughten and Urry 2001; Cater and Cloke 2007), provide a foundation for examining ecological restoration. Cater and Cloke (2007) note that an ethnographic approach lends itself most logically to these themes. Ethnographic methods are particularly appropriate for researching embodied action, ritual, heightened emotion, and the narratives that combine to produce intersubjective understandings in groups of people carrying out shared practices (Cater and Cloke 2007).

Ethnography originates from 19th century anthropology. In its earliest form, it concerned written descriptions of non-western cultures or communities, usually after the writer had spent considerable time, usually years, living with the group under study. Throughout the 20th Century ethnography spread into other disciplines, first to sociology where it has predominantly been used to research groups and communities within North America and Europe, and latterly to

geography where it is used to study socio-spatial phenomena such as urbanisation (Herbert 2000), and psychology where it is used to study psychological phenomena in everyday life (Tanggaard 2014). Ethnography is associated with a range of theoretical ideas, especially interpretivist approaches such as symbolic interactionism, phenomenology and hermeneutics that argue that that human behaviours are bound up with social and cultural meanings. Interactionists contend that humans behave towards things according to the significance that they have. This significance is derived from social interactions during practices which are formed and carried out by the members of a group or society (Blumer 2012). An ethnographic study aims to uncover these meanings, by studying a particular social situation or phenomena. In this case, the research intends to examine how meaning is made about nature and relationships to nature. To do this it focusses on how meaning develops in group situations, rather than focussing on solitary restorationists, thus addressing the lack of research into connection to nature that considers group situations that Ives et al. (2017) observed. It also incorporates longitudinal techniques in order to examine how relationships to nature fluctuate over time, addressing the concerns of Müller et al. (2009), Beery and Wolf-Watz (2014) and Restall and Conrad (2015). During an ethnographic study, the researcher usually observes the experiences and behaviour of participants, and data is ordinarily collected through participation, conversation and interviewing (Hammersley and Atkinson 2007). Thus, ethnographic methods such as participant observation and in-depth interviewing are able to collect information on both the corporeal aspects of experiences and the representational talk that participants engage in. Ethnography typically focuses on a small number of cases, or a single case, of the phenomenon under study, in order to produce an in-depth analysis. Accordingly, the next Section looks at how a case of hands-on ecological restoration was chosen.

3.3.3 The case study

In this instance, the choice of case is theoretically guided, it has been chosen as a "crucial case" of the type of restoration practice that it is claimed can produce a sense of 'connection to nature'. A crucial case "offers the circumstances which enable the analyst to reject some theoretical proposition" (Mitchell 1983, p. 197). Accordingly, the case has been chosen for its explanatory power rather than for its typicality. The case is an example of restoration, which has all the attributes necessary to provide sufficient conditions for participants to connect to nature: thus enabling both analysis and refinement of the claims that have been made for

restoration as a practice that enables participants to connect to nature. The crucial case of restoration that has been selected is one that involves hands-on physical work in nature, the encouragement of focal attention, the use of ritual, and material and social conditions which are conductive to communitas.

Thus, the research concentrates on one case of ecological restoration carried out on 'conservation weeks' by 'Trees for Life', (a small Non-Governmental Organisation) in the Scottish Highlands.

The following attributes describe in detail why Trees for Life was well placed to be a crucial case:

Firstly, Trees for Life's work is clearly and unambiguously framed as *ecological restoration*:

> *[Our mission is to] "restore the Caledonian Forest and all its constituent species of flora and fauna to the Scottish Highlands"* (Trees for Life 2017)

Secondly, the restoration practice in this case involves hands-on "direct participation" (Suding et al. 2015, p. 639), the primary characteristic that is seen as a prerequisite for a sense of connection to nature.

> *"You will spend a week in one of four beautiful locations in the Scottish Highlands, planting trees or carrying out other work to help restore the ancient Caledonian Forest"*
>
> (Trees for Life 2017)

Third, Trees for Life use techniques of focal attention to give the work meaning, here they explain their purpose:

> "To collectively focus our attention on the tasks at hand and how it relates to the wider purpose of Trees for Life"
>
> (Trees for Life 2015b, p. 31)

Trees for life also carry out restoration in ways which include simple rituals (meditation, guided sensory observation of the surroundings, visualisation and tree dedications) which aim to foster connection with nature and each other. They term these 'nature connections', here they explain their purpose:

> "To bring a deeper sense of connection with nature

To help members of the group to connect to themselves and to one another

To foster inspiration and curiosity for the natural world"

(Trees for Life 2015b)

Finally, the extract below demonstrates how the Trees for Life 'conservation weeks' provide a situation consistent with Turner's concept of 'communitas'. Turner saw communitas a state that could occur when people are separated from their everyday lives and their everyday status or role in society. He also saw people in this situation as becoming more anonymous and more amenable to new ideas when their everyday obligations and connections are shed (Turner 1974).

During the Trees for Life (TfL) conservation weeks participants are separated from their daily lives, and positioned in a transient state together. Participants usually do not know each other before their attendance on a week and are taken out into the Highlands to stay together in an isolated location.

Trees for Life describe the social experience of their conservation weeks as follows:

"During our residential volunteering we live as a community, working together in the forest and sharing domestic tasks such as cooking the evening meal. Many of our volunteers form friendships for life as our groups work and live together, inspire each other, and encourage one another." (Trees for Life 2015a)

Conservation weeks are remote and secluded, run by TfL from Saturday to Saturday in spring and autumn every year. TfL's offices are at Findhorn (an hour's drive east of Inverness) and the weeks themselves are currently held on one of four sites in, or close to, the sparsely populated mountainous area that makes up TfL's core area (see Figure 3-1), an hour or two to the west of Inverness: at Glen Affric, Dundreggan, Corrimony and Torridon. Once they are on site, volunteers are isolated and have no transport of their own. The remote locations mean that the participants are asked to commit to stay for the full week and it is rare for participants to leave during the week. The weeks are facilitated by the group's leaders (known as Focalisers) who live with up to ten volunteers for the duration of the week. The weeks are an intense and concentrated experience of restoration, in which the themes suggested by the research questions are likely to

be 'writ large', aiding their identification and analysis. The choice of case was also guided by access and ethical considerations that ensured that the host organisation agreed to participate in the research and allow access for participatory observation.

Figure 3-1: Trees for Life's core area for restoration. Source: Trees for Life

3.4 Methods of data collection

The principal aim of ethnography is to provide thorough documentation of, and insight into, group actions (Hammersley and Atkinson 2007). To this end ethnography typically entails the researcher spending extended periods of time with the group that they are studying, which enables them to observe the details of what others are doing as well as engaging in the activities of the group themselves. The main tool of ethnography is participant observation, which is used to watch what happens, listen to what is said, ask questions and have one on one conversations with members of the group, as well as take part in and observe group discussions (Crang and Cook 2007). Interviews are used to pursue particular salient topics with participants. The phrase 'hands-on restoration' makes explicit that it is a practical sensory experience, which suggests that aspects of a 'sensory ethnographical' approach (Pink 2015) are important too, in which the researcher immerses themselves in, and pays attention to, the physical aspects of the practice. Ethnographic researchers write field notes which detail the goings on around them, and their own reflections on their participation in activities (which can include physical sensations and sensory detail), and collect other data such as

written documents and photos (Hammersley and Atkinson 2007). This enables them to create a vivid picture of the phenomena under study and derive interpretations of these data to create plausible explanations (Sennet 1977) of what they observe. Participant observation and interviews, and the issues that arise when they are used by researchers, are considered in the following Sections.

3.5 Participant observation

Participant observation entails the researcher taking part in the daily activities, rituals, habits, traditions, activities, events and interactions of a group as a way of learning about their understandings of what they do and why (DeWalt and DeWalt 2002). As well as the learning about their explicit understandings, participation in the group enables the researcher to gain an understanding of the 'tacit' knowledge that participants know but do not or cannot articulate (Polanyi 1967). This tacit knowledge is not necessarily easily expressed and is not necessarily conscious, but can be observed by a researcher who is participating in the activities of the group. Each culture, subculture, group or workplace has its own tacit (as well as explicit) understandings of how to complete the necessary tasks and behaviours in order to thrive within the group. Any type of collective organisation or practice involves knowledge and understandings that are accessible through joining in rather than asking questions. As Van Maanen and Schein (1977) below explain, effective participation in organised activities such as hands-on ecological restoration is dependent on a wide range of tacit understandings:

> "Any organisational culture consists broadly of … a somewhat special language and ideology that help edit a member's everyday experience, shared standards of relevance as to the critical aspects of the work that is being accomplished, matter-of-fact prejudices, models for social etiquette and demeanour, certain customs and rituals suggestive of how members are to relate to colleagues…"
> (Van Maanen and Schein 1977, p. 1)

Through participating and observing what others do, the researcher can access these understandings; comprehend how restoration tasks are done well and why it is seen as important that they be done in a particular way. Through learning in this way, the researcher can begin to understand the reasoning behind the actions that the participants make, and become 'socialised' into the group, carrying out tasks in the way that the group does (Van Maanen and Schein 1977).

There is also an the ability to use the body as a tool in participant observation, as in carrying out restoration one learns through the body as other participants are, and the physical senses of touch and smell and bodily affects experienced during restoration can be observed. Restoration practice has important embodied aspects in that it requires particular physical activities that create sensory experiences that are felt and interpreted in certain ways by participants. Nature is experienced through all our senses (eg. Kellert and Wilson 1995), and it is said that the physical work of restoration is a language of action and performance (Jordan 2003), thus the corporeal and affective aspects of the practice assume importance. The skills required to carry out restoration are largely generated by repeating informal practices, which become implicit, rather than by formal tuition. The body of the restorationist is thus a repository for social and cultural norms generated by the practice. Participants 'become' restoration volunteers through the embodied performance of restoration, following the logic of habitus, their corporal dispositions and cognitive templates develop according to particular norms developed within the practice (Horton 2003). For these reasons, active physical engagement is central to participation in restoration and observation of one's body whilst undertaking fieldwork is an important device for understanding the experience of restoration for participants. In living with research participants during the conservation weeks as a member of the group, and making use of all their senses and experience, the researcher is able to bring these reflections to the collection and analysis of data.

Participant observation raises a number of problems: how to access the group, the organisation and conduct of fieldwork, and the recording of field notes to document aspects of the practice, these are considered below.

3.5.1 Entering the group

Taking part in an apprenticeship or becoming a volunteer is an respected way of accessing different groups or situations in order to understand and analyse them as an ethnographer (Tedlock 2003; Garthwaite 2016). Part of the ethos of hands-on restoration is that it involves volunteers (Light 2000b). Thus, carrying out participant observation by volunteering at conservation weeks at each of TfL's four work sites was a logical starting point for the fieldwork. Using the structure of the volunteering program it was possible to spend a week living and working at each of the sites, going through all the necessary inductions multiple times and

being able to progress from being a novice to becoming knowledgeable about what the conservation weeks are like at each site.

Through this process, the researcher aimed to gain enough familiarity with the conservation weeks to understand hands-on restoration somewhat as an 'insider': to have sufficient knowledge and experience of the full range of restoration tasks that participants were engaging in and how and where they were carrying them out, to be able to 'walk in their shoes'. This is known as a 'emic' approach, which aims to capture participants' understandings and interpretations of what is going on around them (Yin 2015, p. 11). To do this, the researcher must become sufficiently familiar with the situation under study so that she can, to some extent, become part of the group and understand the nuances of the experience of the group (Olive 2014).

Simultaneously, the researcher brought an outsider's academic analytical perspective (what is known as an 'etic' approach) to the situation (Morris et al. 1999). The etic approach is what the researcher carries in terms of an external perspective and structure. These are ways of seeing the phenomena under study with an investigator's eye, asking questions and analysing the significance of actions in a way that aims to come to plausible conclusions about what it happening as an outsider. To do this the researcher generally aims to begin the fieldwork period with a somewhat 'neutral stance'. Acknowledging this, the researcher arrived on the first conservation week theoretically informed but open and observant of unexpected understandings and meanings should they become apparent during observation, conversation or interviews. These theoretical understandings are known as 'sensibilizing' concepts (Bray 2008), which in this case were the research questions and the themes that had arisen during the literature review. Initially, observation and questions were focussed on the tasks and activities of hands-on restoration; the ways in which participants attention was directed during the work; and upon the overall social experience of the conservation weeks. As the aim was also to remain flexible and amenable to surprises during the weeks of observation, detailed notes were made on other topics which arose from empirical observation, but which were not necessarily foreshadowed by the literature. As the fieldwork progressed, it became apparent that some themes were more important than others were and, while some themes were dropped, others were developed (see Figure 3-2). Ideas were pursued with clarifying questions in an iterative process, moving between theory and data, to narrow and deepen the enquiry throughout the data collection period.

3.5.2 The organisation and conduct of fieldwork

The fieldwork was carried out between October 2015 and January 2017. There was a first phase where participant observation and interviewing was carried out for four full conservation weeks, one on each site: two in the autumn of 2015 and two in the spring of 2016. All the participants on these weeks were interviewed whilst attending the week and most were interviewed again on their return home (eight did not respond to requests for repeat interviews). This body of data (field notes, interviews, photographs taken by the researcher as well as documents produced by TfL) was compiled and an initial analysis was carried out over the summer of 2016. There was then a second fieldwork phase to look for any contradictory or confirmatory data and ensure data saturation was reached (Bratman et al. 2012) at an additional four conservation weeks in the autumn of 2016. See Table 3-1 below for a summary of the data collection phases.

Table 3-1: data collection phases

First data collection phase: October 2015 – May 2016
• Participant observation as a volunteer on four conservation weeks.
• 'On site' interviews with all 37 participants on these weeks
• 'Follow up' interviews with of these participants approximately eight weeks after they had returned home.
• Telephone interviews and meetings with key informants
Second data collection phase: October 2016 – January 2017
• Participant observation on four separate conservation weeks, for one night and one day each
• 'On site' interviews of all 37 participants on these weeks
• Telephone interviews and meetings with key informants

3.5.3 Field notes

Field notes are so central to participant observation that traditionally anthropologists would refer to analysis and writing up as "writing up your notes" (Agar 1996, p. 161). There are many sorts of field notes ranging from the quickly scrawled reminder or observation to reflexive journals or tidied and edited texts (Sanjek 1990). The central issue with field notes as tool of research is that they are inevitably selective; descriptive and analytical decisions are made about what

is significant, and how to present or frame the observations. They are reductive tools that fix lived and observed realities into examinable forms of text (Emerson et al. 2001). All data are a consequence of decisions made by the researcher (where and when to take a photo, who to interview and what to ask), but unlike most data collection methods, field notes rely solely on the observation, perception and memory of the researcher. They are wholly shaped by the author, with no recourse to any other artefact, there is no photograph and no audio recording that can be disputed (Lüders 2004). Thus, when it comes to field notes there is an exceptional weight of responsibility upon the depiction that the researcher uses. The 'crisis of representation' in qualitative research alerted researchers to this problem of representing the voices and lives of others, and developed ways of acknowledging and managing that responsibility that maximise the reliability, validity and transparency of qualitative research (Alcoff 1992). The next Section discusses these issues and the use of reflexive practice.

3.6 Positionality and reflexivity in ethnographic methods

As a research approach, ethnography has worked hard to distance itself from the early stereotype of the ethnographer as an intrepid explorer observing the 'other'. Early ethnographic work tended to rely on an unquestioned assumption that the world was delineated by boundaries: clear boundaries between the researcher and the researched and clear boundaries between different groups or cultures (Agar 1996). The intrepid research-explorer was assumed invisible in the research, both during the field work and in their writing (Barnosky et al. 2011). Ethnography has moved on, in recent ethnographic accounts descriptions of groups tend to theorise the social world as being far more porous. 'Porous' in the sense that any group or culture is seen as more multifaceted and complicated, filled with inconsistences and contractions. Neither groups nor individuals are seen as distinct from larger scale social and political processes (either temporally or spatially), and all boundaries are seen as much more 'messy' (Hall 1991). These epistemic changes have had important impacts on the way that ethnographic research is conducted and represented. In particular, in order that the research is valid, the contemporary researcher must demonstrate their awareness of their own 'positionality' (Haraway 1985) and their ability to be 'reflexive' about themselves and the research. Despite the difficulty and uncertainty inherent in grappling with some of these issues, the ability to engage with real world messiness is perhaps the most valuable contribution ethnographic research can

make (Crang and Cook 2007). Qualitative method has evolved over decades to include positionality and reflexivity as tools throughout the research process.

Feminist and postcolonial influences on research since the 1980s have stimulated researchers to be aware of or 'problematize' their own social status, experience and worldview which make up where they are 'positioned' or 'situated' in relation to their research outcomes and subjects. Rather than silently claiming the superhero cape of intrepid explorer, researchers are expected to explain themselves and be aware of how the role of researcher interacts with issues of power. Positionality articulates that gender, race, class and other aspects of our identity are manifest in relations with others, and that to be valid research needs to include an account of the researcher's specific position in the context they are working in (Alcoff 1992; Maher and Tetreault 1993). Consequently, there is a need to be aware of the role the researcher's presence plays in the groups and their effect on group dynamics (Lincoln and Guba 1985; Turner 2000; Tong et al. 2007). Reflexivity is a process of openly reflecting upon oneself as an active producer of one's research, as well as reflecting upon how the choice of the research methods affects and influences the research process and outcomes (Finlay and Gough 2008). Both positionality and reflexivity emphasise the need for researchers' characteristics and experience to be detailed in their research reporting alongside their procedures for reflexive learning to allow readers to assess the dependability of the research.

3.6.1 Statement of position
It is not possible to know the full extent to which the researcher's characteristics have shaped the data, but researcher identity has had an effect upon what people disclosed in interviews and upon how they behaved. Briefly below I give a statement of position for reasons of transparency.

Gender: one group leader (who are known as 'focalisers') talked about how they and other focalisers had observed a tendency for volunteers to seek a focaliser of the same gender if they need to disclose any problem or difficulty during the week, and it is reasonable to assume that this tendency could apply to interviews and informal conversations during the fieldwork. Certainly, on conservation weeks gender seems to have a bearing on group behaviour, my experience as one of only two women on a week (the other woman was the girlfriend of one of the focalisers) was very different to the weeks I experienced with a more equal gender ratio. On the eight weeks I attended, I only shared a bedroom with men on

one occasion. If I were a man the opposite would likely be the case, and the conversations I heard and participated in would be been different.

Age also has a bearing: As someone who is middle aged, I was neither a peer of the cohort of volunteers who were school or university leavers in their teens or early twenties, neither was I one of the cohort of retired people. On the weeks people tended to affiliate somewhat with people of a similar age (although the focalisers tried to avoid factions forming), and although I was conscious of the need not to form such differentiated bonds myself, I did feel an affiliation with those people of working age.

Experience: I have worked as a community worker managing volunteers, meaning I know something of the role of TfL's focalisers, which meant I could ask questions based on my experience, which may have helped create rapport with them. I have some ecological and forestry understanding (e.g. an MSc in Forestry), as well as practical experience (e.g. qualification and experience as a chainsaw operator), which meant that I was not coming to the forest restoration experience as a completely inexperienced volunteer. This position will have affected my perspective, and meant that I may not have built such good rapport with those for whom the experience of working outside in forests was completely novel, thus, they may not have identified with or confided in me. I am fairly fit, which meant that although I found the wet and cold challenging - at times miserable, I was not exhausted by the physicality of the work, whereas some people found it almost unmanageable. The experience of the conservation weeks must be very different from this perspective.

Nationality and origins: I am English and grew up on a small farm, which meant my experience of the weeks was not one of exploring my roots (as it was for some Scots) and my experience will have been different from those of my more urban counterparts.

Bearing this position in mind, I aimed to create rapport with people whose experience I likely had less in common with, in order that I minimised my own bias. Through interviewing and informal conversations, I sought to understand the perspectives of those people who had different life experience and characteristics than do I. Through this reflexive practice, I aimed to close the gaps in my own viewpoint in order to obtain an understanding of the hands-on restoration experience that was as accurate and broadly representative as is possible.

3.7 Discussions and interviews

As well as the physical and group aspects of restoration, reflection is seen as an important aspect of restoration for Higgs and Jordan: restoration must be carried out "thoughtfully and attentively" (Jordan 2003, p. 133), it is not a mindless physical practice. Participation in large and small group discussions was also important during participant observation. Listening to how groups talk about the activities of restoration is important for understanding what meaning the participants read into their work. Interviews were also a good opportunity for participants to reflect upon their restoration experience and to explain what meaning it held for them. Although interviews are managed and performative narratives (Kvale and Brinkmann 2009), and do not allow unmediated access into the thoughts of the participants, they do enable some insight into the personal feelings and motivations of the participants, and as such interviews form a central piece of this research. Participating in interviews allows participants to make connections between their everyday work activities and other people, policies, social and political influences beyond the worksite. In this way conversations and interviews with participants are an important aspect of the research that enables the scholar to 'see' outside the work site of the restoration in a way which observation alone cannot (Theil 2013). Participants may compare their experiences to other experiences they have had, which can enable the researcher to put the situation under study into the wider context of participants' lives.

The majority of interviews in both the first and second data collection phases were carried out 'on site': meaning participants were interviewed during the conservation weeks, usually after they had been on site for two days. This period was agreed with TfL to allow people to settle into the work and experience, and give the group to have time to consolidate and get to know each other before I started explicitly carrying out research. These interviews concerned participants' reflections on the work they were doing, how they saw the ecosystem that they were working in and the experience of the group, they tended to be anything from 15 minutes to an hour long[7]. During the initial data collection phase, participants were interviewed again once they had returned home from the

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[7] See Appendix 1

conservation weeks[8]. The second interview was usually about six to eight weeks after they had arrived home. This interval was chosen because most participants said they felt they had settled back into home life about a month and a half to two months after they returned home, thus allowing participants the opportunity for generating deliberative reflections about themselves and encouraging reflexivity (McLeod 2003). Leaving this amount of time was important to enable the research to examine the attitudinal changes that people had towards nature over time and gain an understanding of practices that may have enabled feelings of connection to nature to persist in daily life. The follow up interviews were conducted over the phone, and tended to be between 30 and 70 minutes depending on the experience of the participant: participants who had more experience tended to be longer, indeed some became 'key informants' for the research.

For those had been on a conservation week for the first time the interviews were principally about how they had felt when they returned home, their reflections upon the week and the role it played within their life. Those who had been on multiple weeks were asked to reflect on the specific week, but also about how it compared with other weeks they had been on, the role which the weeks had played in their lives over time and their changing perceptions of the work over time. Different questions were asked of 'first timer' participants and 'longer term' or 'returner' participants since their perceptions of the week were usually very different. It was important to try to ask questions that were pertinent to their particular perspective and captured the how participants became seasoned 'restorationists' over time. Interviews with 'key informants' who were identified during the initial data collection period were specific to the individual, and were about the evolution of Trees for Life or conversation weeks over time, particularly challenging weeks they had had, important events, their opinions or reflections on how the weeks could be improved or how the weeks enabled the organisation to achieve their overall strategic goals. Key informant interviews were used with the aim of obtaining an overall understanding of the 'patterning' and characteristics of the conservation weeks by those who had long term and varied experience of

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[8] See Appendix 2

them (Tremblay 1957). Key informant interviews could present similar challenges to those found when interviewing elites. In elite interviewing in particular, interviewees are likely to present a consciously managed version of their perspective (Goffman 1959; Rubin and Rubin 2012). The elite interview risks being contorted into a public relations exercise for the elite member, but the secure status of the interviewee also presents an active interviewer with the opportunity of challenging statements and pursuing inconsistencies which may break this down somewhat (Kvale and Brinkmann 2009), these interviews were approached with these issues in mind.

3.7.1 Interview structure and content

At the beginning of the interview, the consent process was explained[9], participants were told that the interviews were confidential, and would be anonymised, with any records of their identity separated from the content of the interview. Participants were told that there are no 'right or wrong answers', and that they do not need to present their 'best side', in an attempt to minimise the performative nature of the interaction. Initially, the role of the interviewer was to facilitate the interviewee's description of the work and themselves (Holstein and Gubrium 1995; Gubrium and Holstein 2012), and as rapport was gained, the interview could become almost like a conversation (Marshall and Rossman 2006). The interviews were semi structured, each interview was conducted with a 'script' of questions, which could be deviated from, but provided a rhythm and direction to the conversation. In the first data collection phase the script was developed from the original research questions and as the research progressed, the script was added to according to the topics that arose from previous interviews. This approach was used to establish whether there tended to be a consensus about topics that came up, or whether particular topics were contentious (or simply unimportant) to other participants (Kvale and Brinkmann 2009). This approach was somewhat inductive, with initial questions developed from theoretical ideas about what involvement in the process of restoration may mean to participants, but it is also deductive, as participants often had understandings and knowledge that was not foreshadowed by existing work.

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[9] See Appendix 3

Participants were encouraged when they spoke in depth and personally about why they do the work, and were encouraged to take the interview in novel directions if they raised points that were contrary to those that had been expressed in previous interviews, thus the interviews commonly went 'off script'. The aim was to be able to gain a comprehensive picture of the conservation weeks, including any variations, contradictions or disagreements that existed.

3.8 Complementarity of methods

Using both participatory observation and interviews is a conventional ethnographic approach, similar to those used in studies into social groups such as those by Khan (2011) and Theil (2013). The use of both methods enables a degree of triangulation between different types of data (eg. interview transcripts, photos and field notes). The analysis does not rely solely either on what participants say or what they do. In addition, in exploring both what people do and say, there is an opportunity to improve the overall quality of the data. Interviews can be improved if the researcher is immersed in the world of the interviewee, and vice versa: observation can be improved if the researcher has heard what the participants and focalisers regard as the significant aspects of their work. As the researcher worked alongside interviewees, and spent time observing their preoccupations and temperament, there was greater potential to adapt interview styles to suit the interviewee. As the interviewer became familiar with participant's backgrounds and experience of restoration, questions were modified to the participant. For example, different questions were asked of participants who have been involved in restoration for long periods of their lives. Usually long-term participants had given the aims of restoration considerable thought over the years they had been involved, and had a reflected more upon restoration practice than participants who were attending the week for the first time. Long-term participants generally had more to say about a wider range of ideas and practices, and it was valuable to draw these reflections out. Tacit knowledge and an understanding of the group language gained through participatory observation assisted in gaining a greater depth of conversation during these interviews. Having witnessed events and interactions, the researcher could ask direct questions about them. For example, "what was the purpose of washing the tools in the stream?" or "When it was very smoky from the wet Rhodies burning, how did you feel?" The demonstration of commitment to the work through full participation on the conservation weeks and the building of relationships with participants during the weeks may also have contributed to the support that the research project

benefitted from, as all the participants on the eight conservation weeks agreed to be interviewed at least once.

Participant observation and interviews also offered complementary temporal aspects to the enquiry. Participant observation enabled understanding to develop about the discrete time period of the conservation week over its duration. Since the researcher was engaged throughout the conservation week (from Saturday to Saturday) it was possible to build up a sense of the rhythm of the weeks and how the groups created meaning from their experience as they got to know each other and the work. As a counterpart to the immersive observation period of the conservation weeks the interviews enabled snapshots of the past by asking people about their memories of previous conservation weeks as well as collecting information through the follow up interviews which gave some insight into how participants incorporated their experiences on conservation weeks into their lives as time passed. Finally, using both participatory observation and interviews exposes differences between what participants say and what they do and between what participants say should happen and what actually happens (Blumer 2012), which may help expose the rhetorical work that restorationists engage in.

3.9 Ethics and access

The study was approved by The Cardiff University School of Social Sciences Research Ethics Committee, reference number SREC/1583 (11/09/15).

In using participant observation, the researcher gains the trust of the participants and organisations by having demonstrated an ability and commitment to doing the work of restoration. Through this technique, the researcher becomes a 'peer' by learning the language used by the group and therefore to some extent shedding the 'outsider' status. The following email extract from an exchange with the volunteer co-ordinator at Trees for Life demonstrates the sensitivity required to ensure that participants (and Trees for Life) feel confident with having a resident researcher. At this stage, Trees for Life had already expressed enthusiasm in involvement in the research and this extract forms part of negotiating what the researcher's presence would mean for them as hosts:

> *"I would like to work alongside participants, and be a normal part of the work and conversation. I would like to do interviews with them if they want to, for them it would mean being interviewed in the place that the work is happening and talking about the place, the work and what it*

means to them. I would get their consent formally before this, and ask them questions, but I would not be asking them anything intrusive or sensitive. I would also very much take my lead from them, if it did not seem like it was something they wanted to do, I would not ask them to do it. I do not need to interview everyone, I can be sensitive to the situation and the main thing is that people get a great experience volunteering with Trees for Life – I am aware of that. For those that are keen, if it seemed appropriate, I would like to hear their thoughts and reflections about themselves and the work they are doing on a deeper level. Again, this would only happen if the potential interviewee were very enthusiastic about it. " (Email to TfL sent 28th September 2015)

Trees for Life organised for an email to be sent to all participants to ask for their permission for a researcher to attend their week. Each participant was given the option of a veto if they were uncomfortable with the researcher's presence. Once the week was confirmed, we agreed that the researcher would be introduced on the first evening and work alongside people for at least the first two days of the week without any interviewing. Before interviews and photographs were taken, the researcher carried out a formal consent process and ensured the form agreed during the ethics approval was signed by the participant.

The working conditions and activities were sometime physically demanding and the dynamics of the groups were sometimes demanding mentally and emotionally. The intensive nature of such immersive research means that the risks of emotional burnout are quite considerable (Sampson et al. 2008) and the research made sure the fieldwork was spaced out to minimise the likelihood of this. The researcher was aware of, and attentive to, the danger of creating 'unequal affiliations', and how these can create schisms in groups, and how the researcher's presence can change the group dynamics. There are both ethical and professional consequences to unconsciously affiliating with those people to which the researcher feels most attracted. Omitted people can feel less favoured and less inclined to share their thoughts, or the researcher's analysis can be distracted by a charismatic person's version of events. This can influence the quality of the data collected, and the whole direction of the project, thus illustrating the importance of reflexive and aware research practice.

As TfL hosted the research and helped ensure that participants were all comfortable with the research presence on the weeks, there was a possibility that

participants would not differentiate between the researcher and TfL. They may censor themselves, and feel that they cannot criticise TfL or their activities. In order to mitigate against this, when the researcher was introduced on the first night on each conservation week it was explained that the research was independent, and that interviews and conservations would be anonymised during the writing up of the research. As we have seen, this was reiterated when the researcher went through the consent form with each participant.

3.10 Types of data

During the data collection phase of the research, field notes, transcribed interviews and photographs were amassed. Throughout the whole research process, a research journal was kept, which details reflexive thoughts about the research process and decisions taken as the research progressed. Written documents such as details from project websites and internal policy and training documents, were also collected to inform the background understanding of the researcher. Records were made of the process of the research, keeping accounts of all fieldwork visits, as well as chronological fieldwork notes, interview data and journal entries (Creswell and Miller 2000; Koch 2006).

3.10.1 Interview data

For each interview, a digital audio recording and a written transcription of the interview was kept. The transcriptions themselves are, inevitably, an interpretative process because of the translation that the researcher carries out when moving from oral to written speech (Kvale and Brinkmann 2009). However, any analysis was minimised at this stage; the transcription aimed to be descriptive rather than interpretive. The objective of transcribing verbatim is to maintain clarity and consistency over the whole dataset by excluding analytical digressions from the dataset before the analysis and coding of the interviews begins at 'desk analysis' stage. Some extracts of interviews are presented in the following Chapters. Any observations made during interviews were kept separately with analytical notes.

3.10.2 Field notes, journals and diaries

Field notes were taken during participant observation, these are the records of observations, conversations, interpretation and suggestions for the gathering of future information (Agar 1996). In contrast to interview data, DeWalt and DeWalt (2002) see field notes as simultaneously 'data and analysis' as the researcher

interprets throughout the process of writing, and uses the analysis during fieldwork to look for things that are not yet understood. The field notes form the basis of the 'thick description' and extracts are reproduced in the following Chapters when relevant. There are different types of field notes that are kept. Firstly, descriptive notes were made about conversations and types of behaviour that seemed to be important in making up what 'hands-on restoration' is in the case (descriptive notes). These described the context of the setting, and the physical space that the work is taking place in, as well as notes on the interactions of other people and involvement of the researcher (Crang and Cook 2007). These were made on occasions during the day as unobtrusively as possible, and written up in the evenings. Third, analytical notes are taken about events observed and form a 'detective's notebook' of suggestions and reminders to look for confirming or contradictory evidence of subjects that have arisen. In addition, there was the general research diary containing reflections on the research process, analysis, future options and decision-making notes, and 'meta' or analytical notes, and self-reflection. The descriptive field notes were analysed thematically, they complement the interview data by providing confirmatory or contradictory evidence as well as context (Crang and Cook 2007).

3.10.3 Photography

Photography was used quite extensively in documenting restoration activities: photos of people working, the ecosystems and area where the work is taking place, the equipment being used, and the physical context (weather, seasons) that the restoration is taking place in. These form part of the field notes as 'visual documents' (Crang and Cook 2007). Photos are a powerful device, and often unconsciously assumed to hold great truth-value, despite being as constructed, choreographed and composed as interviews or field notes (Banks 2001). They were used for each site and each group of people, and they helped convey the atmosphere of the weather, work and site as well as the groups of people and how they interacted with each other. Often taking photos and making short notes saved having to write pages of descriptive material, especially during the workday, that would have prevented taking part more fully in group activities. Photos are used directly in this thesis to form part of the thick description of participants' activities and understandings in the same way as extracts from interviews and documents are used to describe and analyse the activities and understandings of restoration work.

3.10.4 Documents

Trees for Life produce their own documents such as handbooks, newsletters and a website. Documents of this type are used in this thesis where they provide context and clarity. All these types of data: interview transcripts, field notes, research journals, photos and other documentation are used to develop the analysis; the next Section looks at the process of drawing this data together.

3.11 Analysis

The data was analysed by focussing on themes and patterns, in a process of data collection and analysis, which is explained in detail below. The style that was used is informed by a process of 'funnelling' one's field of attention, which is seen as essential to ethnographic work (Agar 1996). 'Funnelling' requires an interim analysis in order to make decisions about what themes to pursue in depth, thus the data collection and analysis was carried out in two phases.

First data collection phase: October 2015 – May 2016

To recap, initially the data collection began with some literature-derived research questions, and maintained an open attitude to any other issues that arose. During the first four conservation weeks as much information as a possible was amassed to gain a broad overview of Trees for Life in general, and the conservation weeks specifically. After the first four weeks, an initial analysis was carried out according to the method below (see Section 3.11.1 and Figure 3-2). After the initial analysis was completed, a layperson's 'interim report' was prepared for TfL and the initial findings were presented to academic audiences. This enabled discussion of arising areas of interest and the opportunity to benefit both academic and practioners' feedback before moving onto the second data collection phase.

Second data collection phase: October 2016 – January 2017

Once armed with some general themes derived from the data, and the many more questions that had arisen from the initial analysis, the focus was sharpened. The aim was to look at emerging ideas, inconsistencies and areas of contention, which had emerged in the initial analysis, in more depth. More information about specific issues was collected during participant observation on the next four conservation weeks, key informants were identified, and more interviews carried out, both on site and over the phone.

3.11.1 Thematic analysis

The aim of the analysis was to examine the data carefully and critically, decontextualizing and recontextualising it to better identify themes and patterns (Crang and Cook 2007). The desk-based stage of analysis was primarily about 'cutting up' the data and reconstituting it to create a logical and plausible sense of what was happening when people engaged in restoration and how they understand what they are doing. Data was analysed with an iterative thematic approach using a coding procedure derived from Strauss (1987), Miles and Huberman (1994) and Coffey and Atkinson (1996).

Figure 3-2 shows this thematic approach in detail: the process begins at the top of the diagram with a first stage of 'open coding', it is read downwards moving through a second stage of 'axial coding' to third 'core' stage.

This is best explained in stages:

1. The beginning of the analysis initially requires revisiting the data and reminding oneself of the situation it was collected in, re-immersing oneself in the data.

2. Once the researcher is familiar with the sum of the data collected, the next stage involves ordering all the data into an organised and easily navigable system. This can be computerised and/or on paper. In this case both methods were used, the NVivo software package was used for ease of searching and developing and editing codes (all the data can be uploaded into the program, including photos, sound files, and documents) and it is easy to develop categories and move data into them. The transcripts were also printed and stuck on onto a large blank wall. The analysis then involved moving between the wall of transcripts and the field notes and photographs, looking for plausible findings. This enabled a view of all the data at once, and stimulated creative thinking about the themes that emerged in the case.

3. Once the researcher has organised the data in total, the third stage is to go through it again and to develop thematic codes that can be used to cut up the data into the important themes. The Open coding stage (see the blue top section of Figure 3-2) is this initial cataloguing of the data. First, the researcher revisits the research questions and codes (categorises) the data. For example, any data that gave an indication of participants' understandings of nature were coded initially as 'nature'. The second stage of the open coding involves identifying in-vivo themes that are present in the data, and coding them accordingly, these are

strong themes that emerge from the data, but that are not foreshadowed by the literature. The analytical notes and reflections taken during fieldwork were helpful here in observing themes that were not previously highlighted by the research questions or theoretical literature because they recorded jargon used in speech and the tacit assumptions made during the work, that interviews alone would have likely missed. When the initial coding was finished, these codes made up the preliminary themes or areas of interest (represented by the small boxes in the darker blue section of Figure 3-2). For example, the initial codes about work were aesthetics, context, description, fences, fertilizing, work for the sake of work, historical fidelity, non-natives, rhodies, sloes, tree nursery, and tree planting. As will become apparent, some of these categories proved to be central to the final analysis. Whereas others, despite seeming important initially, did not persist through all the iterations of analysis and were not eventually seen as particularly important in hands-on restoration.

4. The fourth stage (the lighter blue section of Figure 3-2) is the process of axial coding. This is a process whereby the instances identified in open coding are developed. The contents of each initial code is tentatively described, for example all the instances where a phenomena was coded 'symbolic' are scrutinised with the aim of explaining what, why and how a phenomenon becomes symbolic in restoration. At this stage, links between emerging analysis about symbolism and other aspects of restoration are developed. Initial areas of interest developed during open coding were dropped as they became less relevant.

5. At the 'core' stage (the section in white in Figure 3-2) interpretations are offered about the contents within each theme, and the links between themes are developed into core concepts and interpretations (Miles and Huberman 1994), with the aim of offering plausible accounts of the nature of the phenomenon under investigation (Sennet 1977). This part of the analysis was often messy and warranted constant revision as analysis developed (Agar 1996; Marshall and Rossman 2006). These 'plausible accounts' were interrogated by returning to the data to look for consistent and negative examples to develop the analysis. After the initial analysis, it was these inconsistences and unexpected findings that helped develop extra interview questions for use during the second phase of data collection.

6. The sixth stage is a process of review, during which the initial analysis was developed to enable criticism and scrutiny of the initial findings. This stage

involved synthesis of the themes and patterns in the data into an overall order for presentation to Trees for Life, peers and senior researchers and professors. This gave two important sources of feedback which aimed to develop the internal validity of the work (Morse 2015): the internal scrutiny of the researcher when preparing to present the initial findings, and the questions, doubts and ideas raised by the audiences in response to the initial findings.

7. A picture begins to take shape as the themes solidified and the relationships between themes became clear. Interpretation became stronger as major modifications became rarer (Crang and Cook 2007). The analysis process is unavoidably iterative, and as such, this linear description avoids much of the messiness that took place. Figure 3-2 illustrates how the analysis was built over time, showing how stages three to six are repeated, as meanings became clearer and interpretation more conclusive.
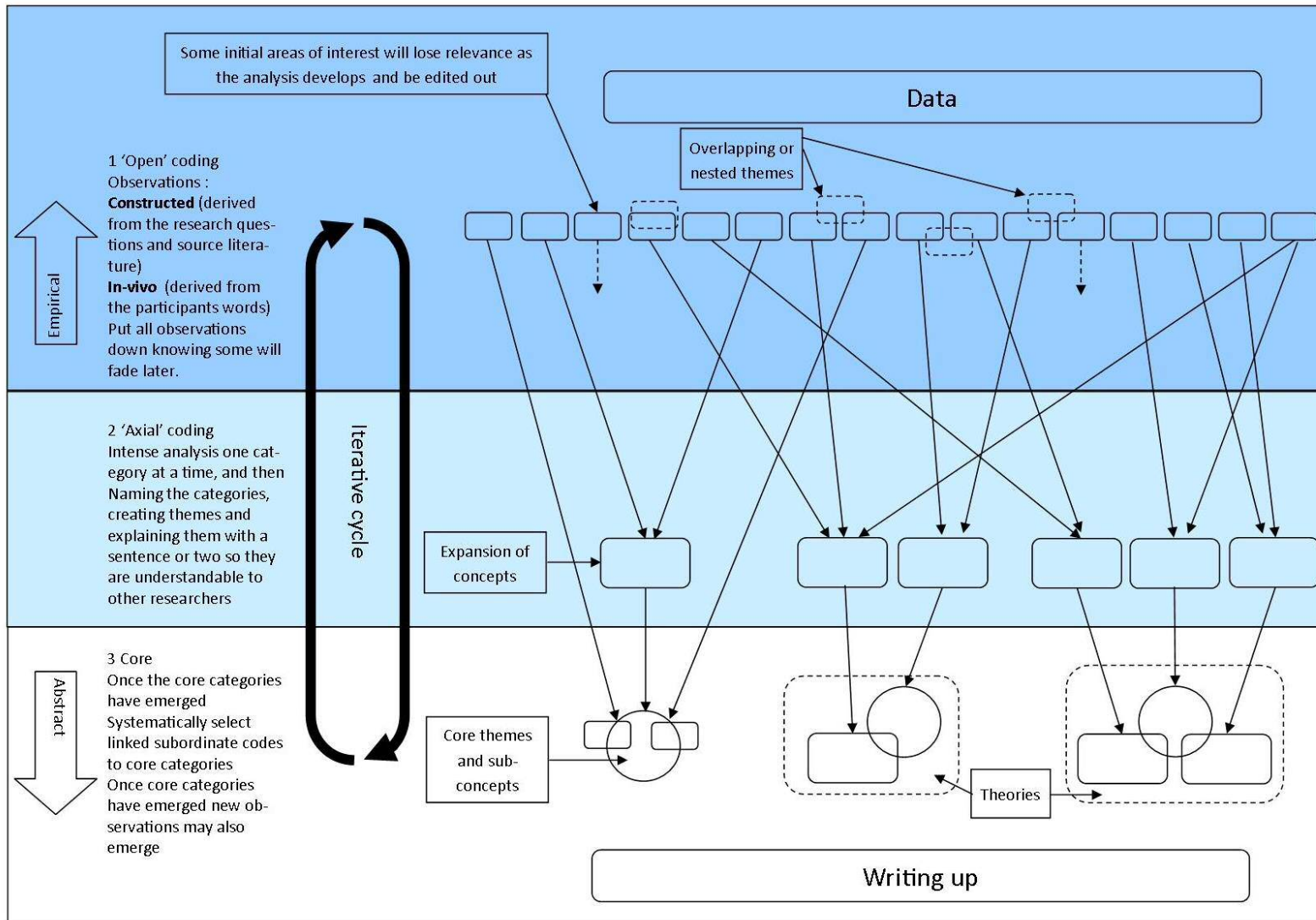
Figure 3-2: Developing a thematic analysis of data.

3.12 Conclusion

This Chapter showed the overall logic of the research by giving an overview of the main research problems that motivated the enquiry: the need to learn more about the idea of connection to nature, and how nature is conceptualised by those who connect to nature, and whether and how the practice of hands-on ecological restoration can enable a sense of connection to nature among participants. To enable this enquiry, one crucial case (Mitchell 1983) of hands-on restoration was chosen (Trees for Life conservation weeks) where physical hands-on restoration takes place in a way that emphasises the idea of becoming connected to nature. The conservation weeks also provide a situation where examples of communitas might be found, which is thought to enable participants to consider new ways of thinking, or open them to transformative experiences. The concentrated intensity of the conservation weeks also provide a situation where the themes of interest (types of nature, connections to nature, and the practices of restoration that are important in fostering these) are likely to come into focus, as participants are separated from the practices of their daily lives and entirely immersed in hands-on restoration.

The research project was designed as an ethnography using participant observation and interviewing as the main methods used to collect data. Participant observation was chosen because it allows access to the detail of the physical aspects of restoration, group experience and conversations. Interviewing was used to hear participant's individual thoughts and reflections about restoration and nature. Both methods support and improve each other, meaning the study is able to consider both what happens, and what is said, as ways of learning about hands-on restoration and understandings of nature. The Chapter also considered the ethics as well as access, positionality and reflexivity that are all part of ethnographic study and included a statement of the position of the researcher to enable transparency. The types of data were considered (including field notes, journals, interviews, photographs and documents) and it was explained how these data were then analysed. The iterative thematic analysis that was used to develop existing claims and novel ideas about hands-on restoration was laid out and the process of examination was explained.

The main themes that emerged from this process provide a structure for the results and discussion Chapters. Thus, the following Chapter, Chapter four, gives some background to the weeks, explaining who organises them and how this is

done, Chapter five addresses the practice of hands-on restoration: the embodied performance of the tasks and the discourse that participants are immersed in whilst they carry out the practice (research question one). Chapter six examines methods that guide participants' attention during hands-on restoration. It examines the role of focal attention, education and knowledge sharing, and ritual in fostering a connection to nature. Chapter seven details the social aspects of the week, and the idea of communitas (research question one). Finally, Chapter eight explores the ideas of nature and connection to nature fostered by hands-on restoration (research questions two and three).

4. Who is who in hands-on restoration: some background

The principal aim of ethnography is to provide thorough documentation of, and insight into, group actions (Hammersley and Atkinson 2007). As such, this and the following four results and discussion Chapters document hands-on restoration in detail. This Chapter begins this by providing background information on the conservation weeks in order to give the reader some context for the findings and discussion detailed in the following four Chapters. It describes the role of Trees for Life in organising the weeks and their focus on social connection which makes their variety of hands–on connection particularly interesting for exploring claims that hands-on restoration can create connection to nature. It describes the role of the group leaders (focalisers) in facilitating the group experience and their reflections on the work, and finally it describes who the volunteers are.

4.1 Trees for Life

Trees for Life is a registered Scottish charity (No. SC021303) and company limited by guarantee, registered in Scotland (No. SC143304) with an expenditure of approximately one million pounds a year. During the field work period they employed approximately 20 people (during that period the number fluctuated slightly). Trees for Life have various projects, but the initiative of interest to this research was their conservation weeks, which involved approximately 300 volunteers a year during the fieldwork period.

Trees for Life promote their conservation weeks by saying that:

> *"Our Conservation Weeks provide an opportunity for volunteers from all around the world, of all ages and backgrounds, to help protect Scotland's natural environment."* (Trees for Life 2017)

Conservation weeks are organised by a 'Conservation week Co-ordinator' who is based at TfL's office at Findhorn and is responsible for managing the focalisers (who live with the volunteers for the duration of the week). In addition to managing the focalisers, the Conservation week Co-ordinator is responsible for maintaining vehicles and tools, arranging accommodation and food, and planning the work sites and tasks. Conservation weeks often run simultaneously on work sites which may be three hours travel apart, and almost all work sites are two hours away from the office. Although staff based at the office may visit to give talks or demonstrations, day to day management of the conservation weeks is carried out by focalisers. Due to the remote nature of the accommodation and

worksites the Co-ordinator is unable to oversee or scrutinise the focalisers' everyday work, and relies on a confidential volunteer feedback system, visits to the weeks, and observation of the quality and quantity of task completed to ensure that focalisers are doing their work satisfactorily. Therefore, focalisers have certain amount of autonomy. This is partly by design, as TfL values non-hierarchical organising and entrusts the focalisers to carry out the necessary tasks, encouraging them to "*do what you can to ensure the focus of the week is held and that volunteers are kept safe*." (Trees for Life 2015b).

4.2   Social connection in restoration

TfL's focus on social connection originates from the founder's experience at the Findhorn Foundation. The Findhorn Foundation is a spiritual community founded on principles of 'inner listening', 'work as love in action', and 'co-creation with intelligence in nature' (Findhorn Foundation 2017). Findhorn and their ideas are not explored in detail in the thesis, however, it is interesting to note the background philosophy that has provided the basis for many of the characteristics of TfL's conservation weeks. These origins are different to the more traditional providers of similar volunteering in the UK) that participants had commonly experienced (eg. the National Trust, Wildlife Trusts and The Conservation Volunteers). Often volunteers commented favourably on how TfL were less focused on exploiting their labour to achieve tangible outcomes and more interested in ensuring that volunteers' labour was beneficial, not only in terms of the tangible outcomes achieved, but also in terms of the experience of volunteering as an end in itself.

The conservation weeks are built upon founder Alan Watson-Featherstone's "*experience of knowing what worked well in terms of group cohesion and activities that were meaningful that help draw out people's more inner strengths, inner qualities, their passion, their care*." (W. F.). He used his experience of organising 'experience weeks' at Findhorn to "*make the conservation weeks as we know them.*" (W. F.). An experience week at Findhorn runs from Saturday to Saturday in the same way as conservation weeks. The experience weeks are focussed primarily on building a "cohesive group" (W. F.), they do this by playing games designed to create trust and connection between people as well as learning dances and other activities as a group which are considered spiritual or are focussed on personal growth. The conservation weeks have kept the aim of creating group cohesion and rely on some techniques that

Watson Featherstone brought from Findhorn, but use them in an implicit and subtle way that somewhat obscures their origins. Watson-Featherstone's motivation for emphasising social connection on the conservation weeks is to give participants a taste of the connection and collaboration that can be achieved within groups of people, and the encouragement that can be stimulated by shared experience. As Watson-Featherstone explains, it was this sense of coming together and feeling inspired that he wanted to keep:

> "…it was the group experience of actually coming together and meeting like-minded people and discovering the synergy and the synthesis and the inspiration that can fall from that…" (W. F.)

It falls to the focalisers to facilitate this coming together (Chapter seven looks at this in detail), the next Section introduces the role of the focaliser and looks at their experience.

4.3   Focalising and focalisers

This extract from the Focaliser Handbook explains that there can be a fine line between a focaliser and a volunteer on a conservation week as both are participants in the group:

> "The word focaliser came into Trees for Life from its history as part of the Findhorn Foundation. We prefer to use this word in place of the word 'leader' or 'co-ordinator', to reflect the sense that the focalisers 'hold the focus' of the group and the task. Some people's interpretation of the word 'leader' is of someone at the front giving the orders, and this does not express our approach. A focaliser in many ways is part of the group, which is a circle with each member bringing his or her own unique quality and contribution. The ideal here is that there is no hierarchical system; just mutual respect for the roles that each person plays. Focalisers are nevertheless group leaders in the best sense of the term. This kind of leadership is a balanced and considered approach to your volunteer group, the conservation task and the needs of individual volunteers." (Trees for Life 2015b, p. 27)

Taking responsibility for the group whilst not being "at the front giving orders" (Trees for Life 2015b, p. 27) requires a more nurturing approach. Leadership theory and research posits a variety of models of leadership that can enable a greater understanding of the focaliser as a role. In particular 'authentic' (Luthans

and Avolio 2003), 'servant' (Spears and Lawrence 2004) and 'spiritual' (Fry 2003) leadership bear a resemblance to the focaliser. Most simply, authentic leadership is thought to demonstrate transparent and ethical behaviour that encourages the sharing of information and accepting the inputs of 'followers[10]' (in this case, volunteers). More specifically, servant leadership is described in a way that fits very closely with the role played by the focalisers: the leader is expected to have vision, honesty and trustworthiness, be service orientated, a role model and demonstrate an appreciation of others' service and empowerment. In addition, servant leaders are characterised as being good communicators and listeners, competent, encouraging of others, teacher and delegators. The origins of TfL's volunteering activities give a clue as to how the relationship between focalising and volunteering began:

> *"We started the volunteer weeks, as I say, in '91, and initially it was me leading them all, focalising them. And then we started some of the... good volunteers who came, we said well, would you like to lead the next one [laughs] and it sort of grew gradually over time that way."* (W. F.)

However, it is the ethos of the organisation and their philosophy of leadership that ensures that the divide between a focalisers and volunteers is thin, meaning participants move between the role of focaliser and volunteer from week to week. Focalisers have all been volunteers, and it is common for a current focaliser to volunteer on weeks that they are not focalising on. Often people work as focalisers for a period and then 'retire', coming back to volunteer on weeks.

> *"...some come back [after retiring from focalising] and often they are like me: two [conservation weeks] a year, one or two a year, rather than five a year ..."* (T5[11])

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[10] The terms 'followers' is used throughout leadership literature to denote participants who do not have the ultimate responsibility for the group or organisation.

[11] Founder Alan Watson Featherstone (W.F.) is not anonymised, since his unique role makes him readily identifiable, and he was happy to be quoted. All other interviews are anonymised, and each are given a code, like this one, T5. These codes are used throughout the remaining Chapters.

Despite the responsibilities of focalising, and the freedom from responsibility for volunteers, there is a strong sense that each group is a whole. Within this whole the participant who is focalising is part of, and not separate from, the group. This focaliser is a conservation leader for a Wildlife Trust when not focalising on conservation weeks, she reflects on the difference in the role she plays as a conservation leader at home and on conservation weeks:

> "...At home I'm delivering...to people whereas here I'm taking part in it." (GA7F)

This focaliser tries to sum up the ethos:

> "I think the reason TfL uses the word 'focaliser', rather than leader is to remind us that we are all part of the group" (C2-8)

The fluid nature of the role of focaliser and volunteer and TfL's determination that focalisers should, as far as possible, see themselves as part of the volunteer group means both focaliser and volunteer are 'participants' upon the weeks: both are taking part in the restoration work and both are involved in the decision-making on the weeks. On each week there are people who have the role of taking responsibility, who will likely be the people who will deal with any significant problems that occur, these are the focalisers for that week. However, there are often volunteers who have more knowledge and experience of the weeks themselves, restoration work or ecology than the focalisers on a particular week and who may play a substantial role in guiding restoration or educational activities. Therefore the term 'participant' is used to refer to all attendees on the conservation weeks, irrespective of their role on that particular week. This is not to minimise the significant responsibilities that the focalisers have, but rather to recognise the accumulation of experience that may be held by volunteers and the moving back and forth between the role of focaliser and volunteer that occurs in TfL conservation weeks.

On each weeks two focalisers work together to lead the group. The job of the focaliser is broad, they need to be able to lead the group, ensuring clear communication with each other and the volunteers; they need to delegate tasks and deal with challenging situations. They are charged with fostering group bonding and delivering the 'nature connection' and sharing exercises detailed in Chapters six and seven. They are expected to facilitate the gaining of ecological knowledge, imparting it themselves and/or working with groups to share the

knowledge that exists among the volunteers or in books and resources. They must deal with risk assessments and safety plans, first aid and emergencies in the remote Highlands, on sites which often the group will have spent at least an hour walking to across unmarked difficult terrain. They need to be able to direct a range of conservation activities such as planting, felling, fence removal, tree protection, root and seed collection, ring barking, fertilising and other activities. To do this they will need to be able to map read, and maintain records of work, use GPS units, manage vehicles, tools, clothing, equipment, food and small amounts of money. They need the temperament to be able to live with the group of volunteers they are leading during the conservation week.

The focalisers are not expected to be proficient in all these things, but with the support of the rest of the organisation ('the office'), and ideally, their group, they are expected to be able to use intuition, problem solve, and communicate clearly and sensitively with those around them in order to complete these tasks well.

The TfL focaliser handbook adds these final words of encouragement:

> *"Trust in what you know. Your love and care for the forest and for the people you are with is your strongest tool. This can carry you gracefully through many different situations, if you allow it to. Also, remember you have the support of Trees for Life staff behind you – use this!"* (Trees for Life 2015b, p. 65)

Focalisers are supported by 'the office', their wider staff team, they are trained before they attend their apprentice week and they attend a weekly gathering annually. There have been changes in how TfL relates to focalisers over the years, and the relationship is not devoid of challenges, but overall focalisers tend to feel a deep sense of connection with the wider organisation, staff members and other focalisers based on shared experience of the weeks, and a shared commitment to the vision and ethos of the project.

Thus, we can see that the job of focaliser is a combination of tangible and intangible skills, knowledges and sensitivities. Focalisers usually work a maximum of 10 weeks a year, with many of them working between one and five weeks a year. Many of them do the job steadily for years, slowly accruing 40 weeks or more of experience in the holidays from their full time job, whereas others may

do it intensely for a shorter period as their main job and then move on to full time work elsewhere.

4.3.1 The focaliser 'vibe'

> *"Why did you give up focalising? Because I wasn't feeling the focaliser vibe anymore…"* (D3-3)

What is the 'focaliser vibe'?

The way the focalisers talked about their experiences foreshadows many volunteers' reflection on their weeks in the following Chapters:

> *"It's a massive cliché, but you know that whole 'life changing moment'? So, I went on to focalising and found that I could inspire people to have that experience and kind of almost relive it vicariously through other people. And that for me was what focalising was all about. So I went on a week and just at the end of the week when you get this massive feedback from people about how they have had such an emotional and recharging week then it is really rewarding."* (D3-3)

> *"I still get the same buzz out of doing it as some of the other volunteers to some extent."*
> (C2-8F)

Thus, we can see that focalising is carried out by people who are enthusiastic and committed to the vision of restoration.

4.4 Volunteers and volunteering

This Section gives some background about who attends the weeks and why they are motivated to do so.

4.4.1 Nationality and geographical distribution

Volunteers and focalisers tended to be mostly Scots (or people living in Scotland) and English (or people living in England), there were some weeks where Scots were in the majority, and some where English were. There was often one or two people from other countries: German, Polish, Swiss, and Swedish; during the fieldwork there was one person from Wales, and one from Northern Ireland. Some people completed long journeys to attend the weeks, even for many Scots the journey to the Highlands is not insubstantial. From Edinburgh or Glasgow to Inverness is approximately four hours journey, and once in Inverness there is

about an hour's journey to the TfL worksites. For many travelling from England or further afield the journey is far longer and more expensive. There were people who came by coach from the South coast travelling for 16 or more hours from Plymouth or Brighton to keep costs down. Equally, there were people who flew from Birmingham or London, a journey of an hour or two.

4.4.2 Age and gender

The age range was from 19 to 78. Overall, there were approximately double the amount of people in their 20s and 30s than there were over 40s. The age mix varied on the weeks, there were some groups where the majority of people were over fifty, some where the majority of people were in their twenties, and some which were polarised with a small group of people in their sixties and a younger group in their twenties or thirties. Some had a spread of ages with each decade represented.

Overall there were twice as many men as women. This, again, varied on the weeks, on one week there was only one other woman in attendance, whereas on other weeks there was almost an even gender split between men and women. Studies of similar organisations (the National Trust and The Conservation Volunteers) have found mixed results regarding gender, with slightly more men than women volunteering for the National Trust and more women than men volunteering at The Conservation Volunteers (Campbell and Smith 2005).

4.4.3 Occupations

There was a wide range of occupations represented, people often had had multiple careers or worked more than one job, or were studying while they worked. This volunteer's reflection on his week captures the variety of occupations and the convergence of interests:

> *"Every single person here is completely different in terms of where they've come from and what they're doing now I think. So yes, you've got me who is ex-military, someone else that's an ex-teacher... he was the headmaster I think. Then you've got a photographer. Someone that owns a stall in the centre of the city... it's crazy. Someone from Poland...a student; a software developer, someone who is going to be a park ranger. So it's just everyone. It's completely different backgrounds but all massively interested or passionate about the same thing."* (C2)

Eight participants worked in the conservation or environmental sector, seven were students, six were ex-military (air force, army and navy were represented), five worked in outdoor education, teaching or youth work; four worked in the corporate sector in banking, auditing or marketing; four worked in IT, four were civil engineers and four worked in social enterprises or charities, three were researchers. In addition, there was one carer, one carpenter, one shamanic healer, a veterinary, a veterinary nurse, a doctor, an NHS trainer, a radiographer, a paramedic, a firefighter, a tour guide, a market trader, a professor, an intern, a McDonald's worker, a Deliveroo cyclist, two artists, a dog walker, a hotel worker, a librarian, one product designer, an animator, two writers, a factory worker, a landscaper, a council worker, and an aid worker who also worked in TV. Ten people considered themselves retired or semi-retired.

While participants' day jobs were often very varied, they were almost universally well-educated, though not necessarily about ecology. Those who were not formally educated beyond school leaving age were self-educated and intellectually curious, often long term participants had accumulated a lot of knowledge about nature, wildlife and ecology. Those who were working in low skill or poorly paid jobs were usually well-educated young people. This has found to be the case in other studies of environmental volunteering in the UK (Campbell and Smith 2005).

There are exceptions to the rule though, and not all people fit this typology, here a focaliser reflects on the people who have been on the weeks he has experienced over years:

> "...there's some people that come on these weeks that know nothing, they don't know a spider from a tree and even they are saying, 'I'm confused why I'm here...' you'd be amazed some people just stumble across stuff and go 'yeah I'm going to do that'." (T9F)

4.4.4 Other volunteering

About half of the participants on conservation weeks often also volunteer on or work for other conservation projects: The Conservation Volunteers, The National Trust or National Trust for Scotland, various wildlife trusts, the John Muir Trust and other local projects such as North Culver Meadows or the Hidden Gardens in Glasgow.

For some people, this volunteering crosses over with paid work, so they may get paid for some conservation work, but volunteer their time for other projects. Volunteers on conservation weeks do a range of volunteering at home, some almost full time, relying on income from other places to enable them to work for free:

> "I do a bit of life modelling on the side as well, just to get some spending money, but at the moment I live at home with my parents and my costs are virtually zero." (D6)

Other volunteers volunteer regularly alongside paid work, study or caring responsibilities. For many of the participants, volunteering was something they do throughout their lives, having started as young adults:

> "[I volunteered] initially for the Avon Wildlife Trust when I was at University. I did a variety of things with them like non-native removal and scything which was actually really fun. Then I did some volunteering while I was in London with the London Wildlife Trust with the Woodlands and Wetlands and somewhere else." (C5)

For others it has become a big part of their lives after they retired:

> "I do…volunteer with other organisations, the National Trust…some path repairs, any local things, I do that, and the moment I volunteer for TfL, the Ayrshire coastal path, Scottish Wildlife Trust, the Ayrshire coastal clean-up…I do quite a lot of volunteering, my wife thinks I do too much."

Some volunteers do other residential volunteering in addition to day volunteering (in the following Chapters there is more detail about how they compared these experiences to their experiences on conservation weeks):

> "…[I've done residential volunteering with] Scottish National Heritage and the Isle of Eigg heritage trust, we were rebuilding a path on the edge of a cliff…I volunteer for the TCV and we've been doing species management around Stirlingshire area, we are converting pasture back into bog, back into wetlands…" (C3-1)

Finally, some participants were also involved in environmental projects which were not about hands-on work in nature, but about campaigning for environmental policy changes.

4.5 Conclusion

We can see that TfL facilitate hands-on restoration in a particular ways which aim to connect participants to each other and nature, they are as committed to connecting people to each other, as they are to connecting them to nature. The structure of the conservation weeks has evolved as the organisation has become established. The weeks are facilitated by guides called focalisers, however, the ideal is that the focalisers and volunteers cohere to create a non-hierarchical team. Experienced participants move into and out of the role of focaliser. The role of focaliser is carried out by people who are committed to the ideals of restoration, and who have energy and enthusiasm to invest into guiding the group and inspiring others to experience a sense of connection to nature. Volunteers are varied in age and gender, though there is slight tendency toward younger males. Volunteers often travel long distances to volunteer, and half volunteer for other organisations, usually closer to home. A wide range of occupations are represented on conservation weeks and both volunteers and focalisers are usually well educated.

The following Chapter builds on this background information to examine research question one. Thus, it looks in detail at the practice of hands-on restoration and the embodied performance of the tasks that are carried out. Subsequently, there are three more results and discussion Chapters, two which also aim to answer research question one by looking at the ways in which hands-on restoration mediated peoples' understandings of nature and connection to it: Chapter six looks at how the physical aspects of restoration are augmented by practices which create meaning for those participating, and Chapter seven details the social aspects of the week, and how this relates to and supports the meanings that participants are make whilst 'doing restoration'. Finally, Chapter eight explores how participants thought about nature and connection to nature (research questions two and three).

5. Doing Restoration

5.1 Introduction

This Chapter addresses the practice of hands-on restoration: the embodied performance of the tasks and the discourse that participants are immersed in whilst they carry out the practice. The aim of the Chapter is to describe the findings whilst highlighting observations which can contribute to answering research question one: What aspects of hands-on restoration are important in mediating participants' understandings of nature and their connection to it?

We saw in the literature review how the physical practice of restoration has been seen as significant from a variety of perspectives. Firstly, physical immersion in nature relates to the building of a relationship with a non-human nature. Labouring in nature is seen as a way of creating a sense of ownership or claiming rightful belonging or 'ownership' of nature. Similarly, Jordan sees working in an ecosystem as a form of environmental homemaking (2003, p. 200) and, after Mauss (1954), restoration as a form of gift giving, whereby through mimesis humans are able to engage with the complexity of the non-human world and learn to observe its needs. After Hailwood, this homemaking can be a way of becoming intimate with nature: no longer being estranged. With these ideas in mind, we look in turn at each of the tasks that participants often do in their day to day work on conservation weeks. We describe and discuss what these tasks are, how participants understand them, and how they are done.

5.2 Preparing for work

Volunteers start their first morning by making and eating breakfast and preparing a packed lunch, with enough food and water (and usually a hot drink in a thermos) to take out for the day's work. Before they leave the accommodation in the morning the volunteers are given the 'restorationist's uniform'[12]: a 'hi-vis' top, an emergency whistle, and protective goggles to carry at all times on the hills. They are to be worn in the approved ways: the 'hi-vis' is worn over the participants'

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[12] This homogenising of the group and its relationship with communitas is discussed in Chapter seven.

outer layer, the whistle is carried around the participant's neck on a string. Emphasising the remoteness of the practice, the focaliser explains that the international emergency signal is six blasts followed by a pause and that the response is three blasts followed by a pause. The risk associated with the work is presented as the equipment is distributed: Protective goggles are kept in the volunteer's back pack and used when removing Sitka spruce (*Picea sitchensis*) (to avoid being spiked in the eye), or when spreading fine powered 'rock phosphate' on windy days (to avoid eyefuls of phosphorite). Volunteers are told about deer ticks (*Lxodes ricinus*) and how they can carry Lyme disease (borreliosis bacteria), and how infection with borreliosis is notifiable to the Health and Safety Executive under UK legislation. Volunteers are told how to minimise the chance of being bitten by wearing long trousers tucked into socks as well as long sleeves and slippery waterproofs to reduce the ticks' ability to climb and find skin. Volunteers are also told to check for and remove ticks after work as well as how to spot some of the common symptoms of Lyme disease. Ticks are very widespread in the highlands, and most weeks participants got bitten by ticks: some focalisers get dozens of bites every year and Lyme disease is a real hazard which causes some concern among staff and volunteers.

Once volunteers are fully equipped: with supplies, sufficient warm clothing and safety gear, they are driven in a minibus to the work site. Upon arrival at the worksite the group then have their first taste of the physical effort that the week is going to require as they walk for an hour or more across rugged ground to the area where the day's job is to be carried out. On TfL's Dundreggan estate sometimes there is no minibus ride and the participants walk straight to the work area from the accommodation, again, this is their first experience of the exertion required to carry out restoration.

5.3 The tasks of restoration

Here experienced volunteers list the kind of jobs they generally carry out:

> "*Tree planting, nursery work, preparing beds, all sorts of work…working with compost, putting up deer fences, no: taking down deer fences, removing non-natives with saws and loppers, even with a wedge cut or without, phosphating trees to help them grow, ring barking trees, brashing trees to be later ring barked, things like that*". (T4)

The most frequent tasks to be done are tree planting and non-native tree removal. Nursery work is also frequent, but often set aside for particular weeks where people are less physically fit. These tasks of restoration all provoke different questions about 'nature' and 'the natural'. Each task confers different symbolic meaning to the purpose and experience of restoration.

5.3.1 Tree planting

Tree planting is seen as the ultimate restoration act by many volunteers and focalisers. Unlike the other common tasks of restoration, it is largely understood as unproblematic and it much prized as an opportunity and privilege (see Figure 5-1). Many volunteers had a very simple idea of tree planting as an indisputable 'good' and often did not reflect on the act in any depth.

> *"One of the great things about the week we did was the amount of planting we got to do…"* (FD6)

> *"…it's constructive, positive, I can't think of anything more worthwhile to do in all honesty for the environment. And I guess it leaves a lasting legacy…"* (T8)

Figure 5-1: A participant proudly plants her first tree, 9/11/15.

Tree planting involves planting bare rooted, plug trees (*"trees with soil"* D1) or 'strikes' (willow sticks that are pushed into wet areas). Each type of tree has different planting requirements; the characteristics and needs of different species are matched with the characteristics of the sites as well as the chosen priorities of the site management plan. Asking why a tree is planted in a particular place at a particular time necessities a lengthy answer which demonstrates the knowledge bound up with restoration: encompassing details of the tree and site characteristics, future plans, availability of stock, skill of planters and time of year. Some trees are planted in the hope they will grow old, die and decompose, for others reaching sexual maturity and producing seed may be seen as a success. During the fieldwork a variety of native tree were planted: Birch (*Betula pubescens*), Rowan (*Sorbus aucuparia*), Willows (*Salix cinerea & caprea*), Alder (*Alnus glutinosa*), Aspen (*Populous tremula*), Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*), Juniper (*Juniperus commuis*) and Scots pine (*Pinus sylvestris*).

Although tree planting was seen as unproblematic for new volunteers, many long term participants understood restoration of the Caledonian forest as an emerging area of understanding. Long term participants understood tree planting activities to be experimental with uncertain outcomes, a view that speaks to ecological restoration in general:.

> *"Ecological restoration … is a new field of study in practice, it didn't exist 40 years ago. So everything that's happening is new, there's no established methodology from last century or a hundred years ago, we test it out and see what works."* (W. F.)

For the job of tree planting, volunteers are given polycotton gloves which have been dipped in a waterproof nitrile rubber, planting spades which have a narrow tapered treaded blade design (approx. 10 cm width) specifically for the job of planting young trees or whips, and a PVC coated canvas shoulder bag in which to carry the trees: these are the 'tools of the trade' that confer the status of the volunteers as doing work that is distinctly restoration.

There are different methods of planting that TfL use, which add up to a discrete body of knowledge that is part of the experienced restorationist's identity. In particular the approaches mentioned by this volunteer are used:

"I guess the two different methods we've used for planting, they are new to me. One, the digger having turned over everything and [two,] us actually having to scrape away the heather and stuff." (D2-7)

Often, the work site is prepared by contractors who use a digger to lift out pieces of peat about 80 cm square and turn them over, burying the heather, grasses and lichens that were growing on the surface and exposing the peat, subsoil and minerals. These mounds are usually spread out about four to ten metres apart, usually they are fairly irregularly spaced. Typically, the resulting mounds are higher than the land around them, meaning they drain freely and exposed to more light and warmth, although they can freeze and be affected by drought (Forest Research 2017). To successfully establish, most trees need to obtain nutrients that are not present in the peat bogs and heaths that are planted in on conservation weeks, here a volunteer explains what they learnt about this:

"I guess I've learned that the minerals that the trees want at this stage are actually below the peat, so I've learnt that these silvery brown parts of the soil, that's what the trees really want, because I would have thought … that you would just plant them in a big slab of peat, but that's not what they need." (D2- 7)

On a site like this which have been mechanically prepared, participants are often instructed to plant trees in clumps, three or four birch to a mound for example.

There were sites where the digging and turning over was done by hand, ('hand mounding'). A miniature version of the excavator's work which consisted of digging out a square of about 25cm from the bog and turning it over exposing the peat and burying the surface growth. The third preparation I saw was 'screefing', which involves scraping the surface plants (often heather) away from an approximately 30cm square area to create a patch of ground where a young tree will not get outcompeted immediately by heather.

Once one of these preparations is carried out, the volunteers are usually taught one or two methods for planting the trees, although TfL are less interested in how the volunteers do the task than one basic principle:

*"**Important!** The soil around the base of the tee must be well heeled down so it has a better chance to survive."* (Trees for Life 2015b, p. 43. Emphasis in the original)

> *"Well, I've learnt … how to do it properly and how to do a tug test."*
> (D3- 4)

This is known as the 'tug test, an essential tool for restoration in the Highlands. The tug test ensures that the cuts made in the soil (when participants have dug their holes) don't open up in droughts, which could lead to exposure of the tree roots. The tug test is also used in the hope that browsing deer will not pull the whole tree out of the ground, focalisers said that the tug should be done with similar vigour to that which a hungry deer may employ.

In addition, with bare rooted trees the roots must be pointing downwards, For both plug and bare rooted trees there should not be air gaps under the surface. The air gaps can become saturated with water which then freezes and as it expands pushes the trees out of the ground; focalisers talked of seeing whole sites covered in trees that had been expelled from the ground like this.

There was not a rigorously adhered to method for planting, different techniques are used by different focalisers, and the focaliser handbook suggests five different methods (see Figure 5-2 & Figure 5-3). The TfL aim is instrumental – to maximise tree survival, there is little orthodoxy about how this is done:

> *"…long discussion in the morning about the different ways trees could be planted – flipping the mounds over, doing it like we are: pushing the mounds back in – learning what works and what doesn't over the years, ice popping the trees out of the ground, roots being air pruned…"* (Field notes 24th April 2016)

Figure 5-2: Focaliser demonstrating tree planting, 24/4/16.

Figure 5-3: Participants discuss different tree planting methods, 24/4/16.

Restoration is always experimental, tree planting has changed over the years, there is a sense of progress to the project, that makes the work feel purposeful and informed, a contribution towards a long term evolving project:

> *"some things ... [have] evolved significantly since my early days... some the practical things are the GPS and being much more specific about how we're planting, where we're planting, learning from what we're doing,*

> *what works and what doesn't and building on that, all that is going in the right direction for me: the tree nursery work at Dundreggan and really monitoring how mound planting is going on there...I think it's really important we're actually feeding back what we're doing rather than saying here's a whole enclosure, here's some trees, go and plant them..."* (C2-2)

A love of tree planting is one of the central tenets of doing restoration work on conservation weeks, but as is indicated by Jordan (2003) it raises difficult questions about human capability to restore nature and is not immune from disappointment. Trees do not always survive, and the work itself is not always inspiring. Some feel doubt about the effect of the project given the scale of the ecological crisis:

> *"There's a little voice in my head that kind of wonders how much impact it's going to have on the future of the globe...I mean I do question the difference we're making but you know, it's... I suppose it's better to do this than shoot off to the other side of the world for a holiday isn't it?"* (C4)

And others have witnessed tree failure themselves, for these participants the raw assumption that planting trees is an unqualified good is less robust, they have a broader understanding of the project and its imperfections:

> *"I...went walking in Glen Morriston ... and none of the trees that we'd planted had survived, none of them, not a single one, we planted 1100 trees on the last two days and not a single one had survived. And I've got the grid reference, a GPS and everything...everything was against them, they hadn't fenced them off, the deer would have got them, the winter was coming up, we trying to get through heather to plant them, there was no preparation, everything against them, so far as I could see not a single one had survived."* (C3- 9)

Finally, there was always a variety of experiences among the groups, but there was only one person in the eight weeks that the fieldwork covered who tentatively admitted that he did not enjoy tree planting:

> *"I don't mind the rain, I don't mind the wind, [but] I was thinking 'why am I grumbling a bit internally?' And I think it's because it is quite*

monotonous work, and that's … and even though there is a superb aim in mind I think it's trying to retain that, while we're doing this." (D3- 9)

In a situation where planting trees is generally seen as a privilege (one which other volunteers have travelled for and paid to do) admitting that it is tedious is taboo.

5.3.2 'Non-native removal'

In the TfL context non-native removal mainly refers to the removal of Sitka spruce (*Picea sitchensis*) and Lodgepole pine (*Pinus contorta*). Douglas fir (*Pseudotsuga menziesii*) Norway spruce (*Picea abies*), Western Hemlock (*Tsuga heterophylla*) and Larch (*Larix decidua*) are also common non-natives, which can be removed by conservation groups, but which didn't feature during the fieldwork. Most of these species of non-native tree were introduced over the last 500 years, but only planted in any significant amount in the last hundred years after the Forestry Commission was established in 1919. These species planted across the Highlands can lead to water acidification and reduce native biodiversity (Manchester and Bullock 2000). Trees for Life remove these introduced trees from Forestry Commission property which is being managed to improve species diversity or on land which was previously used for forestry plantation and is now being managed by TfL or other conservation NGOs. This involves cutting down and pulling up the roots of trees under approximately 20 cm diameter. Trees are cut down with bow saws and 'brashed': cut into smaller pieces and placed in a neat pile (see Figure 5-4). Smaller trees may be cut down with loppers and seedlings uprooted and their roots left exposed to ensure they do not regrow.

Figure 5-4: Sitka spruce (*Picea sitchensis*) cut and placed in a neat pile to decompose on Forestry Commission land, 9/11/15.

Other methods of removing trees involve 'ring barking' where the cambium layer is removed from a section of the tree trunk and the tree is left to die in situ. This method leaves standing dead wood, emulating the usual way in which trees die in undisturbed woodland which provides habitat for many species: invertebrates and birds in particular.

Removing non-native plants is a staple of conservation work across the world, and many TfL volunteers arrive having participated in it before;

> *"I'd never done tree planting before I did a TfL thing, the other conservation stuff I have done has mainly been about ripping stuff out that's not meant to be there…"* (C3- 4)

Non-native removal is somewhat problematic for some volunteers and focalisers as it requires killing a tree and runs counter to their expectations of what restoration is.

On the third week of the fieldwork a volunteer asked during the felling demonstration "*Is anyone else feeling sorry for the tree right now?*" (C4 in field notes 30th March 2016). Later, another volunteer reflected on the day's work: '*it's quite destructive really…but when you see it, you understand more, you've got to take them out before you put something else in.*" (C6 in field notes 30th March 2016).

Non-native removal exposes some differing ideas of what nature restoration should be. For some participants non-native removal was inconsistent with their idea of restoration, and on occasions volunteers object to it:

> "*I don't agree with everything at TfL, especially in Glen Garry when we removed the Sitka. I didn't like it, because I think it is already a habitat for animals and we destroy it now because we want the original forest now. But what's with the animals who are living there? We destroy the habitat of it, so that was a thing I didn't like that much.*" (T2)

On occasion volunteers refuse to do it, and focalisers employ tactics to avoid having to do it themselves even whilst teaching and facilitating volunteers to do so.

> "*I'm not a big fan of killing trees so when we're cutting down Sitka spruce I find that quite tough, if I'm lucky there's just one day of it, that I can get away with just chopping one tree for the demo and then just going round everyone for the rest of the day and making sure they are OK. So I find that a struggle*" (T9F)

Other volunteers enjoy the physicality of the work: both in the use of tools and the physical work and subsequent tiredness.

> "*I'm as happy with a bowsaw as a spade. I do conservation work and I like to get sweat on, I like the type of work where you get tired…*" (FC6)

Some volunteers are zealous about removing the Sitka:

> "*There's areas of non-native trees that, you know, where big areas of non-natives were felled many years ago and there's still seedlings coming up, and it's a time-consuming, laborious job to walk through the landscape and find the seedlings. It wouldn't be cost-effective for contractors to do that. But impassioned volunteers, and I know some in*

particular that like it, they will hunt down the last... Sitka spruce seedling and get it" (W. F.)

Whereas others prefer a balance between removal and planting, in particular when it comes to the more persistent non-natives:

"I quite like the non-native removal, but it's a bit soul destroying isn't it? I mean, it's a bit uplifting to plant some of the bloody things as well, not just hacking down rhododendrons knowing full well it's going to grow back..." (FC6)

5.3.3 'Rhodie bashing'
Rhododendron ponticum colonises large areas of land, reducing biodiversity through its detrimental effect on a wide variety of native plants by shading out and producing grayanotoxins which inhibit the growth of other plant and fungi species (Tyler et al. 2006); in rhododendron dominant ecosystems bees produce poisonous honey which can have lethal cardiac effects if ingested by humans (Erenler 2016). The Wildlife and Natural Environment (Scotland) Act 2011 has had the effect of tightening the policy of many public land managers (e.g. Forestry Commission) on invasive non-natives. The EU Regulation 1143/2014 on 'Invasive Alien Species' (IAS) came into force in January 2015, which aims to reduce the impact of IAS through five year management agreements with rural land managers, this is financed through EU funds. In Scotland particularly, the Rural Development Fund finances eradication of *Rhododendron ponticum* on private estates, including the Ben Damph estate that TfL work on. In the Highlands rhododendron has had an impact which Highlanders sometimes feel strongly about:

"I hate the rhodies, scourge of Highlands." (T5)

On conservation weeks 'rhodie bashing' involves cutting down (with bow saw and loppers) *Rhododendron ponticum* and burning the wet wood and leaves in constantly tended bonfires. This extract from my field notes demonstrates the arduousness of the work.

"Cutting the rhododendrons I wear thermal leggings with waterproofs over the top, this set up is 'waterproof' but cool enough for constant work. On top I wear a long sleeved t-shirt, long sleeved thermal top, hooded fleece lined showerproof jacket and large hooded Hi Vis

waterproof coat. I wear a baseball cap under a woolly hat and the hood of my coat on my head; on my feet I wear two pairs of socks, and wellington boots. Despite the waterproofs, I am soaked to the skin all over by the end of each day. The rhododendron cutting is rhythmic and satisfying" (Field notes 25th November 2015)

Figure 5-5: Cutting *Rhododendron ponticum*, 27/11/15.

For some the job of removing rhododendron (see Figure 5-5 and Figure 5-6) is one of the more demoralising restoration tasks, which emphasises the uncertainties of hands-on restoration. Despite the policy of funding eradication in Scotland, there is little confidence that the plant can be successfully removed in the long term (Tyler et al. 2006). As one of the volunteers suggested, the futility of the task is such that perhaps: *"we're a bit like a little team of dreamers cutting a little bit of trees to make us feel good."* (T3). Another volunteer reflected similarly: *"There's just so much more to do. It's, it'll be never ending in some respects. Like a huge garden to maintain."* (T1).

Figure 5-6: Volunteers cutting *Rhododendron ponticum*, 24/11/15.

Opinions diverged as to whether cutting the plants back was worthwhile or not, some volunteers were optimistic about the possibility of restoring, while others were critical of what they saw as the ineffectiveness of hands-on restoration to resolve such a widespread problem.

5.3.4 Nursery work

This involves working at TfL's Dundreggan site, in polytunnels planting seed, pricking out (transferring young trees into root trainers, see Figure 5-7), moving trees from root trainers into tight black bags of 20 'plugs' to be taken out to sites or 'tree dumps', placed in planting bags and eventually planted by a different group of volunteers.

Figure 5-7: The nursery manager explains the day's work while a focaliser looks on, 6/11/15.

Outside the polytunnels, volunteer dig over beds where trees are grown to maturity to produce seed, as well as collecting and cleaning seed (on fieldwork we cleaned sloes for seed, and volunteers talked about collecting acorns). It is sometimes hard physical work, digging over beds and dirty work if it is raining:

> *"Aye, we did a day in the nursery, that's right, pricking out and stuff like that... putting the little trees in bags. Oh, it was pissing with rain that day, proper, proper, proper, proper, proper bucketing down, and we also helped making some of the seed beds and we got absolutely mocket[13], mocket from head to toe."* (T6)

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[13] Scots word meaning dirty

Nursery work can also be sedentary. The indoor tasks can be sheltered and require dexterity rather than strength.

This volunteer sums up the general attitude to nursery work: it is paradoxically regarded as both interesting and boring:

> *"... it's really interesting to learn about how they... what they do with the seedlings and things. It's quite relaxing but it can also be quite boring, because you're just sort of rifling through soil."* (C5)

Many participants talk about the value of knowing how much work goes into getting a tree to the stage where it can be planted on site and the opportunity of seeing the process of growing a tree from a seed or cuttings (scions). The nursery work emphasised the temporal aspect of restoration, emphasising the small contribution to a wider vision that volunteers were making.

5.3.5 Phosphating and fertilizer application

Nutrient poor sites are almost ubiquitous where TfL work, without artificial fertiliser many trees fail to establish. Volunteers may apply a fertiliser mix called Albacote which is a blend of slow release NPK (nitrogen, phosphorus and potassium) fertilizer; this is applied at the time of planting under the roots. TfL also use rock phosphate in powder form which is applied after planting to the surface of the soil in a circle around the newly planted tree:

> *"...in a nice 30 cm ring. It aids the soil growth where you've got poor soil. Puts nutrients and things back in the soil, from what I understand. And then you just put a little ring round and go round with your spade, plugging it in...Hopefully it'll help them on their way."* (D3)

Only one person questioned the use of fertiliser, questioning the 'naturalness' of the approach: his point is explored in detail in Chapter six and seven.

5.3.6 Fence installation and removal

There was no fence removal during the fieldwork period, it tends to be a task that needs attention sporadically. However, fencing is central to the TfL story and as such is explored here: the Coille Ruigh na Cuileige fence enclosed 50 hectares in 1990:

> *"...that was the first sort of significant achievement...and there's a plaque, a big stainless steel plaque.... that then started this on-going*

relationship with the Forestry Commission and it still is going from strength to strength today." (W. F.)

Browsing by red (*Cervus elaphus*), roe (*Capreolus capreolus*), sika (*Cervus Nippon*) and fallow (*Dama dama*) deer is major problem facing restoration in the Highlands, the shooting estates and the lack of predators keep the population of deer very high. Deer damage to seedlings is the main reason why the Caledonian forest is unable to regenerate without intervention. Deer 'exclosures' are used to protect areas of forest so that tree seed can become established and the many different species that make up the understory can grow back (see Figure 5-8 and Figure 5-9).

"We built fences to protect the trees from deer and we also planted trees inside the fence" (T2)

Figure 5-8: Deer have been excluded from the area on the right for 25 years, 25/4/16.

Figure 5-9: TfL's first deer exclosure showing retrofitted wooden slats to prevent grouse injury. The plaque commemorates the opening of the exclosure in 1990, 25/11/16.

5.3.7 Reintroductions, research, and experiments

Volunteers participate in surveying, not all of these are related to reintroductions, some are for monitoring existing species. There have been ant's (*Formica rufa*) nest and water vole (*Arvicola amphibius*) surveys that volunteers talked about as well as native tree surveys. During fieldwork there was a red squirrel (*Sciurus vulgaris*) survey that was part of a project to reintroduce them to an area in Glen Affric (see Figure 5-10), these surveys enable a detailed observation of non-human nature that is discussed further in Chapter eight.

Figure 5-10: Searching for signs of red squirrels (*Sciurus vulgaris*), 26/4/16.

5.4 Ease, effort and elation, and finally exhaustion: how restoration is done

The previous Section of the Chapter detailed the tasks that are carried out and participants' reflections about those tasks. This Section looks in more detail at the corporeal aspects of the tasks. The physical experience of hands-on restoration is seen as key to restoration's ability to foster different relationships with nature. On conservation weeks there is a balance between the need to accomplish the tasks at hand and maintaining a relaxed and inclusive atmosphere. Within this a another tension between those participants that want to exert themselves and those that have less ability or desire to do so. The physicality of the work and the embodied sensation that this entails are described below.

5.4.1 Ease: taking it easy

The work is the central task and volunteers work in challenging conditions on exposed hillsides in cold wind, rain, snow and hail. Focalisers have a key role in moderating the demands of the work, they encourage volunteers to work at their own pace, and as their handbook suggests:

> *"While we work in the rain, snow and cold (pretty exhilarating at times!), you have to assess when it is getting too much. You may feel fine, but if only one person is drenched and miserable, then it's best to finish early. Point out to the volunteers beforehand that they should feel free to tell*

> *you if they're really struggling, but also keep an eye on quieter*
> *individuals, people sometimes become withdrawn when hypothermic."*
> (Trees for Life 2015b, p. 35)

Focalisers try to encourage people to get work done, but it is not at the expense of education or group morale: *"…one of the important things is that it hasn't been a sort of industrial planting operation."* (D2- 3). Below, a volunteer reflects on this towards the end of a week of tree planting, describing the balance between getting the work done and emphasising the wellbeing of participants over the attainment of somewhat arbitrary goals:

> *"You know, [the focalisers] were joking before about the number of trees?*
> *But everyone knows it's not about that. The other day we kind of jokingly*
> *stopped and were at 940, and it was like 'shall we do a thousand?' And*
> *everyone was like 'no, everyone's tired, we're not about numbers here,*
> *we're about doing as much as we can', and we had a cup of tea and came*
> *down the hill."* (D2- 1)

5.4.2 Effort and elation: Hard work is its own reward

The challenge of the hard work of restoration was a key factor in rendering it significant and meaningful for people, the physical demands of the week were important in creating a sense of transcendence in participants which imbued the whole week with significance:

> *"It feels pretty amazing really, even coming back after a day of planting*
> *and you feel tired and exhausted. You feel a sense of achievement,*
> *accomplishment and physical exertion that has actually restored you at*
> *the same time as taken something out of you, it's a very sort of two way*
> *process. Compared to sitting in an office for seven hours a day and staring*
> *at a computer screen, I mean Christ, it's been fantastic, it makes you feel*
> *alive…"* (D2- 3)

On some weeks there were people who have mourned their lack of achievement. The weather is often inclement, and on one week it snowed heavily and there was a long walk into the tree planting site, meaning some working days were truncated. On the last day, Friday, it was snowing in the morning and the decision was made not to attempt planting. The group chose to go for a walk instead. That week some volunteers were happy with the amount of work they achieved and others felt disappointed not to feel a sense of accomplishment:

"I don't feel we've done that much work. I wish I'd come away feeling that I'd done stacks of trees and I don't." (GA7)

"I still feel a bit deprived, I do think we didn't manage to do as much as I would have liked to have done, of the planting of the trees, we were dead unlucky with the weather. I think the weather was just awful really." (F GA9)

This happened again on a week where it was windy, cold and raining, on the Friday about two thirds of the group elected to stay at 'home' and the rest decided to do a morning's work.

5.4.3 Three exhaustions: from working, walking and connecting

Although the desire to contribute was almost ubiquitous among participants, for some the physical demands of the work were challenging to the point of exhaustion, and the mental demands of the week could also be tiring. For some the experience of physical work was a new experience: *"I guess something I haven't really done is working all day at something physical. And it feels a bit weird, I think it's really great."* (D2- 5)

Despite their struggle, for many the hard work was not a deterrent, and I never heard anyone complain openly during a week, even when people had worked for days in quite severe weather conditions. However, when I asked some people confidentially what the experience of the week had been like for them, their first thought was one of how strenuous the experience had been:

"Hard work. Really hard work. I knew it was going to be physical, I knew it, I was prepared for that, yeah, it has been difficult, but I've enjoyed it but it has been a bit difficult. I think it might be the fact that I wasn't that fit coming here anyway... If I can probably come next year I would hopefully be a lot more fitter and hopefully it wouldn't be such a challenge." (D2- 4)

Although a lot of people talked to me about how tiring they found the weeks, there was only one person who was fairly sure that they couldn't do a similar week again, when I asked how the week had been they volunteered the following reflection:

"Bloody hard work. Really almost too heavy for me...I felt like there were moments where I felt pretty bleak about what I could actually offer and

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almost inadequate, but I tried to just squash that, because it felt like I could still give something...I don't think I could do it again..." (C2- 4)

For some participants walking on the boggy, very uneven ground was a challenge and on some of the sites a walk of at least an hour (sometimes two) was required to access the deer exclosure where we were planting each day (see Figure 5-11). These walks were a good opportunity to talk and bond with other participants (this is explored more in Chapter seven), but for some participants they added another laborious task to the day (see Figure 5-12).

Figure 5-11: Participants walking to a planting site with tools, the walk was over an hour each way, 28/3/16.

Here two volunteers talk about the walking into and out of the site each morning and evening, you can see the bittersweet aspect of the experience in both their words, the redeeming features of the week remain despite the physically challenging trek they experienced:

> *"I always get to these things and realise how unfit I am....it doesn't help having little legs either because you are kind of climbing over all this heather, whereas these six foot tall guys are striding ahead of you. It's beautiful though..."* (C3- 4)

> *"[I am a] bit of an OAP nearly...it did feel quite hard at times and I was a bit worried on day one and day two that I might have to take a day off, which would have been really sort of shaming but actually no, so... I'm*

actually quite proud that I actually did it. Although time turns things into a good memory when in fact it was pretty gruelling." (F C4)

Figure 5-12: Tired participants arrive on site to meet the conservation week manager (behind the exclosure fence) who has been bringing in trees with an Argocat, 28/3/16.

5.5 Embodied participation in nature

For participants who felt they had been estranged from nature before they came to TfL it was often felt that simply passively being in a natural environment was insufficient as a way of building a relationship with nature. This observation is similar to that made by Muirhead (2016) who echoes Thrift (1983) in his study of volunteering in Scottish environmental groups. Muirhead noted that among his environmental volunteers it was not seen as enough to just be in nature, they also needed skilled or creative engagement in nature in order to feel connected to it.

On conservation weeks walking or cycling through a landscape without engagement in any form of intentional action and without one's attention focussed upon the non-human was disparaged: *"[…before I came on these weeks] I was climbing munroes, which is a pointless exercise."* (FT4). Passive immersion was not seen as something that enabled one to become closer to nature and it was seen as perfectly possible to remain estranged from nature despite being immersed in it: *"…walking around or travelling around, [if you are] a tourist, you walk around, see what you see… but nothing more."* (C3-3). The inference made here is that restoration is meaningful work, in which one sees more or becomes

enlightened. Those who went on to become involved in TfL in the long term saw their previous selves as cut off, unable to see what they could now see. This reflects what Macnaughten and Urry (2001) observe, that many practices are understood in contrast to others: described in ways that elevate them above activities which are seen as less virtuous, and also resonates with the observation of Van Wieren (2008) that restoration reconnects human to nature in a "spiritual-moral sense" in which the practice is seen as "sacred work".

In the case of TfL, the view of restoration as virtuous was bound up in the physicality of the tasks. Jordan and Higgs do not explore the embodiment aspect of restoration in depth, but Hailwood's consideration of the necessity of human participation in the 'flesh of the world' foreshadows the deep importance of the corporeal in restoration. To become intimate with non-human nature requires physically participating: working with non-human species and becoming immersed in the environment seems to be essential, and both the physical sensations and the psychological intention motivating the action were of importance. When participants carried out restoration they were physically engaged in the non-human, they felt the peat and mosses, often kneeling to carefully plant the trees (see Figure 5-13), they got covered in peat on wet days.

Figure 5-13: Volunteer planting trees on his knees, 24/4/16.

Participants needed to explore the different types of soil to find appropriate places to plant their trees which meant they had to test how the different

materials such as clay, mineral soil and peat yielded under their spades. They learned without being told that moss was easier to cut through than grass or reeds, which were easier than heather. A lot of learning how to do the restoration tasks required touch and observation, there was an intimate materiality to the work.

The importance placed on embodied interaction with the material non-human world is not unique to restoration work and has been found in research into adventure tourism, mountaineering or river rafting which require intimate knowledge of non-human nature (e.g. Cloke and Perkins 1998; Cater and Cloke 2007). Aspects of restoration such as the exertion of the body, journeying to a remote place and the emotion of the panoramic view are all experiences which are often bound up with ideas of adventure and an intensity of physical sensation and observation that contrasts with daily life. As Lewis (2001, p. 68) observed in his work on rock climbing: "estrangement from the world is to be expected when one is already estranged from one's body. Adventurous activity, on the other hand serves to unite body and world." For an activity to be regarded as an adventure, it is not the content of the activity that is important but the participants' attitudes towards the experience (Simmel 2006). Although ecological restoration is far less risky or adrenaline fuelled than other undertakings in the literature (eg. river rafting, bungee jumping, rock climbing) it was often experienced as an adventure.

The physical 'ease, effort, elation and exhaustion' aspects of the work that participants went through each played different roles in how they stimulated affective and memorable experience of restoration. The 'ease' aspect relates to how the work was presented: focalisers made sure that participants knew that the productivity of the week was not measured in terms of the amount of trees planted or invasive species removed. Participants were offered support throughout in the form of reassurance that one should not feel compelled to work, nor compelled to override physical discomfort, this ensured that they came to the work without feeling coerced. However, although participants were welcome to withdraw from work and were encouraged to progress at their own pace, it was not possible for participants to avoid exertion or physical discomfort whilst engaging in restoration. The work of restoration was physically demanding and on occasions conditions were challenging. For many the achievement of having completed a day on the hills offered an opportunity to feel their bodies in ways that they did not day to day. As Scott et al. 2017 (p. 24) noted: "immersion

and confrontation with the natural elements, bring regeneration and transcendence". Hands-on restoration gave participants the opportunity to become aware of their corporeality, and be present in their bodies in ways that were unusual for many whose daily lives involved sedentary activities that were removed from the weather and require very little physical movement. Often it was after moments of difficulty when participants had overcome a particular physical struggle that they attributed meaning to their experience, they gained a sense of achievement and positive affect through physical pain. In follow up interviews participants' memories of the weeks were often about the sense of physical achievement they felt, it was these affect filled moments that remained:

> "*I got a little bit of pride out of doing it and not giving up... it reinforced my view of myself that I am game to try new things even if they seem quite difficult...*" (FC4).

Research into adventure tourism and wilderness experiences again supports these findings, albeit outside a restoration context. The physicality, particularly the endurance of discomfort, plays a role in enabling participants to create meaningful memories of their experiences. The discomfort itself can become an "agent of transformation" (Cutler et al. 2014) which can provide both a sense of escape from urban sedentary life and stimulate people to question the limits of their bodies and agency (Arnould et al. 1999; Canniford and Shankar 2013). Participants on conservation weeks felt a sense of elation with their feelings of exhaustion at the end of the day.

During participatory restoration, estrangement from nature can be replaced by an intimacy, and this intimacy is facilitated by the physicality of the work. However, the physical practices by themselves were not always sufficient. As the participants explained above, it is quite possible to be estranged despite being in nature, cycling or walking: you see what you see, but nothing more. It is also possible to be estranged whilst carrying out restoration, there were times on the weeks when participants talked about weeks run by other organisations that they had been on or about Conservation weeks when they had still felt estranged. If participants' attention was not guided towards nature and they were not afforded the opportunity to actively reflect upon what they were doing and why they did not necessarily feel any sense of connection with nature through the tasks of restoration.

The experience of restoration as a way of feeling intimacy with nature was therefore limited. The weather or the lack of apparent non-human nature could preclude a sense of connection: nature could seem to remain elsewhere. Working in degraded ecosystems in the Highlands there is often very little that can be observed. On work sites there can be no more than peaty mud and tough grasses; the visibility can be low in the cloud, meaning the landscape is not discernible. There are times on the hills when the diversity of the ecosystem that participants are working in would likely compare unfavourably with an inner city football pitch and nature can feel absent. Poor weather can mean that a lot of effort is put into keeping nature out rather than welcoming it in (see Figure 5-14).

Figure 5-14: Eating lunch inside the emergency shelter during foul weather, 1/4/16.

No one wanted to lie in the moss and observe nature in freezing rain on an exposed mountainside. This exposes a fact that is not much discussed in contemporary discourse about connecting to nature: it is not always desirable, in fact it can be hazardous. Connecting to nature is spoken of as an unqualified good in contexts where people are rarely threatened by non-human nature: once it becomes threatening, it seemed that there was an instinct to escape from the natural world. This finding concurs with those of Marczak and Sorokowski (2018) and Vining et al. (2008) whose research indicates that a certain level of protection from nature affords us the desire for connection, as Vining says, once humans have a certain level of security are more likely to treat nature as sacred.

Thus, though one may be physically engaging in the practice of restoration, unless there is an intervention to draw attention towards an unthreatening natural world, one may remain estranged from nature with one's attention focussed elsewhere. The embodied experience of restoration practice can be intimate, as in the extract from field notes below, but alone it does not remedy estrangement. It is certainly possible to do physical restoration work in the outdoors without feeling a sense of connection to nature, in fact the physicality of the experience can be so consuming that the soil, plants and weather are perceived only as impediments:

> *"Cutting rhododendron you are immediately on your knees, waterproofs are soaked in the boggy, peaty, mossy watery ground. You use a bow saw to cut the thicker branches covered in mosses so wet they seem like slime. I wear two pairs of gloves, a thin soft cotton pair and a pair of waterproof gloves on top. You have to work hard and stay moving to keep warm. The wind is strong. Despite the fact that I wear a baseball cap, a woolly hat, and two hoods to keep the rain out of my face and from running down my neck I have eczema all over from working in wet clothes all day. My neck, wrists and chin are worst where the skin gets wet and the cuffs and collars rub."* (Field notes 25th November 2015)

This experience was echoed in this focaliser's reflection on the same week:

> *"I've not had a nature connection this week, which I usually have…[I've been] wondering 'Where's the life out here? It's all buggered off because it's too wet and there's nothing to eat.'"* (T9F)

In good weather it is easier for focalisers to engage participants in observation about their surroundings, participants can stay still long enough to scrutinise a lichen or sit back and look at the clouds, and the sense of connection may be greater. However, hands-on restoration cannot always deliver an experience of nature as benign or pleasant.

5.6 The value of 'doing something'

We have seen that different restoration tasks offer different opportunities for connection because they have different symbolic meanings. Tree planting was a particularly fertile opportunity for enabling participants to feel a sense of gift giving or offering that Jordan sees as an important way of entering into a

relationship with nature. Removing non-native species offered an opportunity to think about why they were there and what previous interactions had been, it offered a chance for participants to begin seeing the landscape as an outcome of the social processes and relationships which had been active in the location and the land use policy and practice which were important in the present and future. It was also very physical, and often enabled a sense of intimacy despite the destruction involved. The squirrel survey offered the opportunity to observe one's surroundings in minute detail. Whereas the nursery work gave a chance to think about the lifecycle of the trees, from seed collecting to planting and nurturing the trees ready to be planted out on the hills.

It was this *doing something,* the simple practical act of planting a tree or the act of cutting down non-natives (which participants had become experts in in a few hours) that participants themselves often regarded as the most important aspect of the practice of restoration.

As well as the embodied physical aspect of doing the work there is a clear payoff from carrying out work which is practical and can be witnessed at the end of the day. This may be, as Hirsch (2015, p. 119) suggested, that: "[they] trusted physical engagement over discursive rhetoric, relying on the persuasive power of action over words".

There was a strong desire among participants to do something, to physically engage in some form of action which had a positive environmental effect:

> *"It's …really exciting for me to be here to actually do the practical side of it…I was just craving so much to do something practical. Actually doing it is just amazing."* (C8)

Many people wanted that 'something' to be tangible and visible to them, they wanted to take action and witness a clear and obvious outcome. This participant wanted action with clear physical consequences, not talk:

> *…I wanted to give something back, that you couldn't take away, that was meaningful. I knew that I was probably going to…I don't know, join a political party. I could see myself talking about various things and getting animated, but at the end of my life, like a lot of people in political parties, or whatever, you don't have much to show for it apart from making a few speeches and maybe converting a few people, but what did*

you actually achieve? Well I just knew I wanted to achieve something…"
(F D2)

There have been suggestions that if restoration becomes a professionalised activity, there will be a loss (Light 2000b). The loss would be the absence of the opportunity for laypeople to make a tangible contribution to their future environment and feel a sense of agency. There is a lack of attention paid to the eudemonic aspects of environmental volunteering and volunteering more generally, with research suggesting that there is hunger for engaging in tangibly meaningful environmental action (Son and Wilson 2012; van den Born et al. 2017). There are too few occasions in postmodern life to *do* anything, to engage in focal practices, to do a practical thing for the sake of itself (Son and Wilson 2012). This participant's comment sums up the value of this sense of agency:

> *"There is something very immediate and direct about this sort of practical volunteering where you can at the end of the look back at what you have done and you can tell people what you have done. It feels like a very positive process, you can have confidence that you are changing the world."* (C2-8)

A large part of the value of restoration does seem to be that it can provide an opportunity for laypeople to contribute something that feels valuable, an opportunity to enter into a negotiation with the natural world via the giving of a gifts in the way that Mauss (1954) sees gift giving: as a method of creating and maintaining relationships. In the case of restoration this gift giving flows from the participants towards the natural world.

5.7 Conclusion

This Chapter describes the tasks of restoration and their significance in shaping the meanings that restoration has for participants. A number of themes emerge from this depiction. Firstly, the ambivalence and uncertainty embedded in the tasks of restoration. Tree planting is the chief symbolic act of restoration which participants tend to see as an unqualified good, but it is not always successful, which raises questions about human ability to restore. Removing species that have been introduced to Scotland is quite emotive, non-native removal can provoke confusion and give sense of inconsistency to the experience: restoration is seen as encouraging life, and removing species requires the opposite, leading volunteers to question their ideas of nature and what they are restoring. Nursery work is

essential to enable subsequent tree planting but it lacks the iconography of planting on the hills: it has an important temporal aspect in that participants begin to understand the slowness of establishing trees, but the necessary tasks are often deemed boring: there is little adventure in repotting seedlings.

Secondly, the embodied aspects of hands-on restoration are important. The labour of restoration on conservation weeks can be summarised with four words: ease, effort, elation and exhaustion, which indicate the role of bodily sensation and how physical discomfort can be an "agent of transformation" (Cutler et al. 2014) on conservation weeks. The work of restoration occupies the body, working it and producing a somatic and affective experience of overcoming challenges which elevates the significance of the experience for volunteers. The opportunity to 'do something' was also important, enabling participants to express a desire to contribute something tangible to resolving environmental degradation. There were limits to the sense of connection that can be felt through physical engagement though. In bad weather, people were occupied with protecting themselves from wet and cold conditions. On sites that were barren and degraded, nature could feel absent, particular if visibility was low, and participants were not able to see the surrounding mountains. These limitations suggest that physical immersion in what is understood to be nature is not always sufficient in creating a connection to nature. The following Chapter builds on these findings by looking at the ways in which physical experiences are augmented by techniques that focussed the attention of participants on other aspects of their experience.

6. Attending to nature

This Chapter is again concerned with answering the first research question: What aspects of hands-on restoration are important in mediating participants' understandings of nature and their connection to it? To do this, the Chapter examines ways that participants' attention was directed during the practice of hands-on restoration. It looks at focal restoration, the role of education and knowledge sharing, and the role played by ritual in creating forms of intimacy with nature.

6.1 Focal restoration

We have seen that the physical practice of restoration alone did not necessarily enable participants to overcome estrangement. However, on conservation weeks participants' work was framed in particular ways, which we look at below. It was common for participants to compare their experiences on conservation weeks with experiences they had had on other conservation holidays:

> "I'll find [at another organisation] it's just go and work, you ask 'what was that tree?' and they'll say 'I don't know', 'Why are we doing this work here?' 'I don't know, because the landowner asked us'. 'Why does he want this work done?' 'I don't know.'" (T9F)

Here, a focaliser who works on conservation weeks and at the other organisation mentioned above explains the difference in approach:

> "[in my other job] I do try and educate people as we go along about natural stuff, nature, the area we're working on, so on and so forth. But that's not a requirement of my job." (C7F).

By contrast, on conservation weeks, discussing nature, the surroundings and the meaning of the practice of restoration is of central importance. This opportunity to become aware of ones surroundings and reflect upon the work and its purpose was seen by participants as something which enabled a sense of connection:

> "...because just to have that time to reflect...have this kind of mindfulness to it...I think if you're coming to somewhere like this then it's just part of it really and it makes you feel more connected, connected to each other and connected to the work that we are doing." (C2-5)

The way participants' attention was directed toward the experience, their

surroundings and the intention of the practice enabled them to feel a sense of intimacy with the natural world. There were the same constraints that inhibited the efficacy of corporeal practice: the weather, the type of work that was needed to restore the ecosystem and the sometimes bleak degraded ecosystems that the participants were working in, but often, mindful attention to tasks allowed participants to step away from distractions (worries, plans, regrets, memories) and become immersed in the observation and the physical sensations of the natural world around them. Focalisers ensured that participants had opportunities for reflection and mindfulness even in foul weather. They were practicing what Higgs understands as 'focal restoration'. Building upon Borgman (1984), Higgs suggests that a transformative hands-on restoration requires 'focal practice', a practice which is a "communion between self, thing, and environment (and perhaps also spirit) that generates profound meaning in our lives." (Higgs 2003, p. 185). In Higgs' focal practices there is not a focus on ends, or consumption, but rather experience. However, Higgs' idea has an additional aspect: practices are carried out with attention to context and meaning, there is an intention to them and how they connect to other parts of life. Focal restoration is a balance of ends and means which cannot be evaluated in its entirety by its ecological outcomes.

6.2 Education and knowledge sharing

Thus, Higgs touches on the importance of intention in restoration practice (which suggests a knowledge of where one is headed), but neither he nor Jordan as hands-on restoration's main advocates devote much attention to the role of knowledge in creating a relationship with nature. It is assumed that it is the physical practice, the 'doing' of restoration and the attitude towards that doing that creates connection. Indeed, in the connection to nature literature there is a general agreement that education alone is limited in the impacts it has on human relationships with nature (Stern et al. 2008; Ernst and Theimer 2011; Schultz 2011; Bruni et al. 2017). Thus, prior to the fieldwork, education was not considered likely to be important in hands-on restoration. However, from the data collected on conservation weeks it was clear that education, as it was facilitated in this case, was important in imbuing the work with meaning. As such, education at the conservation weeks is also considered below. Accordingly, this Section discusses how stories and observation are used to convey information about ecology and restoration and how participants are encouraged to become curious about their surroundings.

As well as encouraging an ethos where participants were encouraged to be mindful and 'present' whilst carrying out their work, one of the focalisers' most important jobs was to stimulate curiosity. Restoration was carried out in ways which created a group dynamic in which people felt encouraged to learn about their surroundings and question what they were doing and why. In order to do this there had to be some form of disruption that stimulated the participants to see the landscape around them differently. Focalisers needed to encourage participants to look at their surroundings as more than a neutral backdrop (Hailwood 2015). Stimulating curiosity, sharing knowledge, and educating and informing volunteers was central to focussing their attention on restoration, the needs of the non-human species around them and their own place within non-human nature.

The educational aspects of the experience on conservation weeks had the effect of channelling participants' attention to particular aspects of the ecosystem they were working in. Although often educated to a high level, some participants arrived with very minimal understanding of ecology and no knowledge of the ecosystem that they are working in, and for them in particular, education played a central role. Education about ecological restoration as well as Highland flora and fauna were things that focalisers prioritised. How education is delivered is varied, each focaliser brings their own interests to the groups they work with; and some may have particular ecological knowledge, here a volunteer reflects on his good fortune:

> *"We've been really lucky with X's knowledge of birds, because he could have not been a bird man at all."* (GA7)

And a focaliser reflects on his desire to teach:

> *"I have a real passion for sharing knowledge of trees"* (D8F)

There were specific standard ways on each week that focalisers guided volunteers' attention. There was always an introductory walk, which took volunteers to see surviving Scots Pine forest.
TfL's Guide to Focalising suggests:

> *"Take your volunteers on a walk near to, or within, your work site. For example, if you are in Glen Affric visit the Coille Ruigh na Cuileige (midgey wooded arm of the mountain) walk."* (Trees for Life 2015b, p. 14)

On the introductory walks there is ordinarily a lot of information that focalisers give to volunteers, whilst usually encouraging the volunteers to share their own knowledge (see Figure 6-1). Focalisers usually discussed past and present land management practices, which have led to current degraded conditions. Usually volunteers were also shown areas where deer have been excluded (where regeneration had begun) and TfL's long term vision to restore the forest was discussed. Examples of connections and interdependence between native species and the ecological cycles of birth, death were renewal are usually introduced. These field notes demonstrate the range of topics that were commonly introduced:

> "...the problem of deer, the 250 years plan of Tree for Life, the eventual reintroduction of wolf and lynx, the Sitka plantations, the native species: birches, aspens. The aspen having been so thoroughly corralled into river gorges and inaccessible crags for so long that researchers thought that this was their preferred habitat, but later realised that it was not: these were just the only places that the deer couldn't reach the young trees. The 'Champion Pine' and the deer exclusion fences where pine and rowan are able to regenerate, the grouse flying into the fences and the experimental nature of what they are doing, the partnerships with the RSPB and others where people have used different designs of deer exclusion fences...." (Field notes, 30th March 2016)

Figure 6-1: On the introductory walk a focaliser explains why there are only old pine trees: deer numbers have prevented forest regeneration, 9/11/15.

6.2.1 Stories about the connections between things:

How the information was presented was important, volunteers referred to stories that the focalisers told, it was these stories that made the forests vivid for people:

> *"We go for a very short walk and are told 'ecological stories' such as the 'Wood Ants and the Scots Pine': the ants make their homes from the pine needles under the trees, and eat the pests that eat the pine: A symbiotic relationship* (see Figure 6-2).*"* (Field notes, 30th March 2016)

Figure 6-2: Looking at a wood ant (*Formica rufa*) nest underneath a Scots pine (*Pinus sylvestris*), 31/3/16.

In the realm of science communication, stories: metaphors and analogies are well known to be more successful than abstract facts and figures in conveying memorable environmental information (Kearney 1994), here a focaliser explains his thinking about transmitting information to volunteers:

> *"…the information is quite a lot and the way you put it across, trying not to say it with the figures: … make it a story kind of thing, a narrative or more of a full picture rather than just that's a tree, that's the height, that's the leaves, that's whatever. So you're trying to make it a more fluid thing rather than a bullet point thing….More accessible and more memorable. You make it a story, you know. You make it a… connection, more of a connection…"* (C3F)

Kearney (1994) claims that conveying environmental information in a way that enables people to reflect upon their pre-existing understandings can be successful by employing narratives which use interesting content, relatedness to prior knowledge, concreteness, vividness and coherence and mystery (pp. 436-437). Here a volunteer explains a focaliser's ability to do this, by creating a coherent, vivid and somewhat mysterious narrative about the Caledonian forest ecosystem that built on his prior knowledge:

I'm really into foraging and I love my wildlife and stuff, and I thought I knew quite a lot coming up here because I am a big reader, but going out with X has been brilliant, the way he talks about nature is different. He connects things together and talks about them in a way that makes it feel spiritual. But, I'd hate for that word to be misinterpreted, it's not… it's more about understanding that everything fits together, we are part of this process, nature is part of this process and we need to work together, not against each other…I've learnt a hell of a lot" (D2- 1)

6.2.2 Learning to see: 'nature is amazing'

Stimulating curiosity in nature is a core intention of TfL. Proposed by protagonists such as David W. Orr, theories posit that education carried out in nature can draw out an affinity for life (Orr 1992, 2004). These focalisers conceptualise their objectives in similar ways:

"I can imagine that most people who come on the weeks from a non-conservation background, or 'nature knowledgeable' background will hear all this stuff and think it's amazing and then go away and never think about it again potentially or forget it all. But hopefully if I am talking about nature and I am fascinated, saying interesting stuff, then people will, hopefully, pick up on that and will go away thinking nature is amazing." (D3- 3)

"I can tell you that, and show you that, and seeing their eyes light up and go 'I never thought of that' and you can say 'yeah, no one thinks of that stuff and neither did I'. (T9F)

Other focalisers hope to 'open volunteers' eyes', showing them aspects of the world which they may have previously been unaware of, inspiring "knowledge by acquaintance, direct, intimate tacit knowledge that affects and is capable of engaging all the senses" (Bonnett 2007): See Figure 6-3 for an example of how this 'eye-opening' can capture the imagination of volunteers.

"You know, folk from Birmingham, London, have never seen the Milky Way, so you're, instructing them in something which they may know, but they often they don't know, and you're showing them with a hand lens a bit of moss, or something around the place and it makes them think and see. They're learning how nature interacts …unless you know that, you don't know what you're looking at. You're just walking through a, a wood,

planting through and thinking this is shite weather, it's, but if you point out, oh, there's a, if it's droppings of an animal, bird, little things that're growing, a small pine tree or, whatever it is, that they wouldn't see because they don't know how to look for these little things. So that enlightens them, so during the week, er, for those who've not experienced, er, those aspects of nature, you learn. And you learn by looking and by listening and understanding that inter-connects with that, and that with this, you know." (FT5)

Figure 6-3: On one of the weeks there was a participant who became fascinated by lichen, which meant everyone bent down to see what they may not have otherwise noticed. This photo is a product of that week, 28/3/16.

6.2.3 Knowledge authority and sharing

For many volunteers who were not familiar with conservation work or the Highlands, focalisers' knowledge of the ecosystem and of nature was held in awe. Here three relatively inexperienced volunteers reflect upon the focalisers' ecological knowledge:

"You can trust them to be able to do everything and to have the answer to most things and that is someone you can respect." (D2-2)

"I think they're a bit intimidating though, I think all this sort of… I mean, I wouldn't particularly want to be in a focalisers' conference. Because

there's a lot of knowledge there, isn't there?… and you've got to know a lot of stuff, haven't you?" (C6)

"….he was great if you wanted to know anything about nature, he was like an encyclopaedia…" (F C4)

Volunteers were encouraged to share their knowledge with the group as a whole and to become curious about what is around them and why together. This gave a context to the week from the beginning which emphasised the knowledge of the group as a whole, and a meaning to the physical activities that the group were engaged in. It would be a misrepresentation to portray the focalisers as the sole holders of knowledge. Often there are volunteers who have a considerable amount of expertise and there are focalisers who have very little. The role of the focaliser is not to be the expert but to facilitate learning within the group, the knowledge doesn't flow from focaliser to volunteers in a linear way, often focalisers learn from volunteers. Here two focalisers explain how they encourage volunteers to offer their knowledge to the group:

"I learn something every time, I'm really interested in ecology and I studied ecology and conservation, but there is so much to learn and we often get really knowledgeable people on the weeks so I always pick up some new bits, I always invite people at the beginning of the weeks to share what they know, and people are open a lot of the time. I've been learning this stuff for 20 years but I've barely scratched the surface really. I encourage people to share with everybody and with me, and hopefully some of it lodges and I'm able to share that with other groups in the future, just learning more about these habitats that we work in." (C2- 8F)

"…we've got Stephen on this week who is a botanist… I have been encouraging him to share his knowledge, he did a little grasses talk for us one lunchtime, he got a load of samples. We're going to do a quiz the evening and instead of me gathering everything I asked Stephen if he'd like to be involved in gathering the stuff for it…" (C2-2F)

Figure 6-4: Self-taught focaliser explains how to differentiate between Scots pine (*Pinus sylvestris*) and Lodegpole pine (*Pinus contorta*), 24/4/16.

Focalisers are often self-taught (see Figure 6-4), and there is an emphasis upon volunteers finding out things for themselves. Focalisers foster a general curiosity: a part of the equipment that the focalisers transport to each of their sites is a crate of reference books, about 30 books in all, focaliser often ask a question to stimulate a discussion:

> *"We done it the other week in Glen Garry, about a month ago, and before you know it eight people were round three books around the table trying to ID one tree and they were there for hours and hours doing it. And I was thinking, 'look at that, they're amusing themselves just by someone asking a question.'"* (T9F)

Similar things happened with volunteers curious about birds, lichens, grasses and the stars. Volunteers came back to the accommodation with all sorts of natural material to look up and identify, people brought back pieces of lichen, leaves and needles, or trees, gnawed nuts, grasses, mosses, animal dung, fungi and feathers.

There are weeks when this happens less, or not at all. If a group is particularly focussed on work rather than learning or it is largely composed of people who already have some knowledge of the ecology, or people who are not willing to be curious, who perhaps find it difficult to admit that they don't know things. Again, foul weather, and a bleak site with little biological diversity are impediments, but

also: a group that is difficult to manage and the focalisers' style can also contribute to an absence of curiosity and learning. Here the same focaliser talks about times when it is harder to ensure that learning is present:

> *"…sometimes it can be difficult enough to get it running: making sure everyone's wearing the gear, they've got their lunch, they're in the van, we're doing the job without injuries, without anyone ballsing up or getting annoyed. Then we're back getting the gear off, and we're all here and we're calm, and we make dinner… so that's already a logistical challenge for the first couple of days until people find their niche. So to bring everything else in is quite daunting, it's finding the right time to bring it [an emphasis on nature and learning] in."* (TF9)

Bearing in mind other findings that suggest that education is not related to connection to nature (Stern et al. 2008; Ernst and Theimer 2011; Schultz 2011; Bruni et al. 2017), perhaps *how* the educational aspects of restoration work are carried out is important. In this case the educational aspect of the weeks was subtle, peer led and emphasised curiosity over the status of knowledge or learners. Conveying wonder and awe was important in stimulating participants' curiosity too, as was an inclusive and generous approach to knowledge. The knowledge and skills of all the participants was valued, and the focalisers facilitated the sharing of knowledge and autonomous learning within the group. The education also often took place within an ecosystem which allowed participants to identify a lot of species on the week: there were always books on hand, even on the remotest of sites. As the knowledge pool on each week varied, depending upon the knowledge of the focalisers and volunteers in attendance, so one week may involve a lot of bird spotting and another have more emphasis on trees or lichen. There was often a sense that the group was learning together, even though there may be a wide variety of prior knowledge within the group. This way of stimulating curiosity and autonomous learning gave participants a sense of liberation alongside their learning which added to a sense of empowerment. Each group felt the nature they discovered was 'theirs', it gave the groups a sense of discovery and adventure that enthused them, it made them *want* to feel a connection to this ecological world that was opening up in front of them. It primed them to feel connection and intimacy, which the physical act of planting trees alone would be less likely to achieve.

6.3 Exercises for creating intimacy with nature

The term 'nature connection' is used as a noun on the conservation weeks. A 'nature connection' can be one of a range of activities, for example watching clouds, observing the leaves fall from trees, listening to the wind, meditating outdoors, or closing one's eyes and holding hands with the rest of the group in a circle. For TfL the purpose of these activities is to:

> "*bring a deeper sense of connection with nature; to help members of the group connect to themselves and to one another; to foster inspiration and curiosity for the natural world; to collectively focus our attention on the task at hand and how it relates to the wider purpose of Trees for Life*" (Trees for Life 2015b, p. 32).

Nature connection activities were an important part of TfL for long term participants, and they were an aspect of the conservation weeks that made TfL different from other organisations with similar environmental aims. The basis of the nature connections came originally with Alan Watson-Featherstone from the Findhorn Foundation.

6.3.1 Attunements

Originally, nature connections were termed 'attunements' and they always consisted of participants holding hands in a circle. More recently, attunements were used less frequently and been replaced by other activities: often watching, listening or meditating upon aspects of the natural world. Nature connection activities, and attunements in particular, were contentious on conservation weeks, regarded by some as TfL's most important and fundamental practice and by others as risky and uncomfortable.

Here Watson-Featherstone describes the practice of attunements:

> "*…people will stand together in a circle, they will hold hands with the right hand palm up and the left hand palm down and they will close their eyes, and the focaliser will… sometimes it will be silent but often the focaliser will say a few words of inspiration just to help people focus. And then at the end, after 30 seconds or a minute of whatever it is, the focaliser squeezes the hands-on each side and the squeeze gets passed around the circle so that everyone knows it's over and open their eyes again.*" (W. F.)

In addition to the description given by Watson-Featherstone, there was a strong spiritual undertone to the attunements. An experienced participant described the practice as a way of focusing energy. He meant this literally: that the act of holding hands in a circle generated a flow of electrons, but he also mentioned other more figurative conceptions of energy such as yin and yang and chi at work in the circle. He also suggested that stone circles may have been constructed due to similar beliefs: in order to contain or focus a type of energy, and that water divining may work in the same way. Watson-Featherstone describes the attunements in similar terms:

> "…when we hold hands, and have an attunement and send energy to that spot, there is a reality there, it's not just a thought. There is an energy that follows that. There is an intention that follows that. And the earth responds." (W. F.)

The spiritual or esoteric aspects of this explanation is part of why TfL have tried to 'rebrand' (C2-8) attunements and shift their practice to more conventional meditative and mindful 'nature connection' activities in the last five years: for fear of discouraging people with more conventional understandings of the world. Attunements are a good example of the combination of evidence based and spiritual practices that TfL embrace and attempt to balance in their restoration practice.

It is not only the spiritual aspect of the attunements which may deter participants. Attunements also presented difficulties because they involve physical contact with strangers, something which is uncomfortable for many people:

> "You come away with a group of people you have never met before and then someone says, 'let's hold hands then and meditate for five minutes'. I've never been used to that, and a lot of people aren't used to that. It's a bit of a shock in our culture, holding hands with strangers. If I'd known that was part of the week I would probably have been put off…" (C2-1)

Attunements had been part of the week that the focalisers should deliver, but more recently the attunement was just one of many techniques used to connect people to nature:

"It used to be that you were expected, usually, to do an attunement with the group at least once a day, whereas now an attunement is one thing you can do as your nature connection and it's far more fluid." (C7F)

Here a long term focaliser describes how he understood the reasons for the change in TfL's practice of attunements:

"I think some people felt that we were forcing the Findhorn way of doing things really, which has these spiritual overtones, which worked for some people and didn't work for others.... I think a lot of people are moved one way or another by having close and extended contact with nature and I think that is one of the things that people find really invigorating and special about the weeks, but not everybody would describe that as being a spiritual experience, and I think it's probably right that we've moved back from that." (C2-8)

Focalisers had delicate decisions to make about attunements, initially even easy-going participants were shy about holding hands, although participants often benefitted from the experience once they became familiar with it (and talked about it as one the most moving experiences they had on the week). It can be difficult to encourage a group to do something they are unaccustomed to. Here a focaliser explains her concern about leading attunements:

"It's a funny thing to introduce to a group who have only just met at Inverness, you've driven off with them onto the hillside and you're like 'And now we've reached this beautiful place and we're all going to stand around in a circle and hold hands'. And the majority of people go with it and actually quite like it. But it was always a moment that I would dread. How do you introduce this as something normal rather than something slightly culty?" (C2-2)

Here are the field notes from my first experience of an attunement, which capture some of the tension between the discomfort and tenderness of participating in attunements:

"When we've planted our last trees and the light is beginning to go the focaliser brings us together again, we'll be planting the last tree together. We're to hold hands in a circle (if we're comfortable with it, I don't think any of us are, but we don't want to disappoint) and [the

focaliser] talks about planting trees and hope and despair. With our eyes closed we're asked to imagine the rutted peat in 10 years, in 20, in 30 years from now. I'm holding hands with a 67 year old former gas and oil engineer and a Wildlife Trust manager in his 50s I'd guess, he's a private person and I don't like to ask how old he is exactly. The focaliser talks about how trees grow better with love. I'm not convinced this is true."
(Field notes 4th November 2015)

Despite focalisers' agonising about the attunements, there seemed to be very few people who found the experience unbearable, it seemed the fear of upsetting people was perhaps greater than the reality of it. I met one person who seemed angered by the experience, but his response was unusual:

"The aspect of it ...that I found nearly disturbing was our falling into a circle and holding hands and so on... that's not my scene, that's not my scene at all." (F GA9)

Despite TfL's preference for the term 'nature connection' over attunement, in practice participants often used the terms attunement and nature connection interchangeably. Focalisers varied in their attitudes towards the move away from attunements, some welcomed the change, which they felt enabled them to better gauge the group and avoid making anyone uncomfortable, whereas others mourned the loss of something they regarded as central to the work of TfL. Some focalisers felt disappointed, somewhat affronted, or concerned that an important aspect of the weeks would be lost:

"I don't think they officially said 'don't do it' but they started ...[saying] 'go for a walk and connect with nature'. Well, what on earth does that mean unless you know what to do? In the old days... we explained how you do that. And it just sort of worked. And then these days it's, they're frightened of this Findhorn connection... my slight fear is that...people may not connect with nature, because if they don't know what to do, how to do it, or what they're seeing [they will] miss... out..." (F T5)

This comment also gives an indication of the extent to which a connection to nature was facilitated by the focalisers, after all, as this participant says: if people don't know what to do, how can they connect with nature?

6.3.2 Meditation

Other ways of creating connection with nature were 'sit spots', quiet meditations upon one's surroundings:

> *"we'd have a little sitting mat and we'd be able to go and sit wherever we wanted for about 10 minutes and just look around and be silent, you never get a chance to do that in normal life."* (D2-4)

The great majority of participants enjoyed these opportunities:

> *"...we went and sat down...by ourselves for about ten minutes, just trying... basically a meditation but not really. Just trying to use our senses, just feel... they just encouraged you to, like, listen and feel... understand your emotions, why you're doing it and... we did...that kind of thing quite a few times throughout the week and it was nice." (C5)*

However, there was the occasional participant who was angered or frustrated by these activities:

> *"[there's] this thing at the end of the day of standing still for four or five minutes so you can get the atmosphere, well I don't need to do that because to me I've kind of got it at lunchtime, I got it this morning when I was walking in..." (C2-6)*

The occasional participant does not want their restoration to contain anything other than the 'work' without any '*specialness*' (C2-2) added, but TfL deliver their restoration with specialness:

> *"Monday morning was a glorious morning, there'd been a frost and the leaves were just coming off the trees, it was just a magnificent morning. We stopped down by the cairn just to watch the leaves come off the trees."* (C2-1)

TfL do not publicise the contemplative facet of their work and most first time participants did not expect to be engaging in 'attunements', meditation or other 'nature connection' activities. Initially surprised, it was typical that participants accepted this aspect of the work, often finding it positive:

> *"...when I first came up, I was surprised by the attunements and the focus on spiritual aspects of stuff...it was just a bit of a surprise, it wasn't that I disliked it or anything, so it was fine."* (C7F)

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"I didn't expect any of the connection to Findhorn or anything… the hippy stuff basically, I had no idea that that was at all part of it. And I really like it because, I mean I am a scientific sceptic at heart, but I think that been surprising and surprisingly positive." (D2-3)

6.3.3 Tree dedications

An emotional connection to nature, or perhaps to restoration itself, is also built through the tree dedications that TfL carry out. Here my field notes describe the practice of tree dedications on conservation weeks:

> *"The focaliser leads us down the ludicrously rutted hill, filled with pits and mounds of peat, with the pits often filled with up to a foot of standing water. We follow in our now practiced gait with our planting spades and bags in hands and on shoulders. When we reach the floodplain next to a burn the focaliser begins the 'dedication'. People can buy trees from Trees for Life. They sponsor the project £5 for each tree planted and on the website they can type words into a box before they send their payment to dedicate a tree to someone. The focaliser starts reading: "Mum our hearts broke when you left us, even though we knew it was time for you to go and be reunited with Craig. We miss you as much today as the day you left. Happy Birthday Mum." The next volunteer continues and in turn we all read something out from the computer printout of dedications…We're asked to have a few moments silence to think about the dedications, and then to plant our trees this afternoon with these people in our minds."* (Field notes 4th November 2015)

These dedications were less frequent than nature connections and were not intended to have particular effect. In fact, they are only mentioned in passing in the focaliser handbook as a clerical note:

> *"Additional paperwork: You may receive some tree dedications to be read out when planting."* (Trees for Life 2015b, p. 69)

Originally dedicating trees began as a way of raising funds, as is common among conservation charities in the UK, TfL started a scheme whereby it was possible to sponsor a tree. It was not until TfL started receiving donations in this way that they realised that they would need to do more than cash the cheques:

"...when people started doing it, we got these very moving dedications...we just said well, we're dedicating these trees, let's make it real, because that's what it's all about, it's having an integrity and a wholeness. So it's not being a paper tiger that says one thing and then the reality is different, it's about following things through." (W. F.)

Tree dedications led by focalisers only occurred on one of the weeks during the field work, but often the idea of dedicating trees arose from the volunteers:

"I liked the idea that [another volunteer] came up with of dedicating...the trees. He was saying he came specifically to plant some trees in memory of people, and I was like: 'do you know what? I've lost so many people in my life... I've got no blood relations'... that's really given me an additional purpose for doing this, and that is dedicating these trees for people who have passed on." (GA1)

The interview extract above was typical of comments from volunteers who were bereaved; the dedication of trees was moving. Dedications had the effect of connecting the past and the future vividly for many people. Participants often talked about a personal loss and how the symbolic planting of the tree meant that as the life of the deceased receded, the tree would grow onwards into the future. This seemed to have the effect of linking the vision of the restored landscape with important personal connections that people had in their lives. On days where dedications were taking place, the possibility of restoration seemed to acquire emotional resonance and provide participants with comfort and optimism.

6.4 The role of ritual

All these activities were an important aspect of hands-on restoration that allowed groups to make their experience meaningful: particular events were picked up and reflected upon by the group as a whole and became iconic for the group. For example, stopping to silently watch the leaves fall off the trees on the first frosty autumn morning was talked about vividly by almost all participants during the interviews that week. Similarly groups which had been shown how to meditate during quiet solitary 'sit spots' often discussed as a group what they had observed as individuals, thus individual and group meanings intertwined. Individual observations often stimulated discussion and thought in other participants, even when they were not based on a shared experience.

Both Jordan and Higgs see a role for ritual in stimulating participants to think about their relationships with nature, Jordan in particular thinks that ritual should be used more as a tool in hands-on restoration in order to examine relationships with nature, and argues that restoration itself is a form of ritualistic gift giving, he sees a strong role for organised ritual as an enabler of new 'enlightened' perspectives on nature among participants in restoration. In contrast, Higgs focusses on the more mundane tasks of restoration, emphasising a need for participants to focus on what they are doing and why so that the practice is consciously enacted (his 'focal restoration'). Both are right, a conscious focusing on the mundane tasks makes hands-on restoration powerful in enabling consideration of nature, and rituals provide a disruption that stimulates or encourages active reflection upon what is being done and why. Ritual expedites contemplation by upsetting participants' expectations and jolting them into active contemplation, its power lies in its interruption of the mundane, and would be lost without the mundane. Ritual alone may not have the power that ritual does here when it is combined with the routine and simplicity of the physical work of restoration. The tree dedications and nature connection activities were a significant part of the conservation weeks on conservation weeks, they played an important role in attuning participants to each other and what they were doing. On the one week where they did not happen, without these events the week seemed less connected and meaning filled. The rituals provided an interruption in the working days that had the effect of giving the physical work of restoration a wider meaning. The attitude towards these rituals among participants and focalisers on conservation weeks vindicated both Jordan and Higgs, as they did have the affective power and transformative potential, but they were also off-putting for some participants who dislike the spiritual overtones or intimacy of them. Although Jordan is a strong advocate for bringing ritual into restoration work, the ambivalence found on conservation weeks is quite typical of the ambivalence found in Western Canada by Meekison and Higgs (1998), and by Jordan himself in Chicago (Jordan 2003, p. 193). While some people were happy to stand in a circle holding hands around a tree, others were not.

As focalisers were encouraged to carry out nature connections activities which both they and the wider group were comfortable with, each week had a slightly different emphasis or feel. The particular activities that the focalisers used often became a central memorable moment for the group. Although the bulk of a day may have consisted of walking to a site and planting trees, with only 10 minutes

sitting quietly listening to the wind, it would often be that 10 minutes that participants talked about in interviews. As one focaliser said, she looked for appropriate ways to add some 'specialness' to the work. Each group experienced different varieties of specialness. Together they may hold hands in a circle (whilst imagining the forest past and future or whilst listening quietly), stand and watch leaves falling, and participate in tree dedications. Alone they would usually be asked to observe their inner thoughts and feelings and/ or their surroundings. These rituals had the effect of directing participants' attention to the present: disrupting the working day and reminding them of where they were and why they were doing the work. Rituals also created group cohesion in the ways described above as groups developed meanings and stories derived from the unusual experiences.

The tree dedications were usually about commemorating death (though sometimes birth or other important life transitions were commemorated). They were a solemn ritual which allowed expressions of grief which were uncommon for people who do not know each other well. Planting as a commemoration of death whilst simultaneously promoting group (or community) cohesion and a reaffirmation of life is commonly used during mourning. For example Hirsch (2015) explored the planting of red geraniums to symbolise the blood of Martin Luther King after his death and the meaning this ritual created: organiser Karl Linn reflected upon the event explaining that "bending to embed a plant in the earth, each of us knew that these blood red flowers has been transformed into personal and collective symbols for our grief and our rededication to life (quoted in Hirsh 2015). In this case, participation in the planting was an 'equalising' event, which enabled "trans demographic dialog and collective action outside scripted norms of behaviour" (Hirsch 2015, p. 121). On conservation weeks participants were not commemorating violent political deaths and were not planting symbolic red flowers. The deaths they were commemorating were more quotidian, but no less tragic for the individuals affected. Though the lives commemorated on conservation weeks may not have had the global impact on popular consciousness that Martin Luther King had, the affective nature of the planting was as important, if not more important than the physical product of the labour on conservation weeks. The trees dedicated were collective symbols of grief for the despoliation of the ecosystem and participants' rededication to life, a gifted commitment to the earth symbolised by the tree in the ground. This acknowledgement of the past, and commitment to the future, is similar to the

symbolism found in the tree planting discussed by Krasny et al. (2014) in post Hurricane Katrina New Orleans, where trees symbolized "survival, stability, strength, and longevity". The past of planters becomes symbolically linked to the future of the trees they have planted.

6.5 Conclusion

Participants were encouraged to direct their attention towards to their experiences of carrying out the work, their surroundings, and the intention of the work, this enabled them to become immersed in the work for its own sake. Again, it was contingent upon the weather, but often it allowed them to be absorbed by the simple tasks they were engaged in. Conservation weeks involved education as a collective endeavour using stories to engage participants and to encourage them to see the connections between species. Inspiring curiosity and fascination about nature is something that enthuses focalisers and often moves volunteers. The promotion of curiosity and telling of evocative stories adds another layer of meaning to the experience in which the tasks of restoration are elevated in their significance: the discourse reinforces that there is a higher purpose to the planting of trees. Participants were facilitated to take time to observe their surroundings in meditative ways that were often unfamiliar to them. This encouragement towards intimacy was threatening to some participants, and contravened social norms, particularly if it involved physical contact with other people. Consequently rituals like 'nature connections' were contentious and had to be managed sensitively. Tree dedications also created an opportunity for participants to make sense of, or commemorate, bereavements they had in their lives, and gave people a strong sense of connection between their everyday emotional lives and their experience on conservation weeks connecting past, present and future. Ritual created vivid memories for participants of their experiences, they made participants' experience of carrying out restoration seem important, special and moving. We saw in this Chapter's treatment of education how important group cohesion was to enabling people to become curious in the nature around them. The following Chapter pursues this avenue, looking at the importance of the group dynamics more generally in enabling a sense of connection to nature.

7. The social experience of conservation weeks

7.1 Introduction

The previous Chapters described what participants do on restoration weeks: the tasks of restoration, the corporeal aspects of the work and the meaning making role of education and ritual on the week. The current Chapter describes the social situation within which these aspects of restoration are taking place. In common with the previous Chapter, it aims to elucidate the question of what aspects of hands-on restoration are important in mediating participants' understandings of nature and their connection to it. In particular, it aims to clarify the role and plausibility of Turner's concept of communitas which is seen as an important tool for fostering a connection to nature. In communitas, there is a release or giving up everyday status and an experience of intense affect and bonding. It is through entering into a state of flux and change during communitas, that Jordan thinks participants are able to consider a new relationship with nature.

This Chapter looks in detail at the group bonding and social connection that develops on conservation weeks. It describes what the social experience is like for participants in three chronological phases. After Van Gennep (1960), Turner (1995) describes the first as a separation or 'pre-liminal' phase where individual participants lose their everyday connections and become acquainted with their companions. Next, there is a 'margin' or liminal phase, 'limen', signifying "threshold" in Latin (Turner 1995, p. 94), this phase is what Turner describes in detail in his work that develops the idea of communitas. Finally, there is a 'post-liminal' phase, during which participants must leave liminality and reintegrate with their everyday life. To examine these ideas, the Chapter examines the material circumstances of the week, as well as less tangible factors, that may stimulate or inhibit a state of communitas. What happens after the experience ends is also examined, including how the participants reflect on their week and whether their experience of the week changes their perspective on their everyday lives.

7.2 The phases of the week

Conservation weeks begin on a Saturday. The feel of a conservation week on a Monday is very different to the feel of a conservation week on a Friday. A group on a Monday is still a group of individuals, often the majority of people will be unfamiliar with all or many aspects of a TfL week: doing physical work outdoors in often inclement weather, spending 24 hours a day with strangers, cooking

vegetarian food for 12, being in a remote location and having no access to communication technology. As a consequence, at the beginning of the week people are quiet, taking in a lot of new practical and social information and often quite physically challenged: in short, they are finding their feet. A visitor to a conservation week on a Thursday or Friday will find a weathered group of volunteers, often loud, with their own distinct shared humour, affiliations and priorities. I took these notes during my third conservation week:

> *"As the days pass, or hours pass, the group coalesces. Each [group] is different and begins to make up a whole with its own characteristics; we each become features in a whole. There are alliances, usually benign, perhaps between older or younger, or more or less experienced people. There are unequal affiliations, but in a good group there are no lone individuals. By the Tuesday everyone is affiliated to each other, we are a 'group' by Tuesday and we refer to ourselves as a group, people observe: this is a 'good group' All my groups have felt they were a 'good group'"* (Field notes 29th March)

How well the group coalesces varies: generally a group that is varied in age and gender, not dominated by a particular age group or gender, with no subgroups, close friendships or people keen to reinforce a hierarchy of experience, seem to bond most closely. Participants saw a number of features of the conservation weeks as important, unique or significant. When talking about the week people often used the term 'bubble', a term they use to refer to the phenomena of "*a good or fortunate situation that is isolated from reality or unlikely to last*" (Oxford University Press 2017). Once one had entered into the 'bubble' or the social experience of a conservation week it was usually characterised by positive affect and relaxation. The 'bubble' was assisted by conditions of isolation where participants were immersed in communal living and working, with the sharing of chores and food. It was carefully facilitated by focalisers who worked to establish an ethos of generosity, openness, laughter and cheerfulness.

7.3   The pre-liminal separation phase: loss and formation

There is a clear routine to the beginning of every conservation week, and this provides a structure for volunteers' first understandings of TfL and their restoration aims. The first 24 hours of the conservation week is usually fairly uniform from week to week.

During the conservation week season on Saturdays at 1pm, volunteers begin their week by meeting the weeks' focalisers and other volunteers at Inverness train station. After accounting for each person who is expected, focalisers load volunteers' rucksacks into storage cages welded into the back of a minibus. The volunteers get into the bus, and the focalisers drive them to the accommodation, via an 'introductory walk' (detailed in Chapter six). The group usually arrives at their accommodation in the dark between 5pm and 6pm. On some weeks, the focalisers cook the first evening meal, on others two volunteers cook. After the meal and the washing up (also carried out by volunteers) there is some explanation about the week and the work, and the first 'sharing' (see Section 7.4.4) is usually initiated. Volunteers usually retire to bed between 10pm and 11pm.

On the Sunday morning work begins at 9am. If the journey to site is long there will be a tea break upon arrival. On the first day there is usually an introduction to the work and a demonstration of tool use and safe working[14]. At the end of the day, tools are put away, sometimes cleaned beforehand. Two volunteers make the evening meal. People wash, change & drink tea or whisky. The meal usually takes two hours to be prepared and served. Often there is only between one and two hours after the evening meal, during which two or three people wash up and clean the kitchen. Others might chat or read, or there might be a quiz, short film or talk, later on during the week they are more likely to stay up drinking, talking and laughing.

The next two days are usually similar in structure. It is while these activities are going on, from the Saturday afternoon until the Tuesday or Wednesday evening that are a formative period during which individual strangers 'become' or begin to speak about themselves as a group. During this phase norms and habits are created and tacitly agreed within the group. By the Wednesday evening the group has distinct characteristics, their own unique brand of humour, priorities and history of shared experience.

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[14] See Chapter five for more detail of the work preparations carried out on the weeks.

Participants who came on a week for the first time ('first timers') often saw the experience as going into the deep end:

> "I kind of like being thrown in at the deep end... you are picked up from Inverness and you're taken to a place you can't go from, you've never been before..." F C5

Reactions to the deep end varied, the great majority of people like the woman above, adjusted quickly to the their responsibilities and accommodation, and although the basics of sleeping space, food, and water all took initial organisation and explanation, there was usually a fairly smooth practical transition into the 'bubble'. The 'bubble' sensation is described below.

7.4 The margin or liminal phase: The 'bubble'

The weeks are deeply absorbing, intense and engaging. Here volunteers describe how the social aspect of the week required their full attention:

> "....you become so immersed in what you do with everyone else that the normal sort of thought processes and challenges sort of drifted out of my head and I went into it and I went with it...and yes. So to me that was something I've, it's almost like I became immersed in the process..." (D11)

> "The intensity of the experience I think is a bit seductive, isn't it? But that's all part of its appeal, isn't it? But I can imagine it's very difficult for people... that just come here... to plant trees... because the living together is such a critical aspect of it, isn't it?" (C6)

This level of absorption in the moment to moment experience meant that within a few days it was typical for volunteers to not know what day or date it was. This interview extract illustrates typical experiences of time on the weeks.

> Interviewer: "This is interview T1, and what's the date? I've no idea."

> Interviewee: "I actually don't know, I've lost track of the day... seems unimportant." (T1)

In addition to the absorption that participants felt during the week the' bubble' was characterised by generosity, relaxation and the absence of participants' usual everyday problems and routines. The generosity was noticeable in terms of the food, volunteers are always reassured that they can eat as much as they like,

often encouraged to eat more than they would usually since they are doing physical work in cold conditions. It is not unusual for focalisers to have bought chocolate or snacks from their own money to share after work and returning volunteers also often arrive with special food or drinks to share. However, there is also a generosity of spirit, an ethos of acceptance and a kindness which enables people to feel safe.

Despite the hard physical work and a situation where people are living, initially, with a group of complete strangers, again and again people talked about being relaxed and finding the experience therapeutic, often they not only attributed this to being in the safety of the bubble, but also due to the absence of the world outside the bubble, in fact when people talked about being relaxed they almost always referenced the anxiety and tension present in their everyday life:

> *"I get really tense at home and at work and you can physically feel that, but here just feels just so much more physically relaxed, you feel your shoulders drop…"* (C3-4)

> *"I just find it therapeutic, being away from the city, I feel like I'm on holiday so it just feels like I'm far away from whatever is happening, whatever is going on. I just find it peaceful and relaxing…"* (D7)

These factors: separation from everyday life, the sense of a supportive, safe 'bubble' and consequent relaxation came up repeatedly. In this interview with a volunteer six weeks after her first experience on conservation weeks she encapsulated the 'bubble' phenomenon that was frequently described:

> *"I'd got three things that I'd written down about the week, and one was the word relaxing, which… I think it is related to the fact of kind of being… feeling at ease with everybody, and possibly slightly because it felt like being in a little bubble, but actually not worrying about what was going on at work, what all my friends were doing, what was happening with this, that and the other, but just feeling quite…relaxed in this kind of quite safe environment, I guess, and quite at ease with everybody."* (F D4)

The 'bubble' bears a strong resemblance to what Victor Turner describes as 'communitas', meaning it is a useful concept to apply here. Turner sees communitas as a form of 'anti-structure' which complements and references the

everyday social stratification that people experience, while allowing participants release from their usual rank and role. Participants persistently explained their experience on conservation weeks by contrasting it to their experience in everyday life. This was particularly the case when they were talking about the sense of belonging they had on the week. For many participants the love they had for nature, or concern they felt about human destruction of the environment, made them feel like "weirdos" (GA5) or the "odd one out" (D7-2) in their everyday lives:

> *"I'm used to my family just rolling their eyes at me…"(C2-7)*

> *"you don't meet many people [who care about nature]…especially in my family… they'd probably laugh at it." (C5)*

Participants often felt self-conscious and tended to self-censor with family, friends and colleagues, worried that they might be stereotyped as a "tree hugger" (FD4) or break taboos:

> *"the people you're closest to, your mates and friends… you've known them for a long time and you can't really broach this issues with them because, well, for me, they never talk about environmental issues or political issues or social issues at all" (D2-9)*

Those who did choose to talk had little hope of being understood:

> *"If I go out for dinner with my friends, right, or my work colleagues, none of them will get the environmental thing. I could talk 'til I'm hoarse and I wouldn't be able to change their views." (F D2)*

This feeling of being an outsider was mitigated when they were on conservation weeks: for many it was the only time or the first time that they felt they were with 'like-minded' people who had similar values (the term 'like-minded' was used frequently), these two extracts encapsulate what many expressed:

> *"I've never been with as large a group of people who have the same values. We're not all the same here, we're from all different backgrounds, from all different walks of life, but there's definitely something that happens when people come together that have got a deep appreciation for nature and understand what is trying to be done." (D2-1)*

> *"…it's nice to feel like there's a bit of a home for you in the world." (F D4)*

The next Section looks at how this feeling of ease, safety and isolation was created by the material circumstances of the conversation weeks.

7.4.1 Material conditions that support the 'bubble'

The remoteness and isolation of the weeks and the shared domestic tasks of the weeks provided the structure upon which the sense of wellbeing characteristic of the 'bubble' could be constructed. TfL conservation weeks take place in remote locations (by UK standards). Occasionally, a volunteer will have driven to the highlands and will meet the rest of the participants there, but the great majority will have met at Inverness and been driven to site. This means that leaving the remote location may not be feasible without causing disruption to other participants.

On their website TfL explain:

> "*The Conservation Weeks take place some distance from Inverness, so it's not possible to return and pick up volunteers later. Similarly, it isn't possible to drive back to Inverness before the final Saturday. Therefore, please commit to the whole week if you wish to attend.*" (Trees for Life 2017)

Although there are occasions when people do leave during the week, it is unusual. The shared commitment to the time period of the week enables the 'bubble', giving a spark of solidarity or cohesion from the beginning of the process.

The remoteness of some of the sites means that the group itself may not come across any other people during the course of their week, which also contributes to the feeling of seclusion participants feel. With the great majority of their day taken up with either working or walking on the hills and domestic tasks and socialising in the accommodation, it is usual to mix solely with TfL staff and participants on a conservation week and have nothing, or very little, to do with anyone outside the 'bubble' for its duration.

Participants were sequestered from contact with the outside world. Participants were considerably less connected than they were used to (or not connected at all) to communication technology during the weeks. At the accommodation there was usually very limited or no mobile phone signal at all, and although there was access to Wi-Fi and a landline somewhere on the majority of the sites, there was very little use of either. On all but one of the weeks the lack of mobile phone use

seemed to have arisen out of a mixture of unspoken consensus and lack of signal. This had the effect of meaning participants' attention was focussed on their immediate surroundings and on the people they were sharing that space with. As a consequence, it felt disrespectful to be looking at a screen as no one else was. The one occasion a person used a mobile phone in the communal living room was surprising as an observer (which considering the ubiquity of mobile phone use in everyday life, demonstrates how quickly the norms shifted upon entering the TfL 'bubble'). Strangely, this week was also the only one where a focaliser had explicitly suggested that using mobile phones in the lounge was not allowed.

Some people found the lack of connectivity in the 'bubble' an appealing contrast to their everyday experience:

> *"you come away from home and turn off your phone, you don't have any Wi-Fi or data signal, you haven't got your list of jobs to do in the house, but you put all that aside, nobody is going to phone you up, you're not on Facebook, that actually a big bonus, get away from the evil social media which just eats into your time, it does mine. It is holiday, a vacation: you vacate your life and leave."* (C2-8)

Others were keener to maintain contact with the outside world, here a focaliser describes a group he had who let go of the outside world reluctantly. In this case, someone from the group drove the two hour return trip to a shop to get bread and other supplies half way through the week and brought back newspapers.

> *"[It was] in West Affric, the youth hostel up there, when the second gulf war started. We had no idea what was going on, which was great. But there were stockbrokers there [volunteers on the week], and they were itching for information, so when the papers came on a Wednesday the standard conversation stopped, and they were glued to these bloody newspapers….The same with the mobile phones, they all started pinging when they got the signal, so they changed from being relaxed back to the frenetic…"* (F T5)

In general there was no TV or recorded audio use (except on their own site, Dundreggan, when focalisers sometimes showed short educational videos), even when these were available at the accommodation volunteers never used them. Only on one trip did I see exceptions:

Recorded media on this trip, on two occasions: once an iPhone playing music (on speaker setting, put in a bowl to amplify the sound) and another morning a podcast played on an iBook pro."(Field notes 31st March 2016)

In general, the lack of external stimulus did mean that conversations tended to happen more easily than they might have, had people's attention been directed away from where there were and who they were with, meaning that this volunteer is usually accurate when he says that:

"You definitely are in a bubble. Your whole life effectively is the group." (F D7 & T8)

Turner describes communitas as ascetic: unselfish and simple with an absence of property. Conservation weeks are busy, but simple, almost Spartan. As a participant, you are surrounded by people and active for almost all your waking hours, most of that time is spent doing chores or work in addition to the day's restoration activities. Field notes recorded clearing up the bothy, collecting and stacking logs, splitting kindling, cleaning the toilet, cleaning out the grates and setting fires, washing gloves and 'Hi Vis' vests, collecting water from the river, preparing food, and washing up- all usually carried out with other volunteers. In addition to communal tasks there was the need to tend to one's own equipment and clothing (especially when it was foul weather) and keeping oneself clean and warm, which was easier on some sites than others. Each site has its own characteristics, the bothy at Glen Affric was the most basic, with no running water and no electricity – and consequently had the most chores to be done. Again, some participants found it harder to leave the convenience of everyday life than others, here a focaliser explains:

"Well, I was at the bothy, and this girl said, 'where's the shower?' I said, 'there's no shower'. They would get water from the river to drink, and [I said] if you need to bathe, there's a basin, and you stand in the basin and you do what you need to do, or you go to the river. So, that poor lassie didn't know what she was going to, and again, you know, communal sleeping on the floor upstairs…" (F T4)

Before and after the restoration work, the day was filled with the simple physical tasks that were necessary to meet the group's basic needs for water, food, warmth and cleanliness. All these (such as laying a fire, collecting water and

washing up) require activity and attention, but were usually unhurried and peacefully carried out. There are typically people relaxing, talking and reading at the same time as other people are doing chores, adding to the feeling of good natured relaxation.

The accommodation is simple, but it is sufficient for most people: here a first time volunteer talks about how it feels to be at Glen Affric.

> *"I'm really in the middle of nowhere but it's great because, you know, you don't miss the phone, you don't miss this or that. You just don't even think about it. It doesn't come into play. So yes, it's great. We have everything we need. We have warmth, we have water, we have everything really."* (GA8)

The central domestic task of the day was the preparation of the evening meal, a vegetarian meal for 12, which usually every participant carries out at least once. For some people vegetarian food was something completely unfamiliar and on occasion challenging. It was not unusual to hear someone ask: *"What's a lentil?"* (GA 8).

There were different aspects to the cooking, the food, and the eating that were important. Firstly, the more intimate situation in the kitchen can suit shy people and people who are not so confident out on the hills. The cooking of the food was an important activity that created rapport between people in smaller groups: cooking only requires two or three people working together so it is a more intimate way of interacting, which many people enjoyed. Making food provided a way of contributing for people who may find other ways more difficult. Here a focaliser explains the significance that the evening meal can take on during conservation weeks and how finding a way for each member to contribute can be important:

> *"The chef's done something: they might be really good at that and be crap on the hill, not very good at chopping this (rhodie), not very good at keeping the fire going, not very good at dragging, not very good at identifying a rhodie from a birch, so they could feel a wee bit down….so the cooking usually helps, even if they are just a chopper; because the chef always goes: 'and Ella helped me also' and everyone's like: 'yey, well done Ella' so there's a gee up thing for that person the next day."* (T9F)

Cooking a meal for 12 people in an unfamiliar kitchen with possibly unfamiliar ingredients is almost a rite of passage in itself. The anticipation and planning, doing and completion can be a source of self-esteem, and provide a way for the group to reassure individuals and express positive regard for its members.

> *"I think the meals are absolutely critical …someone's taken responsibility, they're worried about it, everybody reassures them…."* (C6)

> *"The cooking aspect of the week is really, really important. Especially when the cook puts the food out and everybody loves it. There's lots of good feedback."* (T9F)

The vegetarian or vegan food made from raw ingredients was different to what most participants had previously experienced. TfL have compiled a book of recipes built over the years that they have been running the conservation weeks, which enabled people to cook even if they were new to it. The different foods were also something that a lot of people, of all ages and backgrounds, enjoyed experiencing. For some who were unfamiliar with cooking or eating vegetarian food it inspiring:

> *"The vegetarian part is really… I mean it's interesting…I'm just amazed at what people do and the skills. Even that guy who was baking the bread last time we were there, one of my objectives this year is to bake bread, you know."* (F D2)

The novelty of communal cooking and the types of foods that were being eaten all provided a centre point for conversation and bonding. The act of sitting and eating a home cooked meal every evening after a hard day's physical labour also gave a focal point for conversation. A lot of the group connection occurred when everyone was together eating in these relaxed and warm surroundings: 'in' jokes developed, the day's work or ecological discoveries were discussed or remarked upon, ideas were suggested and anecdotes recounted: lentil by lentil the group began to forge their sense of communal identity.

7.4.2 Intangible support of the bubble: expediting social connection

On conservation weeks the isolation, restoration work and communal living and eating arrangements give the group shared experiences to bond over, but it is the focalisers who have a vital role in establishing the desired norms of the week:

reciprocity, sharing of knowledge, generosity, emotional openness, curiosity and exploration. Here this is described in more depth, detailing what is required to facilitate the intense bonding that many volunteers find most memorable about the week.

7.4.3 The role of the Focaliser

Focalisers need to employ considerable affective labour (Hochschild 1983) in running the conservation weeks, this Section explains how important this role was in ensuring the weeks maximised the possibility of a sense of connection. Focalisers 'read' the groups from the moment they meet them, hoping to predict whether they will bond:

> *"When you meet folk at the station you can… get an inclination… from how people engage [as to] how they [will] gel."* (F T5)

> *"From the first bus ride, which is usually really quiet unless people have bumped into each other before or if they've met at the train station and talked…it seems to take a few days for them to settle in. And that's what I like, it's the group dynamic, it is part and parcel of what of what the focalising job is, it's helping that develop and grow… over a week."* (C3F)

The role of focaliser is not only to be a conservation leader responsible for the completion of practical work, but to be a guide and facilitator of the bubble. Hardt (1999) describes the intangible products of affective labour as "a feeling of ease, well-being, satisfaction, excitement, passion – even a sense of connectedness or community" (p. 96) qualities that are remarkably similar to those listed when describing a situation of communitas. Here a focaliser describes the tasks that are required: problem identifying, anticipating, analysing and solving, strategic brokering, and crisis management:

> *"…it's trying to read people on the Saturday and by the end of the Sunday trying to get a really good scope and reading people's psyche, what might people think of a situation, how might they react? Try to gauge the group the whole time, there's a lot of psychology in involved, you need to do that to make sure that you assimilate everybody into the group and that we assimilate into the group. [If] there's any friction…or we can ….[deal with] friction before it starts. So for me there's that bigger aspect that is part of our job, it's not written in as our job, but it's just dealing with anything that arises."* (T9F)

The focaliser must have the 'emotional intelligence' (Mayer and Salovey 1993) required to 'read' a group, to be able to recognise the emotions that other people are feeling (whilst recognising their own emotions), be able to regulate their own feelings and be able to manage the emotions of others. Here a focaliser explains his perspective on the job: he analyses the feelings of others, his own feelings, and discusses how by making people feel carried, supported and nurtured he may achieve his end goal of enabling them to feel relaxed, inspired and connected with the rest of the group:

> *"I do care to make sure everyone is as comfortable, as relaxed as they can be. And I really feel for the people that clearly aren't comfortable, and you can see their nerves, and I feel really awkward for them...We always want to try and make people feel like they can be carried, that they're supported, that they are nurtured."* (D8F)

Focalising requires the surface acting typical of emotional labour (Hochschild 1983): disguising one's feeling or pretending to feel what we do not. Here a volunteer reflects on the surface acting of the focalisers:

> *"it's not easy because you've got to stay motivated, and you know, they'll be tired, they'll have their own issues, you know, got a bad back or got a window or a roof to repair at home or something and all that sort of normal stuff, but you know they don't let on. They're still out there sort of motivating and cajoling people and being life and soul and all that....So they're giving a lot all the time. It must be pretty demanding."* (F D7 & T8)

Focalisers also lead by example: the generous tone of the week is set by the focalisers, we have seen that they are generous with their knowledge, but also generous in empowering other participants to share their knowledge. They are also explicit that all the food is to be shared and that there is plenty for all. Their emphasis on sharing in the first few hours of the week sets a precedent that most other participants reciprocate during the week:

> *"... it was just a, just a generous spirit as well....Generous...yes giving a lot. ...I mean there's quite a large cross over between who goes on different kinds of conservation weeks, but generally speaking, Trees for Life brings out a good side, brings out good things from people....And I think that's got to be focalised and led... It's got to be something in them*

[focalisers] that brings it out of people…I think they do drag out some good things in people." (F D7 & T8)

It is not only by leading, motivating and cajoling people that focalisers can encourage volunteers to connect socially with each other, they also use some facilitated methods that can stimulate social connection. These are 'sharings', as well as other games and activities, which are examined below.

7.4.4 Tools for connection

'Sharings' are events where all participants are present and they are invited to reflect upon their experiences or share something of themselves. There are slightly different ways this can be managed, it can be that each person is asked to speak, or it can be voluntary. Either way, the group is facilitated to ensure no interruptions or commentaries are made on someone's contribution and that participants feel safe. Sharings usually take place at a minimum on the first evening where everyone is required to introduce themselves and share their reasons for attending the week and on the last evening when participants are asked to reflect upon the week. They vary in how intimate they are, some are polite reserved 'go rounds' of names and motivations: indeed, the focaliser handbook suggests presenting the sharings as a 'check-in' to prevent shier groups from being daunted by the format. TfL emphasise the fact that for a sharing to work, participants need to feel safe, and that it is "*important to let your group know that it is completely fine if they don't want to speak…it is important to ensure that people feel safe; your job is to hold the space open and invite people in*" (Trees for Life 2015b, p. 33).

Often, the focaliser sets the tone for the sharing and once one person has opened up, most others are willing to, here a focaliser explains his technique:

> *"As you know when I do sharing, I never lie, and I try to be as open as I can, I don't care, I've got nothing to hide, whether that's that I've been a arsehole all my life or whatever…I'm like 'here's what I was like…' And it's helps people open up I think. But I'm not wanting people to open up because I can find out their secrets, [but] because I know some people are wanting to… but they say ' I've had a lovely time.' …they want to say more, and it's nice if you can bring people out more and they get it off their chest, because they move forward in their life, whatever it is that they've been holding, keeping in… they've let it out."* (T9F)

Focalisers themselves will have all experienced the sharings as volunteers, and may have experienced the release that the focaliser above describes. Again, another focaliser explains how he started on conservation weeks in a vulnerable state and found acceptance at sharings:

> I couldn't communicate at all well which I explained to people ... Sometimes when I pick up people from the station and there are little nuances, if there are quite 'vulnerable' (in inverted commas) folk...if I'm leading I'll say "I'm in a shit state and here I am" so people feel more comfortable. Basically they may say "I'm in a shit state as well" because it's 12 folk to meet initially they're not going to say, you know... [but] people are people, they don't mind what your handicap is... (T5)

Often sharings are very profound, deep, and emotionally intense. People often spoke about very personal and vulnerable experiences such as bereavements, emotional distress, mental health issues and major life changes:

> "...you're comfortable enough and held enough to share things with people you've only known for five days you know...things that are really intimate and personal with people that you barely know, that you might not know the second name of." (D8F)

Often groups tacitly decided that they were in a safe place through the use of the sharings. Many found it was possible to acknowledge feelings that can be hard to disclose in everyday life. This happened in the example below, where the group discussed their both their outsider statuses at home and the deep losses that some of them had experienced:

> "Interesting and powerful sharing this evening: the consensus was that 'we are weirdos': people talked how the week was a place where you can share something of yourself that you can't in everyday life. There was important stuff about meeting people and about losing people too: A talked about searching for his friend on beaches for 21 days, H about her partner dying, D about three friends dying..." (Field notes 27th April 2016)

Nevertheless, sharings are not always intense. Focalisers often use them to check how people are coping with the physicality of the work after the first day or to bring the group focus back together after the Wednesday day off. The sharings often had the effect of consolidating meaning when participants reflected on particular things that had surprised or interested them. They also helped create a

shared group identity and gave a unity to each group's story of the week. There were jokes and observations that became part of the group identity. Sharings serve to reinforce the group aspect of the weeks, establish the group as a safe and respectful environment, break down barriers, and reduce the dominance of loud people or reduce the risk of cliques forming:

> "…often groups can get overtaken by certain individuals and you can be in a big room and not really speak to people because there is a monologue going on. And the sharing gives the chance for the quiet people -and even the noisy people, I mean, people like to just blow wind - that is not really what they're really thinking…You get some really heartfelt responses as to why people are at Trees for Life events." (T4)

As well as sharings, some focalisers use games and activities to break down inhibition in groups. I stood in many circles on the hills, some while each person massaged the next person's shoulders through their waterproofs in the rain. Others that involved sharing stretches before starting out on an hour's walk across a bog, or saying favourite things about the day whilst eating chocolate after work.

Some TfL groups tend towards communitas with only the support of the isolation, shared communal living and restoration work, enabling the focalisers to concentrate less on facilitation and to have a similar degree of connection and absorption in the group themselves. There were volunteers who instinctively provided a nurturing role which supports the focaliser, meaning the week flows easily and there is minimal distinction between focaliser and volunteer:

> "…older people, [often] they are workers, they will just keep working and they bring a lot of fatherly, or if it was a woman a lot of motherly, love into the group and that's sometimes nice when we've got couple of older ladies who are like 'Yeah! And I've made tea, and are you alright pet?'… And that is phenomenal because then you've got a couple of mums there that are looking after everyone and everyone feels all …in the womb." (T9F)

Other groups will need more guidance or encouragement to bond. Focalisers talked about different ways that a group could require more guidance to bond, or would not bond at all. For example, in this memory of a group that were very quiet:

> *"We had one where everybody was really, really quiet, the whole group: [they] would come back and literally nobody would talk, you don't have background music to distract like a dinner parties, so literally silent, and people were reading books, and I was, on a personal level, slightly uncomfortable by the silence but also thinking is 'everybody enjoying it?, or are they unsure of what to say, not confident at starting conversations?' It didn't really evolve..."* (C2-2)

Sometimes no amount of sharing, communal dinners or geographical isolation will induce a group to bond, this next Section looks at the limitations of social connection.

7.5   You can't force the bubble: the limits of group bonding

There was acceptance among long term participants that not all groups bond. There has to be some kind of willingness to engage in social connection from the majority of the participants for the sensation of safety and intimacy within the group to occur. As this focaliser explains, the will to engage and be somewhat open to the experience is a prerequisite for connection:

> *"We want people to feel like they want to do it [relax and connect], because at the end of the day, that's the only way it's going to be a success anyway. If you don't come of your own volition you're not going to bother."* (D8F)

Some groups did not bond, and in some of these cases the reason might have been that participants did not want to engage. For example, one participant described the group on his previous week as:

> *"...more composed of its elements...They were a bit more centred on their own selves, they were less talkative. Just, like, individuals. Not so much part of a group or something. Doing their stuff, each was doing their thing."* (T3)

Even with the support of the isolation, shared communal living, restoration work and experienced focalisers to guide them, some groups refused to move beyond the superficial, and some individuals refuse to defer to the collective spirit. Some participants within a group can be instrumental in blocking the creation of group connection; not every person feels comfortable with the implied intimacy of a "a transformative experience that goes to the root of each person's being and finds

in that root something profoundly communal and shared." (Turner 1974, p. 138). Some were quite hostile in their rejection of the ethos of TfL. Here a focaliser remembers the contents of some participants' feedback forms:

> *"I had a group where three of the group said 'what they most wanted...out of the week' was 'a McDonalds'."* (C7F)

Group bonding seems to require relinquishing of status in order for everyone to become equal, some people talked about dropping the persona they had in their professional life or relished the lack of responsibility that came with complying with the group. In contrast, some participants found it very difficult to give up their status or autonomy, and were frustrated by the expectation that they would be part of a group.

> *"We've had some focalisers who wanted to restrict us and really do everything in a group, which upset a few people, I like it when it's a bit, you always have a choice, but sometimes there is more pressure on you to not to do this, not to do that. You know, we can go to the pub, or stay in, do what we like."* (C3-8)

To some extent volunteers have to relinquish control when they choose to attend a TfL week:

> *"...I have [previously] been bit more of a... not a control freak.... It probably took a bit of adjustment ... I have adjusted to being more relaxed about it, just letting go a little bit, because... if you don't relax you're not going to get the most out of it, if you're bringing all your usual ways of thinking along with you."* (C3-4)

Despite the need for participants to relinquish their everyday status, to amalgamate with the group, it would be a misrepresentation to claim that conservation weeks were without stratification. A hierarchy of experience has developed within the organisation. Here a long term volunteer talks about a situation where all the participants present on the week ranked themselves according to the amount of weeks they had attended (see Figure 7-1) :

> *"...there was like some sort of table of 'where are you in the pecking order'. That's what it feels like...to be honest, and this is very narrow-minded and I admit it, but I sort of feel like you've sort of achieved some sort of status within your own group by being an old hand. And to some*

extent, and that's not my main motivation for coming out by any manner of means, but you feel like an old dog that's...yeah, that knows a few things. You know, rightly or wrongly." (F D7 & T8)

A less experienced volunteer reflected on the same week, somewhat in awe:

"I mean, that group we were in that was the most experienced group I think that was ever put together and that was just amazing, there were people who had done 60-70 weeks and more and it was just 'wow this is amazing what these people have done'." (FT1)
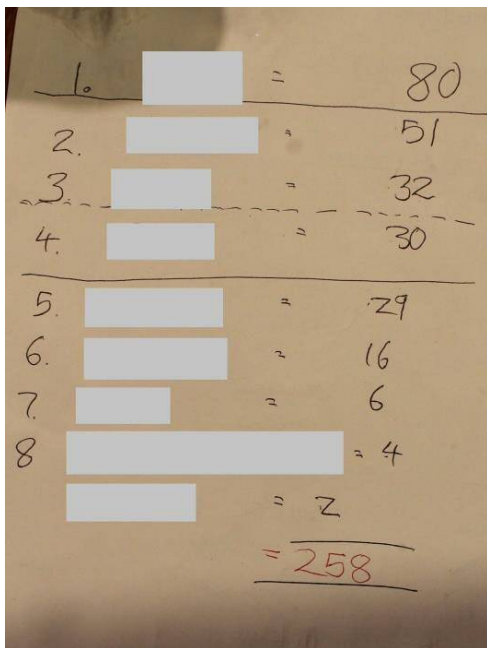
Figure 7-1: Ranking drawn up by participants of conservation weeks completed, anonymisation added 23/11/15.

A willingness among participants to discount their everyday status is usually sufficient for the group to integrate. The conservation week experience based 'pecking order' is usually so embedded in the overall conservation week ethos of generosity that it does not threaten a sense of group unity.

However, individuals can block group bonding in other ways, in ways which are likely unintentional or unconscious. Focalisers talked about exceptional weeks when they were managing participants with serious mental health problems, emotional distress, active addictions and volunteers who did not speak English at all, all of whom could be difficult to integrate and accommodate into the group. Personality clashes could also pose a problem, in among particular people with strong or controlling personalities who seemed to clash with each other. This was

usually managed without much disruption, although I was told about occasions where people did leave the week, withdraw from activities or arguments erupted. However, focalisers usually avoided this, and many focalisers talked about an ethos of acceptance as being important on conservation weeks, with focalisers aiming to be as inclusive as is possible:

> *"There's always the odd ball, there's always the eccentric exception… most people, like at the train station, or the first day, you can spot that somebody is at one end of the spectrum. It's just human-nature, they're not ostracised, they are just accommodated because we are good that way…some are really extreme but they're still accommodated."* (T5)

Whether the group bonds or not, but especially if they do, there is another phase to go through when the week is over. The next Section describes this.

7.6   The post-liminal phase: the train back to reality

It was a sense of belonging on conservation weeks (albeit temporary) and feeling of alienation in everyday life that were the strongest themes that arose in interviews carried out after people had returned home. The transition out of the 'bubble' and 'back to reality' was one that was difficult for many. It seems that for some who feel connected to nature there is a deep sense of feeling alienated from a society that is disconnected.

Participants travelled home usually by train, car or plane. The train allowed a period of acclimatisation back to everyday life, generally a majority of participants make the journey to Edinburgh together before they begin to split up, with some going south and others going east. Often there was company until Birmingham, meaning the connections from the week were not cut until later in the day, hence the sensation that the train journey was also a journey 'back to reality'; many volunteers referred to going home as going 'back to reality'. Train and car tended to allow a slow exposure to the more densely peopled areas where most participants live, often accompanied by a sense of foreboding:

> *"…as you head South down the A74 and M6 it gets busier and busier and it just gets to you, you come back and think Oh bloody hell why do I live down here?"* (C3-9)

The plane is fast, abrupt, and people were usually immediately alone after saying their goodbyes at Inverness. Usually there would only be one person flying on a week, if any:

> *"...the plane is a bit different because it's about 50 minutes and I don't know whether I'd do it again, because I do like that train journey, it sort takes you back gradually...because you're with people ... until Edinburgh by and large and then you split up and you're either going with other people or you're on your own, and the then you go through Northumberland which is lovely and you go through Newcastle and then eventually you get to the shitty midlands and then you get off the train and there you are..."* (F C6)

As the previous quotes suggest, going home was widely regarded initially as an unpleasant experience: a violent "bump" (F C6) or "culture shock" (C7F). After the bump, the actual arrival home, people often felt a sense of grief about the loss of the connections that they had built on the week:

> *"The people that you live with and the people that you engage with, you sort of... there's a danger. I mean... and this might be a highfalutin, but you fucking grieve when you go back to your normal world, you actually miss these people, which is also a bit unreal, isn't it? Because they're people you've met for a week, you have an amazing bond. If you met them in the street, you might not have that bond with them again."* (C6)

This feeling of connection with other people tended to tail off over time once participants were home, there was usually an initial flurry of group emails with people sending photos, articles they had done for blogs, or poems they had written about the experience. But they dissipated over about two weeks. People did make longer lasting connections, staying in contact via social media, or making deeper connections which matured into friendships, but these were less usual than a dissipated tailing off of contact. The feeling of relaxation and peace ("I come back feeling sort of wrapped up in cotton wool or living in a bubble" (FD7&T8)), tended to dissipate fairly quickly for most people too. Participants often said they got 'sucked back in': "*...when you get back into the normal routine... it slowly fades away and you get sucked back into the drudgery*" (D2-3). Participants reflected that the "*effect doesn't last for long*" (FGA4) and that it gets "*knocked out of you*" (FD7&T8). This suggests that effects of hands-on restoration are transitory, and do not lead to a shift in everyday practices or in

consciousness, but are quickly replaced with the practices and perspectives of everyday life at home, a theme which is discussed further in Chapter eight.

The period of transition back into everyday life is a moment which permits participants an analytical view of their daily life which they are usually too immersed in to be able to see. Many first time participants were stimulated to question assumptions they had made about the immutability of daily concerns. TfL catalysed enquiry into the fundamental assumptions about what society is and what relationships with nature can be. Some volunteers talked about whether their experience on conservation weeks was removed from reality or whether it was a more accurate reality, here a volunteer talks about a conversation she had with another volunteer on her last day:

> *"I was like: "back to reality..." and they were like: "No, this is reality. The city world: everyone just gets caught up in it".* (C2-7)

From Turner's perspective, this journey is one from the 'antistructure of communitas' into the 'structure' of society. When Turner's subjects moved back into society from their state of communitas they often experienced a change of status, for example from boyhood to manhood. There is no such societal affirmation for TfL volunteers, usually participants are not supported in integrating their experience on conservation weeks into their everyday life. This may explain the feeling of 'bump' or a sensation of feeling 'sucked back in'. For many, the experience on conservation weeks is one that feels hard to integrate into daily life. After their week participants return to largely uninterested family, friends and colleagues ("at work, when I got back it was: 'oh, how was it?' Small talk really, that didn't really go anywhere, I don't think anyone was that intrigued to go deeper into it." (F GA5)). Simultaneously the demands of everyday life rush in:

> *"In the past, I've got sucked back into the shit quickly. And you know, you take back something positive but... you can't walk around your house like a fucking hippy can you? when everybody else has just had loads to do 'cause you weren't there. You can't just indulge yourself, so I sort of snap back into the world."* (C6)

The degree to which participants face 'culture shock' when they return home depends upon their personal circumstances. Although it is important to note that city dwelling office workers often found the contrast between conservation weeks

and their daily life saddening, retired people often found it easy to integrate the positives that they found on conservation weeks by volunteering for outdoor work at home.

City dwellers in office jobs tended to be most affected by their time on conservation weeks, particularly the 'first timers' who had not experienced something like the TfL week before; these were people whose material and social conditions of everyday life were very different to the TfL experience, and for whom changing their everyday life would require considerable upheaval: perhaps retraining, leaving jobs, moving house. These participants described their everyday life as noisy, polluted, time pressured and stressful: "...*you're just surrounded by noise and people and pollution and activity 24/7...*" (GA6F). Their colleagues often had very different values, and their work time was often spent doing things that they described as having little tangible purpose or that they felt perpetuated environmental decline. For participants in this situation the experience of the conservation week exposed the alienation they experienced in everyday life: particularly the sense of social and environmental disconnection that people felt. City dwellers spoke of feeling claustrophobic and socially disconnected in their usual urban environment: "*you see a million people but you don't ever have any real interaction with them.*" (D2-3), and talked about weekdays dominated by long commutes, computers and offices.

Others spoke of the time pressures associated with city living:

> "*...cities are just abnormal in a way: that the speed of life, the amount of things you've got to do in the time you have...or the distractions....I don't know whether human beings are built for that really.*" (FD7 & T8)

It was not just workers in corporate jobs who felt the pressure of 'industrial time' (Thompson 1967), those who worked in conservation often spent little time in offices but still seemed to feel time pressured. Avoiding office work does not seem to be a guarantee of an unhurried life, here a focaliser (whose daily job is as a conservation ranger) describes her thoughts when preparing for her TfL week:

> "*I'm so busy and really tired and I thought 'oh god, I don't think I can handle going to Scotland and leading a group and having no electricity and all this sort of thing. What if it's freezing and I won't be able to have a wash?' [but] after 24 hours you're actually okay and you realise that a lot of things that make you tired at home are stress related and space*

related. It's not maybe how hard you're working, it's some of the psychological effects of modern society that actually make you tired." (GA6F)

Although many participants struggled with returning home, as one participant said *"you take back something positive"* (C6). The experience of conservation weeks may be fleeting, but the memory was valued after participants returned "back to reality" (C2-7).

7.7 Is the social experience one of communitas?

It is Jordan who most firmly makes the claim that restoration may be able to stimulate and benefit from inducing a state of communitas (Turner 1974, 1995). As we saw in Chapter two, Turner lists 26 attributes of the state of communitas, which can be refined into six categories: transition, compliance, absence of status, homogeneity, asceticism and sacredness. Conservation weeks demonstrate many characteristics of communitas and suggest that Jordan is right in thinking that communitas is an enabler of shifting understandings of nature.

It is clear that the conservation weeks involve the transition periods that Turner saw as important in generating the liminal state characteristic of communitas and that there are clear phases to the week. After these 'transition' phases, Turner's subsequent attribute of communitas is 'compliance'. Turner described participants in communitas as being in a state of compliant heteronomy, totality, obedience, acceptance of pain and suffering, and foolishness (foolish meaning they are willing to be new, or inexpert). The conservation weeks cannot be described as a state of heteronomy. Having volunteered for work, there are ways in which participants are compliant and obedient and accept the exhaustion and hard work of restoration: participants do work hard to conform to the pace set by the group. However, the groups are pluralistic. Members are not expected to submit to leaders, indeed, as we have seen when discussing the role of focaliser, it is often hard to distinguish between the leaders and the volunteers during a week where the group has gelled well. Turner's theory itself is unreliable on this: on the one hand he describes formal rituals of initiation or puberty in central Africa where participants "must obey their instructors implicitly, and accept arbitrary punishment without complaint" (Turner 1995, p. 95), and on the other hand he discusses situations where communitas arises from the 'happenings' of American hippies in the 1970s where people felt no such obligation to conform.

Perhaps communitas requires a sense of togetherness which can be instituted through heteronomy and compliance, but can also be instituted in other ways. On conservation weeks group compliance was manufactured by focalisers' use of emotional intelligence to guide and consolidate the group.

As Cater and Cloke (2007) described in their study, guides are the gatekeepers for the negotiation of experiences. In hands-on restoration the guides become the curators of the experience of communitas. Cater and Cloke go on to say that in their case (extreme sports tourism) guides must be active, outdoorsy, larger than life, "acting as exemplars of the bodily habitus which is expected and desired" (p. 15). In restoration too the guides need to be active and outdoorsy, but thoughtful rather than necessarily larger than life. There is much more flexibility for the guides in restoration because there is less 'selling' of experience than in adventure tourism. Focalisers are under little pressure to be aspirational exemplars. They can lead from the front or from within the group depending on their personality and what they judge necessary. The role of the focaliser is rather to use affective labour "*embedded in the moments of human interaction and communication*" (Hardt 1999, p. 96) to induce participants to feel a sense of connectedness to the wider group. The social experience of the weeks is facilitated by the focalisers, but they cannot use coercion, and it is incumbent upon the focalisers to ensure that the group does not feel any compulsion.

The focalisers' lack of mandate to enact top-down authority does not mean that the groups do not attain states of communitas, just that the state is attained using subtlety different means (and that those means have different impacts). As Hochschild (1983, p. 187) explains, in doing this intense emotional labour unreservedly focalisers risk burn-out: exhaustion from the emotional dissonance felt as a consequence of displaying emotions they do not feel. Conversely, in holding something of themselves back from the job they risk feeling false and unable to sustain the work because they feel insincere. For many it can be hard to accommodate their own negative feelings (tiredness, boredom, frustration etc.) whilst appearing positive over the long term. This ex-focaliser's sentiments are an example of this:

> "*I tried to make sure it never appeared like it was a chore, [but] that it was always something that I wanted to do. And it was…quite emotionally draining*" (D3-3).

By contrast the volunteer role is simple: to socialise and bond with the wider group and do the physical work (including cooking and cleaning) that is expected of them. The volunteers must to do the tacit work of complying with the unwritten code of the restorationist: curiosity about and love for non-human nature, a relaxed and sociable attitude, and a willingness to work and accept challenges. Through a sense of loyalty to the wider group, most participants comply with the group consensus and tolerate any minor hardships they may feel. Each individual volunteer must make a decision at some point to prioritise their interpretation of the group mood over their own preferences if necessary.

The delicate dynamics of the subtle guidance of the focalisers and the tacit compliance of the volunteers foreshadows Turner's next attribute of communitas: absence of status. For Turner communitas is characterised by the absence of rank, no distinctions of wealth, the suspension of kinship rights and obligations the presence of humility. This fits with the conservation weeks: as we have seen there is an ethic on conservation weeks which aims to have minimal hierarchy between guides and volunteers, as well as across areas of experience, knowledge and physical prowess. The incidental conditions of the week (largely the geographical isolation and lack of contact with the outside world) meant that participants were severed from their everyday status, wealth and kinship obligations. Although some participants found it hard to turn off their mobile phone (if they had any access to connection), the great majority of participants were keen to conform to the group and relinquish external connection and references to status.

This overlaps with Turner's next attribute: homogeneity. Turner saw communitas as being characterised by uniformity of attire, disregard for personal appearance, equality, anonymity, minimisation of sex distinction & sexual continence. Participants of both sexes on conservation weeks are dressed for most of the time in anonymous and homogenous looking waterproofs, wearing the required high visibility vests over the top. This is coincidental, there is no attempt to remove distinction, these are simply practical and safe attire for working on the hills. Focalisers were asked not to engage in nudity or sexual relationships on the week, (this rule is not necessarily mentioned to participants and both have certainly taken place in the past, though rarely). The general absence of sexual activity on the weeks is also possibly in part down to practicality and lack of privacy, but there is also a group loyalty aspect to the weeks. Unequal affiliations tend to be avoided to give primacy to the group experience.

The weeks are also somewhat conductive to another aspect of communitas: asceticism. Turner describes communitas as unselfish and simple with an absence of property. While Turner describes communitas as unselfish, the conservation weeks went further than mere unselfishness, they were conductive to generosity, gratitude and care. The tone often was set by the focalisers who usually begin on the Saturday night by thanking participants for attending the week and emphasising that all participants' needs for food and warmth can be met. Despite the hard work and sometimes challenging conditions of the restoration work itself, the overall tone of the week tends toward celebration. The weeks are simple and ascetic in some senses, the food is humble and healthy, and participants tend to have brought basic personal possessions: there is generally little luxury, glitz or glamour on a conservation week. However, the weeks are not sober, either in manner or with regards to alcohol. Although focalisers are asked to try to moderate excessive drinking and discourage drunkenness, convivial drinking is usual, and could not be described as ascetic, as this participant reflected:

> "….it's not what I expected, but I don't know what I expected, I've learnt so much about conservation, about trees, about whisky…" (C2-3).

The weeks are also rarely sober in tone, usually by the Tuesday or Wednesday night there is considerable laughter and joking, good natured teasing and exuberance.

It was mentioned earlier, that Turner sees true communitas as a "transformative experience that goes to the root of each person's being and finds in that root something profoundly communal and shared." (Turner 1974, p. 138). Some conservation weeks do have this sense and other do not. Communitas on the weeks was supported by the material circumstances of isolation, lack of external contact, the simple communal tasks and chores of the day, and preparing and eating meals together. Less tangibly, the weeks are supported by the affective work of the focalisers, and the sharings which encouraged shared stories and group bonding.

7.8 Conclusion

This Chapter suggests that the social experience of conservation weeks is moderated by the material circumstances of isolation, and communal living. There is much importance placed on facilitating group bonding through the focalisers' emotional work: reading the group and individuals' emotional state,

introducing tools such as the sharings which encourage emotional openness, and using the preparing and sharing of food to encourage an atmosphere of generosity and support. Those who are reluctant to cast off their everyday identity and join in may reduce the likelihood of group bonding, or block it entirely. The material situation of the conservation weeks and the emotional work of the focalisers is not sufficient to ensure communitas, there must be enough will within the group to relinquish personal control and emotionally engage with others. In situations where the group has connected, upon returning home many participants grieve: both for the loss of the social bond, and for the protection from their everyday pressures and anxieties. Finally, it is apparent that the conditions found on conservation weeks can create a social experience of hands-on restoration that can be likened to communitas. The question remains whether the supportive atmosphere and sense of acceptance that communitas creates can enable volunteers to rethink their ideas of nature and their sense of connection to it. The previous Chapters examined the corporeal immersion of restoration and how it was carried out, and how participants were encouraged to learn about and reflect upon nature during their weeks through focal practices, education and ritual. The following Chapter draws upon this one, and those previous to it, to examine the development of participants' ideas of nature and their sense of connection to nature on conservation weeks. Thus, we turn to the subsequent, and final, results and discussion Chapter.

8. Connecting to 'nature'

8.1 Introduction

This Chapter addresses the second and third research questions: What natures are produced by hands-on ecological restoration; and what sort of human-nature relationships are produced by hands-on ecological restoration? Thus, it examines the particular ideas of nature and connection to nature held by participants. It initially describes the different ways they understood nature, and then moves onto examining their experience of connection to nature. Finally, the Chapter examines how their experience of feeling connected to nature on conservation weeks related to participants' everyday lives.

8.2 Natures

On conservation weeks participants' understandings of nature are bursting with ideas. There were multiple understanding of nature in each group. Meticulous expertise in botany, zoology, land management and ecology and co-exist with ideas strongly held beliefs in conscious interspecies communication and fairies. It was common that participants believed that to some extent modern humans have lost an '*innate*' sense of connection with nature (FD11AF).

Long term participants often have considerable knowledge about local species and many are knowledgeable about local contemporary and historical land management. Others were not necessarily familiar with the Highlands, but had a lifetimes' expertise in flora and fauna identification, and a high level of general ecological knowledge. An approximately equal amount of participants were completely new to any of these areas of knowledge. As the quote below illustrates, TfL is committed to pursuing scientific evidence to develop their techniques, which some participants found comforting:

> *"I love planting trees, and I love doing the work that they are doing. I love the level of detail that is happening on a scientific level, all the soils are being explored, and the experts are in place and that it's not just a crusade with no scientific backing: what they are doing here is really important."* (D2-1)

Both scientific and spiritually derived understandings of nature among participants lent themselves to a conception of nature as interconnected and linked by causal relationships of which humans were a part. Thus, the idea that humans could be

connected to nature in the sense of being part of a wider community of non-humans was possible for participants from a range of perspectives. Irrespective of whether their understandings of nature were influenced by scientific or spiritual epistemologies, for the great majority of participants, nature was an awe inspiring set of interdependent relationships far bigger than the human world, with which it was possible to interact or be part. It is also important to note that there was no clear divide between science based understandings of nature, and more spiritual beliefs, and that it was very common for participants to understand nature both scientifically and spiritually.

There were some conflicting beliefs. Some participants understood environmental issues in a way which reflects the majority scientific consensus about anthropogenic climate change, whereas others did not believe in climate change. On one week there was a late night heated discussion between five participants about the veracity of anthropogenic climate change. For a small minority of participants the ideals of restoration and climate change denial are compatible:

> "*We know the climate is changing, anyway, but with regards to carbon dioxide and global warming etc. the jury is still out on that as far as I'm concerned. I'm not sure that it is man-made, there's a lot of carbon dioxide out there…you still read a lot of scientists who don't believe it is [man-made]. So the jury is out for me. So the mission of restoring the forest: I believe the planet is wounded, so let's change that.*" (T6)

It was common for first time participants' understanding of nature to evolve rapidly during the course of the week. People tended to talk about three different kinds of nature: 'degraded nature', 'absent nature' and 'restored nature'. A minority initially saw the Highlands as untouched, whereas others saw them as 'degraded nature' shaped by human actions. Some participants thought that nature was 'absent' from where they lived or they understood that nature to be deeply inferior to their experience of nature in the Highlands: they were not conscious of the nature in the everyday obviously humanised landscapes they inhabited. Others saw nature as ubiquitous: they saw their everyday humanised landscapes as filled with nature, and saw the Highlands as being different and more dramatic, but not necessarily superior to these. 'Restored nature' was a nature that was imagined, and although restored nature was powerful as an idea, a nature of degradation was more tangible for participants. We look at each of these understandings of nature in more depth in the following Sections.

8.2.1 'Degraded' nature

Participants often described the Highlands as beautiful, they tended to revel in the clean air of the Highlands (joking that they would be able to put it in jars and sell it in central London), they enjoyed the dark skies and the stars. Participants often talked about the ability to see for miles, and the lack to stimulation: *"It's just so still... usually in London if you see something as grand as that hill is over there, there would be, like, stuff. Everything just bustling around it, so you get that scale of largeness and busy-ness. Whereas here you get the scale, but it's just still."* There was uncertainty about the silence of the Highlands, but often there was relief at the cessation of constant noise:

> *"...you can't hear anything, actually when you stop, you can't hear a distant car or a fire engine or some alarm going off. It is just nature... [usually] you can always hear something, even in Sheffield, even in Coventry."* (C2-3)

This nature was bound up with reified understandings of the landscape that participants rapidly re-evaluated during the introductory walks in the first 24 hours they spent on the conservation week. An idea of the Scottish Highlands as being wild nature was pervasively embedded in the assumptions with which participants arrived. It was common for first time participants to have no knowledge about the environmental history of the Highlands. With no education about the social processes that shaped the Highlands, it was common for new participants to initially assume that the absence of humans meant that they were in a 'natural' or 'wild' environment. Some participants came to the Highlands with the English Victorian iconography of the glens uppermost in their minds: *"they just love the...treeless thing, they just think that's what Scotland is..."* (C3-2), they had a reified understanding of the Highlands, believing the landscape to be independent of human action.

We have seen in Chapter six that the conservation weeks facilitate education about ecology and ecological processes. This enables participants to see aspects of their surroundings that they used to pass over. Conservation weeks also facilitate a deeper understanding of the underlying processes that shape the Highlands. Seeing the evidence that the Highlands had been deforested (see Figure 8-1 and Figure 8-2), and learning some basic environmental history changed the way that participants saw their surroundings.

Figure 8-1: Deforested hillside in Glen Affric with the remains of tree roots visible in the peat, 24/4/16.

Figure 8-2: Tree roots visible in eroded peat with volunteer planting trees in the background 24/4/16.

While participants often continued to regard Highland nature as more 'wild' than their everyday nature, on conservation weeks they quickly ceased regarding the Highlands as untouched.

It was not uncommon for more experienced participants to see the Highlands as destroyed, deforested, bleak, desolate or as a wasteland: *"I just look at it and see an industrial wasteland where the land is run down"* (C3-2). What was assumed to be nature in the sense of non-human wilderness was revealed to be Hailwood's (2015) 'humanised nature', and was revaluated as 'non-natural', a kind of 'newly discovered non-nature', and eventually understood to be 'degraded nature'. Here a participant's reflection suggests how prevalent this experience of discovering that that the 'hills aren't natural' is:

> *"I was a typical person who'd grown up in Scotland thinking the hills were natural."* (F T5)

Here a participant reflects on what he has learned during his conservation week about the cultural history of the landscape:

> *"I learned about the clearances of the Highlands which I'd never actually heard of before, the social history of why this landscape is how it is today. Rather than just going out and not having any knowledge as to why…we were walking up to the planting site past the crofts, the old croft boundaries and the stones marking them….I didn't really know…people were cleared off the land and burnt out their homes…"* (D2-3)

Another participant talks about how a deepened understanding of the history of the area enabled him to see the landscape differently:

> *"…there's a far more of an understanding with the history of the land, what man's done…the way man's had an impact, there's far more appreciation of what you're actually looking at, and indeed you look for more. You spot more because… you've learned how to look and what to look at, and indeed you may have more questions…"* (F T5)

Another volunteer talks about her first experience of seeing 'proper' forest:

> *"I had no idea what a proper Scottish forest was meant to be like. I learnt a lot…it will definitely change how I see forests in the future…"* (C5)

An understanding about the history of the landscape combined with an understanding of the complexities of ecology made the landscape more vivid for participants. As the extracts above suggest, participants often began noticing and appreciating things that they would have ignored. When they understood more about the landscape, they began to be able to imagine how it could be different; whereas it had been regarded as immutable and distant it became shifting and immediate.

The iconic mountains of Scotland became a degraded source of sardonic sadness, where certainty about the silence of the hills came to the fore:

> *"You should come to Scotland, see our bare hills, you can sit… all day and you can't hear a sound, there's no birds, there no anything."* (C3-1)

The understandings of Highland characteristics as a product of social processes that some participants described when they talked about the bare hills and the silence show a very different understanding of nature than those who talked early in the weeks about the Highlands as untouched wilderness. Degraded nature was associated with a sense of betrayal and anger on behalf of the nature that could have remained, and the development of the idea of restoration as morally virtuous. Participants' understanding of their surroundings as degraded was ambivalent, although they derided it, it was this degraded nature that participants began to sense a connection to. Degraded nature was still valued: as a place of beauty, clean air, dark skies, uninterrupted views, scale, exposure and silence.

8.2.2 'Absent' nature

The great majority of participants saw the Highlands as a landscape where one's relationship with the non-human world is more immediate than in more densely populated areas with more infrastructure, less extreme topography and calmer weather:

> *"you're more exposed to the elements, you…have to rely on knowledge of the weather…you can't go out because it's been raining heavily then the roads are flooded … I mean you're closer to nature, in the sense that you need to pay more attention to it….in central Scotland it's like 'I'll put my coat on and run to my car'. Up here it's like 'I need to put on six layers because I'm going out…"* (C3-1)

Highland surroundings contrast dramatically with the everyday nature that participants come across.

> "*South east England is pleasant middle England… population density is majorly higher so there's more housing… it's nowhere near as rugged, it is more pleasant, more domesticated, more arable land, [the Highlands are] much bigger and more dramatic.*" (D2-3)

This contrast between nature at home and on conservation weeks may re-inscribe the idea of 'real nature' as being the absence of humans. Although conversely, as we saw in the previous Section, ideas of untouched nature are often undermined during participants' conservation weeks.

Low population density (a legacy of the clearances) and deforestation have led to the clean air, dark skies, uninterrupted views, stillness, silence and exposure of the Highlands that people valued. It tended to be these abiotic characteristics, rather than ecological or species specific observations which participants pointed out when they reflected on the difference between nature at home and on conservation weeks. Participants still often understood the relative absence of people as the presence of unsullied nature, even though they were aware that they were actually working in a severely degraded and simplified ecosystem. It was common for people to say nature was absent In the densely populated areas where they lived.

> "*there's not that much nature in Edinburgh.*" (D2-5)

This suggests that participants who did not have a prior understanding of ecology or nature often arrived on conservation weeks with an understanding that humans and nature are mutually exclusive.

8.2.3 'Restored' nature

The tasks of restoration exposed the ambivalence of human-nature interactions. Restorationists see a lot of failure: trees die no matter how lovingly they are planted and what symbolic gift giving significance they were planted with. Removing non-natives involved killing and this was problematic for some participants: work sites could feel absent of nature, dominated by the dying remains of plants (see Figure 8-3). TfL were also bound by the extent of the degradation in the Highlands, the ground was stripped of nutrients such that fertiliser was used to enable trees to establish, and the deforestation is so

complete in many areas that they plant trees rather than facilitate 'natural' regeneration from remaining local trees. This is what (Jordan 2003) sees as the particular power of restoration, the problematizing of nature which exposes the human values present in the intervention.

Figure 8-3: During *Rhododendron ponticum* removal, 27/11/15.

The conservation weeks are particular kind of hands-on restoration, which involves people. Thousands of people have travelled to the sparsely populated Highlands to restore the Caledonian forest. Using tree planting as an engagement tool creates a particular version of restored nature that is only one of many understandings of restored nature. Here, a participant contrasts the nature produced by restoration practice on conservation weeks with that produced by another project that he works for in Scotland:

> *"I come here and they're going to stick 300,000 trees in this little area of moorland potentially with fertiliser and all the rest of it… it is, effectively a plantation of native trees. But I think the difference is that [in the other organisation I work for] we are trying to create a landscape that is ecologically sound for the species to live in it and we're not…interested in people engagement…in that particular area…Here TfL are trying to encourage people to connect to nature through practical work, So from that point of view that are approaching it in an entirely different way."* (D3-3)

The 'plantation of native trees' that is being planted on conservation weeks will be very different from any remaining 'original' Caledonian forest.

The need for participants to be hands-on creates particular material natures, for some this is controversial. Restoration work on conservation weeks would be seen as questionable by some who see nature as something separate from humans and whose restoration aims are about creating a 'pure' non-human nature. This participant saw the labour on conservation weeks as reducing the value of the restoration by making it less 'natural':

> "I work on a reserve which deemed to be quite genetically pure, if you plant lots of trees around it obviously you affect that kind of genetic purity...there is also potentially an argument to suggest that if you allow forest to regenerate naturally then its evolving and adapting to the environment that is growing in, whereas if you take all the seed and grow it in a nursery you are giving every seed a chance to grow whereas that doesn't ever happen, the seeds have to make their own way in the world."
> (D3-3)

The needs of non-human nature are held in tension with TfL's desire to affect participants by enabling them to develop a sense of ownership and responsibility through labouring at the practice of restoration. In using human labour as a way of connecting participants with nature, hands-on restoration affects what nature exists now and in the future.

The idea that labour creates rightful connection with land has a long history. Modification of the land solely to confer ownership and accumulate land as property has been prevalent in the history of the UK (Arneil 1994). Indeed that land was 'wasted' by crofters' land management practices was used as a moral defence of the Highland Clearances (Richards 2012). Using this logic, TfL's hands-on restoration is virtuous, and confers connection via labour. However, human withdrawal from nature can also be seen as morally virtuous. The argument that land should be left to restore itself too has strong advocates in environmental philosophy (e.g. Katz 1996). Restoration in practice lies somewhere along a continuum between these two principles. As such, Jordan sees restoration as a unique practice that enables humans to confront this ambivalence and the discomforts and difficulties of a 'mature' (careful, attentive, reflexive) relationship with nature. In a mature relationship there are not absolutes, but

negotiations, hence the symbolic power of gift giving as a negotiation with nature (Jordan 2003).

Jordan values these tensions because they push participants to question their actions. Indeed, as we can see from the interview extracts above, participants on conservation weeks wonder: what action, what labour, is justifiable in restoring nature and restoring humans in nature? The imperfection of the restoration ideal forces recognition of nature as a social construction, and therefore forces recognition of restoration as 'value laden' (Egan et al. 2011). As Jordan (2003, p. 50) said, there is a negotiation to be had between humans and nature: restoration makes explicit our dependence on the natural landscapes, and its dependence upon us, and as such, it forces participants into recognising that they are in a relationship with and are part of a wider nature.

Other material factors are related to the outcomes of hands-on restoration. The range of tasks can be feasibly completed with largely untrained volunteer labour, the physical ability of volunteers, the affordability of equipment and transport, the accessibility of sites, legal access to land, and the need to use safe working practices. Wider cultural factors are also at play: the conservation weeks offer an intense and sporadic experience with no ongoing commitment, a form of volunteering which is typical of the kind of the 'voluntourism' or 'reflexive' volunteering that is increasingly common. The need to appeal to potential volunteers in a cultural context where volunteering is seen as a tool for self-realisation and discovery (Ganesh and Mcallum 2009; Wilson 2012) also contributes to the kind of labour that is carried out, as the ecological aims of restoration need to be balanced with the need for volunteers to have a positive memorable experience with a sense of achievement and adventure.

TfL's restored Caledonian forest will reflect the restoration practices that are enabled (and constrained) by these factors. Restoration practice is affected by the cultural context in which it takes place, and using volunteers with the aim of generating a sense of connection to nature combines with these myriad influences to produce particular kinds of nature. Restoration which prioritises volunteer involvement produces particular natures that are relatively easy and legal to access and are created using affordable methods (e.g. unlike other local landowners TfL did not usually helicopter in trees or labour). The product must require the completion of large amounts of simple repeatable tasks (e.g. tree planting) that can accommodate a fast turnover of small group labour, can be

done safely and by groups of people of average physical ability and no particular special skills. In the day to day practice of hands-on restoration the outcome of the work must always be secondary to the social aspects of the group activity and the wellbeing of the volunteers: there cannot be strictly enforced deadlines or targets for the product. As the participant above commented, these factors combine to mean that the nature produced by hands-on restoration in this case is, initially, cultivated areas of native trees which are understood by participants to be restored Caledonian Forest.

Restored nature was a nature of the future. There was little restored nature to experience, apart from some established trees and a deer exclosure (25 years old) which were both at Glen Affric (see Figure 5-8 and Figure 5-9), in which the majority of participants spend limited time. Instead, the majority of participants' time was spent working in open moorland with no visible trees (see Fig Figure 8-4).

Figure 8-4: Tree planting site at Corrimony, 29/3/16.

Thus, restored nature remained largely in the imagination. It was a future nature of fantasy, hope and compromise that was created by the way hands-on restoration is carried out and TfL's richly explained vision of restoring the Caledonian Forest. 'Restored nature' has only a limited basis in what participants experienced physically or aesthetically during the course of their practice. It was rather based on what they imagined may be experienced in the future, often

beyond their own expected life span. Restored nature was built from ideas of what had inhabited or might have inhabited the Highlands that were projected into the future to a time when a new forest may thrive on the moorland. Restored nature was planted trees: safe, labour intensive and symbolic work that appeals to volunteer restorationists, conferring a sense of legitimacy to the pursuit of restoration. The mobility of adventure tourism, in which a constantly changing cast of volunteers work in weekly bursts, produced a restored nature which may persist over generations. Thus, restored nature on conservation weeks is a forest that may grow from the labour of many passers-by. Macnaughten and Urry (2001) claim that human responses to nature are in part derived from what is present at the site and what was, or may have been, on the site in the past. Through examining hands-on restoration we can see that ideas of the future can also influence how people feel about and respond to nature. What may be on the site in the future affected how people felt about their the nature that surrounded them.

8.3 Disconnection and Connection

This Section considers the phenomenon of disconnection from, and connection to, nature as it was experienced by participants in hands-on restoration. It considers how participants were estranged from nature, to what degree they had reified understandings of nature, and considers the role of ownership and how it relates to a sense of connection with nature. It examines a connection to nature as an affective outcome of restoration practice, which participants experience as part of an ongoing relationship with nature. It also considers some of the different ways of understanding human connection to nature that were reviewed in Chapter two: the concepts of biophilia, the 'ecological self' and the Leopold's idea of humans as part of a wider biotic community. It discusses how and to what extent these ideas are reflected in the experiences of participants in the case of the conservation weeks and considers the after effects of experiencing a connection to nature.

8.3.1 Estrangement and intimacy

New volunteers were sometimes younger, urban dwellers who were busy and desk bound and could be described as estranged from nature. Here a participant describes the situation that many of the participants on his week were in:

"I think a lot of people are here for a similar things, you have a more stressful job, working in the city, don't get a chance to really look up and smell nature and just relax and hear nothing, fall asleep because you are tired rather than just tired mentally…" (D3-6)

Their daily lives were often conducted in urban environments and their working time was often spent dealing with abstract worlds (for example computer games, service industries, marketing or promotion). Hailwood (2015) suggested this sort of lifestyle is characteristic of an estranged relationship with nature, where one spends little time engaging in the sensory natural world and most of the day's attention on abstract worlds. This observation is not surprising as it reflects existing research which suggests that increased urbanisation combined with increasingly sedentary indoor work and leisure patterns has meant progressively less exposure to nature for younger generations since the 1970s (Natural England 2009). By contrast, intimacy was provided by the embodied engagement with nature on the weeks.

As we saw in Chapter five, The physicality of the tasks was important, as were the ways in which TfL focussed participants' attention. Another example of an activity which developed this kind of intimacy was the red squirrel survey. This was an opportunity for participants to quietly observe non-humans in a way that they did not in their everyday lives. Before the survey participants were taught about the habits of the squirrels and asked to attempt to discover what animals were using the areas we were surveying. To do this involved scrutinising the forest floor to search for signs of their homes and food. The agency of the non-humans became vivid when trying to work out where and how they made their homes: there was a reason to try to understand the place through the eyes of another species. This extract from the field notes can be interpreted as the discovery of new intimate way of viewing the non-human world:

"I felt like a nature detective, the natural world coming alive around me as I learn to read it. I learn who is who. I learn that hazels and strawberries may be friends. I could learn who had been there by looking for their signs – squirrel's dinner, grouse poo, mouse holes, mouse's dinner, buzzard's nest. All things that you need to be taught to see. Learning to look, listen, observe. It's something that needs to be taught. Stopping and looking. First looking for chewed cones: looking under the big pines on ground covered in moss and blaeberry, pine needles, birch

leaves, twigs, lichen. Then down a steep slope to look in the hazel wood: lots of split nuts, also a bucket and an old hubcap, tiny strawberries, violets, primroses, dogs mercury. We found split hazelnuts and beech nuts so there must be red squirrels somewhere." (Field notes 26th April 2016).

As Hinchliffe (2007, p. 131) observed of his experience carrying out surveys: "Our eyes (and to a lesser extent our noses) were being trained to recognize distinctions that were formerly invisible to us. The pictures, field signs and conversations were changing the way we sensed…" Through physicality and observation participants in restoration are taught a different nature that they can be intimate with.

8.3.2 Reification and environmental knowledge

As we have seen, reified understandings of nature were common on the early days, but it was not long before participants knew why the hills were stripped of native trees and how the landscape of the Highlands was as much a product of social processes as the parks of Edinburgh and Glasgow. Leopold said that *"one of the penalties of an ecological education is that one lives alone in a world of wounds"* (Leopold 1966, p. 183), meaning that restorationists learn to see the damage that has been done to the landscape that many people do not have the knowledge to recognise. On conservation weeks participants were often unaware of the deforestation of the Highlands before they attended a week, many described when they realised that the Highlands were a product of human deforestation:

> *"…and then I realised the Highlands didn't have the trees. And then it all dawned on me why it was so quiet walking up the hills in Scotland, that there were no animals and then I thought, ah ha, okay."* (F D2)

Here a participant talks about how her environmental education has led to a different way of seeing the world around her.

> *"Now I cannot go for a walk in the woodland without looking and thinking about all aspects of it, structure and botany and history and you just sort of can't help looking and thinking, spotting things nowadays…"* (F GA4)

This is newfound ability to see what would have gone unnoticed before engaging in restoration practice exemplifies how relationships between participants and their surroundings could change. In reflecting upon the history of the woodland

the participant is drawing on information which could decrease reification and enable her to distinguish the non-human and humanised aspects of the woodland, seeing the interaction between them. It is more intimate too, reflecting an increasing ability to see and appreciate the non-human and to see how humans and non-humans interact.

8.3.3 Feeling a sense of ownership

TfL gave participants a sense of ownership from the beginning, for those who continue to participate for a long time it is usual to gain some kind of connection with the TfL work sites:

> "[It shows] the ownership we all feel over this. And we've all been working, some of the sites we've been working on for 20 years, [we have] a personal connection with the place we work and these landscapes." (C2-8)

Having tasted this sense of ownership in the Highlands many participants became involved in projects at home that gave them a similar sense of ownership. Legal ownership of land was something that some participants gained as a consequence of their involvement on conservation weeks:

> "I was so inspired that I managed to buy a bit of my own land to do similar activities by removing non-natives and improving the biodiversity…" (T5)

Two retired participants talked about buying land near home and restoring it, although this form of ownership was not financially possible for many participants. The interaction that restoration entailed gave participants a deeper sense of connection with nature which they described as a sense of ownership in a wider, paternal sense:

> "Planting a tree, it feels as though there is some sort of ownership that takes place. There is real connection that takes place between you and that tree. It's not just planting a tree, it's like I'm like a father figure type thing. I've just put this baby in the ground, and you want see that doing well…" (GA1)

This sense of ownership and investment made participants look differently at the landscape:

> *"because you're looking so closely at the landscape, looking for the differences in the vegetation and watching in the trees waiting if they're going to do well, it's totally different from going for a walk in the hills. It is completely different. You have a different eye for everything...when you look back and see your little trees...you feel a bit of ownership."* (GA4)

On conservation weeks legal ownership of the land is considered relatively unimportant in comparison with ownership defined in this broader way. Conservation weeks take place on land owned by private owners, government and other NGOs with the aim that their participants will begin to take ownership of their place within nature. This did seem to be part of what connecting to nature was on the weeks:

> *"I think it's because we're interacting...when you come here you see the broken ecosystem and landscape. You're coming here planting trees and you're playing your role in building it and you're just... it's like you're fitting in to the ecosystem in a way. You're planting a tree, you're sowing the seed of life. You're generating it."* (GA8)

8.3.4 Connection as a lifelong feeling or an epiphany

Some participants felt they had a pre-existing intimate connection with nature since they were young children, others talked about nature camps that they had been on which taught them how to observe nature, or beginning to feel an affinity to nature as they explored the wider world as adolescents. Participants had become familiar with nature in different ways, they had become intimate with the nature that they had access to, usually without any pre-existing knowledge of underlying processes. Their experiences were often formative, unique and specific to their lives, time, and place, as the following examples demonstrate. The contextual information is left in the extracts to illustrate how intimacy with nature has arisen in different ways: unique to the situation of the participant. This participant described wandering in the countryside as a child in the 1950s:

> *"... I was very much a loner and I used to go walking in the hills, I used to see farms, some farmers would give me jobs and give me some tea or something to drink, not pay... and I became part of the countryside, I took it to be my countryside...I saw all sorts of things: wildlife, stoats, otters, rabbits, another thing I used to do was catch a lot of rabbits, and*

sell them to the butcher, I caught the rabbit, skinned and gutted it, and gave it to the butcher, he gave me one and sixpence for the rabbit and he'd charge three shillings for it..." (T7)

Here as participant describes her childhood affinity for nature in the 2000s:

"...ever since I was about 12 I'd spend every day in the nature reserve. I would cycle... before I got an addiction to gaming at one point... I'd cycle after school... I'd cycle to the nature reserve and just walk around. I wouldn't really know anything because I wouldn't have anyone to really tell me because neither of my parents knew anything about it. I just would kind of cycle around and then cycle home, full of flies in my hair..." (C5)

Other participants came to TfL never having experienced any feelings of connection to nature, for many of them the experience on conservation weeks was the first time they had felt the intimacy of observing and being immersed in nature. They often explained this as being different from the more casual observation of the scenery that they had experienced during walking or cycling through landscapes, it was quiet observation that often gave people an early sense of intimacy with other species or landscapes:

"...when you're on a site a full five, six, seven days like we are here, and you're crawling all over it you actually learn almost every square inch. It hits home..." (T5)

The sense of connection that participants feel on conservation weeks did not spontaneously arise as they walked onto the hills. The previous results and discussion Chapters described how participants are nurtured by the focalisers who create a sense of safety and curiosity which supports participants in exploring the natural world. This facilitated exposure to nature meant TfL could be a crucible for emotional epiphanies and the beginnings of an emotional connection to nature.

8.3.5 An affective connection

Although an evidence based knowledge of nature played a very important role for many participants in building a relationship with the non-human world, their experiences of closeness to nature were usually emotional rather than

intellectual. Here a participant explains how this sense of connection is different from a knowledge based understanding of nature:

> *"I'm not a religious person ... I'm not a superstitious person, I'm not into deities, or rituals or anything like that at all. But I have always felt very, very powerfully moved when I've been outside in nature...It's a bit deeper than just having an academic knowledge, it's a bit deeper than just having read up on something or been interested in something, it is that you actually feel something."* (D2-1)

Many participants were moved by their experience of feeling connected to nature, here a first time participant describes how his experience on conservation weeks affected him:

> *"I have always felt a connection with nature, but I just felt as though it was going to another level, it was going a bit deeper. Definitely: quite emotional, I feel quite emotional. I feel as though, just talking about it I feel a real deep emotion, a bit of welling behind the eyes, you know?"* (GA1)

Many participants were reluctant to admit how affected they were by the experience or were somewhat overwhelmed and surprised by the sensation. When they explained how they felt their emotion flooded out like a confession:

> *"...fuck it, who cares anymore?...this is something that actually, yeah, it has affected me, it is important to me."* (F D3)

8.4   Biophilia, the ecological self, and being part of a biotic community

Wilson, Naess and Leopold's ideas all have some kind of love, care or affinity for the non-human as a common factor. The basic premise that unifies these descriptions of connection with nature is exemplified in this interview extract:

> *"... unless people have some kind of personal connection with nature, unless it means something to them, they are not going to be particularly motivated to help conserve it...we talk about all these things like ecosystems services, carbon sequestration, restoration... but to me...going to help prevent flooding...would not be enough to motivate me to get out of bed on a rainy day and come and do it [the work]. To me, the motivation comes from, purely from personal love of the forest. And if*

people don't have that connection, that love, they're not going to be as motivated to do it." (D10F)

This is central to the ideas of deep ecology, that "people exploit what they have merely concluded to be of value, but they defend what they love" (Berry 2000, p. 40). Berry goes on to say that science can help us know the value of species and species diversity, but "it cannot replace, and it cannot become, the language of familiarity, reverence or affection by which things of value are ultimately protected." We have seen above that feelings of affiliation or love were central to the experience of connection to nature. Beyond this common core, the next Section examines whether the ideas of Wilson, Naess and Leopold were borne out in people's lived experiences of connection to nature.

8.4.1 Biophilia

We have seen that, for many participants, a sense of connection to nature was something that was present since they were children or was dormant and could be found in later life. Indeed some participants understood a love of nature as part of the human condition: "... *I feel that it's very much part of who we are...*" (F D11 AF). For some, a connection to nature was an arrival home to one's 'true self'. For some, a connection with nature was understood as something innate, some participants speculated that this innate connection had been lost in peoples' everyday lives. One participant spoke about having long had a '*latent*' (D2-1) desire to live in a way more connected to nature. This feeling of latent or potential connection in oneself and the possibility of 'coming home to a true self' may be what Kellert and Wilson (1995) have captured in the biophilia idea. Participants often idealised the possibility of humans living in a 'state of nature' (absent culture) in a similar way to *Locke in his vision of a* state of nature as "peace, goodwill, mutual assistance and co-operation" (Williams 1976). Here a volunteer speculates, arguing that it is modern society which keeps humans from connection with nature:

> *"I think it's something that's universal because you find it in all cultures, that kind of worldview or connection to something or... everything being conscious... and I feel that we've become disconnected in the society that we live in...I feel it's very much part of who we are and I think if we don't give expression to it in the proper way that's when you start having all*

sorts of different problems...health problems, mental health problems, as well." (F D11 AF)

Overall, in this case people did have an already existing or nascent affective affinity with nature, and they often spoke of a deep love of nature.

The premise of the biophilia hypothesis is that simple exposure to nature will awaken this love of nature in humans, but this premise was not borne out in this research. Although people thought a love of nature was innate, simple exposure to nature was not thought to create a connection to nature. Rather participants' experience was that a connection often required some form of active engagement with nature. In addition, contact with nature was not always a positive experience, participants do not always feel love or affinity for nature, bad weather could preclude feeling a sense of connection. This research suggests that the biophilia concept ignores a more complex reality, in which nature is many different things to different people. A more nuanced picture emerges showing a mixed response to the nature. A love for nature was only one of many strongly felt emotions that were stimulated through taking part in hands-on restoration.

For those unused to being outside urban areas the scale and exposure of the Highlands was sometimes seen as *"freeing"* (D3-1) and for others frightening:

> *"I actually feared for my own existence being out here on the hills, it was terrifying for the first day, we were walking through that bog and the sense of isolation, I knew I was with people, but I felt really alone and vulnerable and I had to battle some of that angst as well, I'm so tiny and I'm such an urbanista."* (C2-4)

The participant went on to say: *"I just saw a hostile environment ... I was sure I would break my ankle and have to be helicoptered off the hill..."* (C2-4). For some volunteers, being in the vast and largely uninhabited landscape of the Highlands, away from familiar infrastructure such as roads is frightening and overwhelming. Although TfL codify the experience of nature that they provide as being about 'beauty' and 'inspiration' (e.g. Trees for Life 2018), some participants see a nature that is menacing and intimidating and through their engagement in restoration they experience a nature that is more sublime than loving. The participant above described the experience as sublime in Burke's (2009) sense: as a source of terror and death (C2-4). This expression of fear evokes the descriptions of nature before the time of the Romantics, when nature was seen as

a source of power and authority that had to be appeased (e.g. White 1967) before wilderness was tamed, celebrated and appreciated in the way it is today (Soper 1995). Other volunteers experience nature as the Romantics did, they come looking for, and found, an extraordinary experience as compensation for the daily grind, and for them ecological restoration produces a nature which contrasts with everyday life. These volunteers experience a nature which is sublime in the sense of inspiring reverence, awe and love rather than fear. They come wanting to experience what has been called the 'accelerated sublime' (Bell and Lyall 2002), in which an experience of nature is consumed as a source of transcendence. For others, nature is a raw experience: nature as a source of vulnerability, not biophilia at all. If nature is understood as an outcome of social practices it will always be too various to be associated with one underlying emotion. If, as in this case, restoration practice sometimes involves travel to remote degraded landscapes in foul weather to carry out hard physical work, nature will likely be a something to fear and a source of anxiety, especially for those who are used to an urban environment.

8.4.2 The ecological self

Naess' idea of the ecological self goes some way in describing what a connection to nature is for participants in this case. Naess suggested that a connection to nature involves incorporating non-human nature into a sense of self, or expanding one's empathy to incorporate non-humans. There were elements of this phenomenon in how some participants talked about their experiences with non-humans. As participant GA2 said: "*this is part of me*", and as participant T7 said when asked whether he felt a connection to nature: "*that's like asking me do I love my wife? Do I love my children…it's part of who I am…*". However, this is not quite what Naess describes, for him the ecological self is an understanding of the natural world which is radically different to most Western understandings of humans and nature. Naess (1987) uses Sami understandings of non-human nature to illustrate his point: in Sami understandings of the world it is inconceivable that one would be separate from nature because the duality of nature and culture does not exist. It is more likely that these participants are talking generally about feeling affinity and care for nature. These participants see a love of non-human nature, and a sense of connection with that nature as part of their identity which is hard to disentangle, but they do not see themselves as inseparable from nature in the way that Naess describes.

Part of Naess' argument for the development of an Ecological Self is that "altruism becomes unnecessary": he argues that we act to protect non-human nature as we believe that we are protecting ourselves. (Naess 1989, p. 9). This idea has its limitations, as Bragg (1996, p. 96) points out, a reliance on self-care as a source of protection for the non-human is psychologically 'naive' as evidenced by the prevalence of self neglect and abuse in Western societies. On conservation weeks it did not seem necessary to circumvent altruism. Altruism was plentiful and seemed to arise spontaneously as part of a sense of connection to nature. Those who felt a connection to nature described deeply empathic responses to non-human experience, which motivated their altruistic behaviour:

> *"I thought I'd go and sit under [a tree] and then I saw all of the young ones around it and the regeneration around it. I just got the feeling that that the tree was really happy because after 200, 250 years of all of her offspring being eaten finally she had her babies, her family around her. I can't explain how or why, but I knew that the tree was happy and that made me happy."* (D 10 F)

8.4.3 Joining a biotic community

Perhaps unsurprisingly, given restoration's roots in the ideas of Leopold, a connection to nature was most often described as an affinity for non-human nature and a sensation of being part of a wider biotic community: in this case hands-on restoration produced a sense of connection to non-human nature that was about belonging. Here a focaliser talks about a group he worked with and explains how they realised that they were part of nature:

> *"even though they were surrounded by nature all their life, but they never noticed it...[realised] they were part of nature, if you know what I mean."* (T9F)

Almost all participants understood nature as something which was bigger than oneself and that it was possible to feel connected to, or part of: a wider web of relationships with the non-human world. It was this that they were talking about when they talked about connecting with nature. Connection was connection with the 'natural world' in which everything, the biotic and abiotic non-human, and the human, are connected in a wide web of relationships. Participants often talked about their experience on conservation weeks as having lead them to feel as though they were part of life. They had a sense of being given permission to

take one's place in 'the great cycle of life' within the non-human world. For many participants this was a profound and affecting insight which felt integral to their identity or sense of self:

> *"…it really hit me when I was volunteering… 'this is part of me. I'm part of that and I'll never be able to break away from that now wherever I go'."* (GA2)

For some, a feeling of belonging meant they felt a responsibility, they saw their decisions as part of something bigger than themselves:

> *"…it has made me think of my part in playing a small role in a much bigger picture."* (F T1)

8.5   After connection: finding, losing and despair

A connection to nature may develop in participants, but it can also recede. We saw in Chapter seven how participants on conservation weeks were 'sucked back in' (D2-3) to modern life upon returning home, that the positive affect they felt on conservation weeks got "knocked out of you" (FD7&T8). This was often the case for those who felt connected to nature during conservation weeks. Here a long term participant talks of his experience of losing and finding connection: the desire to connect competed with other priorities and situations in his life:

> *"I've always had that sort of connection with nature…since I was a kid. I got really into drugs and really into drink and I lost that nature connection stuff and then I was getting into it again and then I went to prison for a while and I lost it again…I found it again, but then I got wrapped up in the same drink and drugs scene…I wish I'd found it and kept it the whole time. It's always been there, it just needed reawakening and TfL came and reawoke that in me, and now I'm holding onto it."* (T9F)

It need not be all-consuming drugs and imprisonment which lead to a loss of connection with nature, a desire for other things can crowd out a connection, even in someone who has chosen a life in which constant contact with nature is her job. Here a conservation NGO ranger explains how her everyday social context changed her priorities:

> *"[When I go home I feel I should]… be a successful participant in modern society…those things don't really matter out here. It doesn't matter if you've got a nice car or a nice home out here."* (GA6F)

She was surrounded by nature every day in her job, but the way she thought about it was different:

> *"...when I'm in the Lowlands and driving round, I'll be looking at everything through my working eyes...you even... I was going to say objectify the countryside, but the things... you are categorising them, it's the work thing...they become part of the stress...You can make them into work."* (GA6F)

It should not be surprising that a sense of connection to nature seems to require maintenance to remain alive. If natures are, as Macnaughten and Urry (1998) suggest, a product of social practice then it follows that as everyday practices change so too do relationships with nature. The idea of conservation weeks as rites of passage is limited, since they do not provide a one-off induction into another way of seeing the world. Rather they seem to give participants a glimpse of another way of seeing the world.

Among those who felt they had a connection with nature alongside their knowledge of environmental issues, there was often a form of hopelessness, despair, or dissonance. Participants talked about the overwhelming scale of environmental problems, the rapidity of biodiversity loss:

> *"I think there is this sort of hopelessness... when you say to people this is what's happening and the numbers are stupidly high, the species we are losing, what's going to be gone by 2020, it's like: 'where do you start?' There's a paralysis"* (D3-9)

Participants talked about the political inability to agree to act upon climate change, the possibility of having already passed environmental tipping points and the cultural change necessary to begin dealing with these issues: they talked about feeling outside '*normal everyday 9-5 life*':

> *"I'm kind of caught between knowing that we have reached a bit of a tipping point and may well have gone past it and also thinking it doesn't really matter because I'll just do what I can do and hope that everything will work out alright in the end. I don't know, but actually being in the conservation sector it is quite... I can see that people who live their normal everyday 9-5 life just can't see what I can see, and they don't therefore feel the same connection with what is going on in the world.*

> *And it is quite difficult for them to envision that things are not necessarily as rosy as they could be."* (D3-3)

It can be difficult, perhaps impossible, to be 'connected to nature' and simultaneously *"be a successful participant in modern society"* as the participant above sees it. A connection to nature that felt like a liberation when participants were safely enveloped by the 'bubble' and away from their everyday lives became harder to sustain once they returned home.

8.6 Conclusion

A number of findings emerge from this final results Chapter, firstly it seems that ideas of nature are highly pluralistic. The nature in which participants are carrying out the tasks of restoration is understood to be degraded, but somehow more natural that the nature at home, whereas restored nature is a future nature of the imagination. Secondly, relationships with nature are varied within the groups, some participants arrive at conservation weeks disconnected from nature: with reified understandings of the Highlands, and estranged from the non-human world. Some participants arrive with a developed knowledge of and/or intimacy with the natural world. Conservation weeks were often instrumental in giving both these groups a deeper sense of connection with nature, at least temporarily. This connection with nature was primarily personal and intimate: emotional rather than intellectual. Hailwood's work posits that estrangement, lack of ownership and reification amount to alienation from nature. Often hands-on participation in restoration enabled estrangement to be replaced by a physical and psychological sense of intimacy, and a lack of ownership to be replaced by a sense of ownership (psychological or occasionally legal). It facilitated reification to be replaced by a knowledge of ecology and environmental history which informed an understanding of human and non-human agency as co-creators of the Highlands as they are today. There were aspects of the experience of connection to nature which were similar to that described by Wilson (1984), Naess (1987), and Leopold (1966), with Leopold's sense of connection to a wider community being most applicable to what participants experienced. Finally, connection to nature seems to be a quality that can be found and lost depending upon context and competing priorities. People who felt themselves connected with nature on conservation weeks often subsequently felt a sense of despair about the damage of the non-human world in everyday life.

9. Conclusion

9.1 Introduction

This thesis began by exploring how the idea of 'connecting to nature' has arisen as a response to environmental crisis, which rests upon a premise that what people think about nature matters. It then reviewed the largely untested claims that the practice of hands-on ecological restoration enables participants to develop more connected relationships with nature. This concluding Chapter presents what this research has contributed by examining the basis of these claims. To do this, it answers each of the research questions that emerged from the literature review and the wider implications of these answers. Accordingly, the opening Section responds to the first research question, which aims to establish what social processes are involved in creating and maintaining connected human-nature relationships:

1. What aspects of hands-on restoration are important in mediating participants' understandings of nature and their connection to it?

Secondly, both in literature primarily concerned with restoration and in literature primarily concerned with 'connection to nature' the concept of nature itself tends to be left unexplored and its complexities overlooked. To address this deficit the subsequent Section answers the second research question:

2. What natures are produced by hands-on ecological restoration?

Finally, although there is a fast growing body of work concerned with connection to nature, there has been very limited attention given to what a connection to nature is as an experience. Therefore the final research question considers this, again using the practice of ecological restoration as the setting for the examination. Thus, the third Section of the Chapter considers:

3. What sort of human-nature relationships are produced by hands-on ecological restoration?

The Chapter considers the wider implications of the research. It also reflects upon the study itself, considering the theoretical perspective chosen to guide the research, as well as the methodology, research design and the data collection methods. Building upon this evaluation, the final Section also suggests some new research agendas that arise from the study.

9.2   What aspects of hands-on restoration are important in mediating participants' understandings of nature and their connection to it?

Physical 'doing' is the core of hands-on restoration: the completion of practical tasks such as those detailed in Chapter five, with most time spent on tree planting and removing non-native species. In restoration scholarship this is variously framed as "direct participation" (Suding et al. 2015, p. 639), "hands-on participation" (Keenleyside et al. 2012, p. 11) and "participation in ecology" (Jordan 2003, p. 91) and is thought to be the critical characteristic of restoration which gives it power to foster connectedness to nature. This research suggested that these claims are generally valid, and that hands-on restoration does foster connectedness to nature, but it also adds definition, detailing three aspects of hands-on participation, which are of particular importance in creating understandings of, and relationships with, nature. These are restoration's ability to allow participants to feel they can make meaningful reparation to nature, its ability to facilitate an embodied intimacy with nature, and its ability to stimulate positive affective experiences in nature.

Taking these aspects in turn, firstly, this research found that hands-on intervention in nature enabled participants to fulfil a desire to contribute to resolving an aspect of environmental degradation by undertaking acts that they felt to be significant. This study found that there was anxiety about environmental degradation, which motivated participants to carry out practical action that appeared to go some way towards caring for nature. Labouring at tasks that were understood to contribute towards the restoration of nature enabled participants to address their understandings of nature as threatened and feel as though they had earned their place in the natural world. This bears out the suggestion of Hailwood (2015), that labouring can confer a sense of ownership, and supports Jordan's claim, based on the work of Mauss (1954), that work in nature which attends to the perceived needs of nature can be used as a form of gift giving to create and maintain bonds between humans and the natural world. The study found that environmental work was felt to be meaningful and worthwhile, offering an outlet for anxiety about the natural world. Although it is important to note that this effect was dependent on participants' pre-existing desire to act in support of nature, and a supporting discourse, which emphasised the contribution of participants.

Secondly, hands-on environmental work mediated human-nature relationships by facilitating embodied intimacy with non-human nature, reducing what Hailwood (2014) termed 'estrangement' caused by 'inadequate' participation in the 'fleshy' 'perceptual' world. The corporeal participation and visceral immersion in nature involved in the completion of tasks fostered a sense of physical intimacy with non-human nature by introducing participants to the possibility of nature as an entity with which one can interact and begin to be acquainted with. Participants were reminded of, or became familiar with, their own physicality, and that of the sensory non-human world around them, via their physical intervention in the natural world. This sensory experience opened people up to understanding their role in the natural world in new ways, as well as reminding them of any significant childhood experiences in the natural world. Physical intimacy was augmented by a another important aspect of hands-on participation, which was not foreshadowed by the restoration literature, but which finds parallels in studies of extreme sports or adventure tourism: the elation and sense of achievement stimulated by physical exertion. The exertion felt during and after the completion of tasks stimulated positive affect when it was coupled with a sense of achievement from overcoming difficulty, which participants subsequently associated with their experience of nature.

Therefore, the research established how the corporeal aspects of the 'doing' of restoration practice were central to its effectiveness in fostering human-nature relationships. However, this physical 'doing' alone did not bring people into a sense of connection with nature: the reasoning and discourse justifying the tasks were also crucial in creating particular meanings for participants about their relationship with nature. Jordan (2003) makes strong claims that restoration is uniquely positioned as a practice to inculcate particular feelings of connection with nature because of its narrative of repairing past damage. This research found that this claim was justified, and that the strong focus on environmental history coupled with a redemptive vision of the future enabled participants to see themselves as a small part of an unfolding ecological story, with which they were able to feel connected. Restoration more generally often relies upon a strong narrative about the past, which explains why existing nature is degraded and how it came to be that way. This analysis of past human actions is central to the intention of the practice and enabled participants to identify some of the legacies of human agency present in the natural world. This analysis reduced participants' reified understandings of nature as an entity separate from the social world.

When coupled with a vision of restored nature, which participants were working towards, the story of restoration gave them a sense of belonging to a broader temporal context as part of a continuing relationship between humans and the natural world. These justifications that are made for restoration make it especially conductive for fostering a sense of connection to nature when compared to other notionally similar practices, such as conservation, gardening, recreational and sporting activities, that take place in nature.

Some of the acts that constitute restoration were more effective in stimulating a sense of connection to nature than others. For example, tree planting integrated easily into a redemptive narrative, which reinforced human connection with nature, whereas more 'destructive' practices such as removing non-native species did not. Tree planting demonstrates how discourse can combine with physical practice to encourage feelings of connection with nature. The act of planting trees became symbolic to participants because of a number of interrelating factors. The long lifespan of trees relative to humans reinforced the wider temporal context that restoration narratives emphasise. Tree planting as a practice also interacted with the redeeming aspect of hands-on participation, in that the act was one of 'giving something' to the landscape, and was easily embedded into a discourse which emphasised the contribution participants could make towards nature by engaging in hands-on work. It enabled an understanding of tree planting that was about healing nature and replacing what had been destroyed. This emblematic significance was elevated further when tree planting was used to commemorate people who had died, and when it was carried out as an act of hope for the future. Through this, tree planting had the effect of connecting significant events in the personal biography of volunteers with the relatively long lifespan of the tree and the wider ecosystem that the tree was embedded in, effectively enveloping the biography of participants into a wider temporal and ecological context and creating a sense of connection between human and nature. However, restoration is composed of a variety of tasks, and many of these hold much less promise for fostering a sense of connection to nature. The acts of clearing vegetation and installing infrastructure are as much about restoring as is tree planting, but these tasks do not offer the same symbolic potential, accordingly, they require more explanation and justification, relying on discourse to make the link between the act and connecting to nature.

In common with other advocates for human connection with nature (Cohen 1993; Baillie 2003; White 2012; Flowers et al. 2015), Jordan (2003) and (Higgs 2003), suggest the ability of restoration to produce particular understandings of, and relationships with, nature is amplified when the practice is carried out in ways that incorporate focused attention on the tasks at hand with elements of ritual. There has been limited analysis of why these techniques may prove useful in fostering a connection to nature, and in response to this deficit, this study contributes some clarity: The use of mindfulness, meditation and ritual were important because they helped create vivid memories and elevate the significance of the experience of being in nature for participants. Participants subsequently drew upon these memories when describing their sense of connection to nature. These findings are supportive of the effectiveness of Higgs' idea of 'focal restoration' as participants attributed their sense of connection to nature not only to their work and the intentions behind it, but also to the experience of paying close attention to the work while doing it. In agreement with other recent findings (Flowers et al. 2015; Barbaro and Pickett 2016; Wang et al. 2016), this research demonstrated that attention to ones surroundings was important in encouraging a sense of connection to nature. Observation through carrying out surveys and paying mindful attention to the mundane tasks of environmental work allowed participants to step away from everyday distraction (worries, plans, regrets, memories) and become immersed in observing the natural world around them. The research found that such mindful attention to tasks was complemented by the interruption of work by formal nature focussed meditation and ritual activities, which had the effect of making the experience of being in nature intense and remarkable for participants. There was, however, a sense of intimacy about the sharing of rituals and often a shared sense of awkwardness or embarrassment about the possibility of feeling connected to nature via rituals or meditation. Thus, the effectiveness of meditation and ritual was contingent upon the consent of the participants to enter into behaviour that broke from usual social norms, including holding hands or standing in silence for longer periods than is typical. This research supports the observations acknowledged by Higgs and Jordan, that the use of these tools is contentious, requiring the acceptance of a degree of vulnerability on the part of participants.

Unlike other scholars in connection to nature scholarship (cf. Zylstra et al. 2014; Ives et al. 2017), Jordan and Higgs both emphasise the use of group 'communitas' as a tool to create connection between people and nature. Indeed, this research

provides evidence that this was a factor that supported participants in entertaining new or different ideas of human relationships with nature. When restoration work was carried out in social situations characterised by trust and mutual support, akin to those found in a state of communitas, participants re-evaluated their relationship with nature with a degree of sincerity and candour that they felt unable to display in their everyday lives. The importance of isolation from the demands of everyday life (work, kinship bonds and media) in creating communitas suggests the possibility that local hands-on activities that are integrated into everyday life may lack the affective power of restoration carried out in remote locations. The research also found factors that are not identified in the claims made by Higgs or Jordan. Firstly, it identified that affective labour was a large part of the work that leaders of environmental activities carried out. Though a study by Grimwood et al. (2015), is a valuable exception, the role of guides in facilitating a sense of connection to nature is not generally explored in the literature dealing with connection to nature (Ernst and Theimer 2011; Barton et al. 2016; Bruni et al. 2017). However, our study of conservation weeks found that leaders' affective labour was essential for achieving group cohesion and facilitating participants in absorbing particular ideas of nature. Secondly, the importance of the provision of ecological education and the stimulation of curiosity as aspects of the practice are also overlooked in claims. Other recent work suggests that the provision of ecological education alone does not stimulate feelings of connection (e.g. Bruni et al. 2017; Lumber et al. 2017). However, this research demonstrates that the incorporation of information about basic ecology into hands-on environmental practice in conjunction with a narrative which emphasised independent learning and curiosity about the natural world did inspire participants to pay attention to and become more aware of the natural world, enabling them to feel connected.

To sum up, Higgs and Jordan suggest, as many other advocates of restoration do, that restoration enables a sense of connection to nature. Unlike most other advocates for restoration, they attempt to explain why this may be. This research has built upon their largely untested ideas, showing that much of what they claim is accurate, and refining their causal model. Higgs and Jordan suggest that the doing of restoration, with its opportunity to offer reparation, together with ritual, focal attention and communitas, is sufficient to instil a connection to nature. This research validates these suggestions, while also demonstrating that physical exertion coupled with a sense of accomplishment felt whilst performing symbolic

acts is also significant in influencing people's ideas of themselves and nature. It also demonstrates that emotionally intelligent leaders are important in creating communitas during restoration, and suggests that when combined with physical engagement, ecological knowledge and the stimulation of curiosity may play an important role in fostering connection.

In building upon the work of Higgs and Jordan, the study also synthesises their work within the wider connection to nature literature. In effect, this study is a bridge between work that is focussed solely upon restoration and its social impact, and work that is primarily concerned with connection to nature. Bringing the two literatures together in this way enriches understanding. By considering Higgs and Jordan's ideas in the context of other scholarship about connection to nature we have been able to use it to comment upon this wider literature. By examining the role of communitas, we can see that the connection to nature field could benefit from considering the role of group dynamics, and echo the recommendation of Ives et al. (2017), that more work needs to consider the sense of connection gained in group situations. Equally, scholars and practioners of restoration need to be aware that restoration is not unique, and not all restoration practices enable people to build positive relationships with nature. Rather, this study demonstrates that physically active symbolic tasks, which are easily understood as redemptive, are effective, and suggests that these tasks may not be confined to restoration. Higgs' speculation that focused attention augments feelings of connection is borne out in this research, and supported by other recent work that examines mindfulness in association with connection to nature (e.g. Howell et al. 2011), suggesting that the theme should be considered in more depth in both literatures. Researchers could also benefit from considering how ecological knowledge interacts with physical practices to produce connection to nature. Thus, this research changes our understanding, demonstrating that a large range of factors combine to foster a sense of connection to nature. However, questions remain: what is this nature that are people connecting to? and what is this connection that they feel? We turn to these questions in the following Sections.

9.3 What natures are produced by hands-on ecological restoration?

Almost all research on connection to nature leaves nature undefined. Without such information, there is limited basis for knowing what people feel they are connecting to, or what kinds of nature they value, which limits the utility of such

research (Ives et al. 2017). This research responds to this problem by looking in detail at the natures that are produced by activities that enable connectedness, and the implications of these natures. The participants in this study understood nature in four main ways: as an all-encompassing abstract entity, as 'degraded nature', as 'restored nature' and as a remote and absent entity confined to places where humans are scarce.

Physical immersion in nature combined with mindfulness activities to produce an understanding of nature as 'the natural world': an all-encompassing entity, to which one can feel a sense of belonging and connection. Participants often used non-human nature such as a particular tree or view as a conduit to connect to 'nature', but it was nature as an all-encompassing abstract entity (Hailwood's 'the natural world') that participants were usually talking about when they talked about having a sense of connection to nature.

The same linear narrative (that nature can be broken and mended) that enabled participants to see themselves as part of an unfolding ecological story and that was embedded in the performance of restoration, produced an understanding of some natures as degraded and others as restored. Degraded nature could be any humanised environment. A 'restored nature' was a nature of the future and of the imagination, which incorporated previously existing non-human nature. The idea of restored nature drew upon an ideal of previously existing non-human nature and was shaped by the actions of participants, which were, in turn, shaped by the affordances, and limitations, of the contemporary social context within which they operated. Restored nature was largely an outcome of the discourse and practices that enabled people to feel connected to nature.

Again, tree planting was important in dictating what material natures were produced. The relative simplicity of tree planting as an activity and its affective appeal as a symbolic act meant hands-on restoration was particularly well placed to produce forest nature, which raises the likelihood that working in nature with an aim of facilitating laypeople to feel a sense of connection to nature could produce particular, potentially simplified, ecological outcomes. Work carried out in this way may be less able to produce rare or endangered ecosystems that are less appealing to participants, require the use of technical skills, greater risk or specialised knowledge. This observation relates to those made by scholars of conservation who have suggested that trees can become 'charismatic megaflora' (Hall et al. 2011) and raises the possibility that when hands-on participation is

used to stimulate a sense of connection to nature it may produce more affectively appealing 'restored natures'. Charismatic tasks, with high symbolic appeal, produce charismatic natures, which may underrepresent less appealing organisms, practices or ecosystems and discount choices that are guided by other considerations or ethics. This propensity towards a charismatic outcome raises another point: planting trees with the hope of creating a particular social outcome (connectedness to nature among participants) can be seen as instrumentalisation of nature. A troubling conclusion perhaps for those drawn to hands-on restoration with the hope that it propagates a better understanding of the intrinsic value of nature.

Finally, nature was often understood as remote or absent. Work carried out in remote locations away from the demands of everyday life was conducive to creating memorable and affective experiences of a feeling of connection to nature, but paradoxically, the exceptionalism of the experience reinforced an idea of nature as absent in everyday life. Similar findings have been reported by Vining et al. (2008) and Grimwood et al. (2015) in restoration and adventure travel experiences. The remoteness of the practice meant that nature was understood Romantically as being present "in the remote, the inaccessible, the relatively barren areas" (Williams 2005, p. 159). Although the natural world felt significant, close and meaningful during hands-on work, once participants finished the practice, they no longer experienced nature in the same way. The idea of nature as absent at home was, for some participants, reinforced by the experience of finding nature elsewhere in exceptional circumstances. It is possible that connecting to nature in this extraordinary way reinforced disconnection from the everyday natures found in the largely urban or suburban places where participants lived, an outcome that could entrench the dualistic idea that nature is separate from humans. These findings are important for restorationists and advocates of connection to nature alike, because they demonstrate that activities undertaken with the intention of connecting to nature in one place and time are not neutral or without consequence. A drive towards to connecting people to nature as an exceptional experience could unwittingly perpetuate instrumental and reductive ideas of what nature is. With these caveats in mind, restoration undertaken in such exceptional circumstances does produce moving and significant experiences of feeling connection to nature for participants. However, it also brings to light the remaining challenge of how to foster connection to

nature in the unexceptional, largely humanised settings in which most people live their lives.

There is also an important finding which relates to the literature which aims to identify and measure connection to nature (e.g. Schultz 2002; Mayer and Frantz 2004; Nisbet et al. 2009; Schultz 2011; Tam 2013). This research demonstrates that when people are talking about nature they are variously referring to non-human nature, humanised nature and the natural world. Thus, a participant talking about being connected to nature may be referring to a sense of connection to an abstract idea of the natural world, while still being unaware of the non-human or humanised nature which surrounds them in the everyday. For example, some participants who said they felt they were 'connected to nature', but that there was 'no nature' where they lived, were using the term 'nature' to refer to two different things, they felt connected to 'the natural world', yet were not recognising the 'non-human' or 'humanised nature' in their everyday life. This use of 'nature' as a term to refer to multiple constitutive concepts indicates that research that aims to identify and measure a felt sense of connection to nature needs to consider a more nuanced idea of what nature means for the people participating in research. There needs to be more examination of what nature people feel connected to, and whether what they understand to be 'nature' changes according to context.

9.4 What sort of human-nature relationships are produced by hands-on ecological restoration?

The insubstantiality of the term 'connection to nature' leaves many questions unanswered which warrant greater consideration in restoration and the other fields that have taken up the term. This study responded to this by focusing on the experience of connecting the nature during a group practice with the aim of examining the lived experience of a 'connection to nature'. In common with Tam (2013), the findings of this research suggest that there is a real need to re-examine conceptualisations of 'human-nature connection'. Across the social sciences the fast growing body of research concerned with connection to nature predominantly draws upon three different notions of connection to nature. Leopold's (1966) understanding of a connection to nature as humans understanding themselves as part of a wider 'biotic community', Wilson's (1984) concept of biophilia, which hypotheses that humans have an innate love of nature, and Naess' (1987, 1990) concept of the ecological self, which understands

a connection to nature as a developmental process whereby the human sense of self is expanded to include non-humans. Currently, these multiple understandings of connection to nature present within the field mean that research findings often have divergent and incommensurate meanings, even when they seem to be considering the same topic.

Although Wilson (1984) is accurate in the sense that participants' sense of connection with nature was deeply affective, a love for nature was only one among a variety of emotions, including fear and anxiety, which were provoked by spending time in what was understood to be non-human nature. Relationships with nature were much more nuanced and varied than most examinations of connection to nature based on Wilson's biophilia concept suggest. Research into human-nature relationships needs to consider a far wider range of possible responses to nature than are suggested by the biophilia hypothesis, and acknowledge the complex relationships that people may have with non-human landscapes, particularly among those who have spent limited or no time outside urban environments. Naess' concept of the ecological self also bore limited resemblance to how people understood their sense of connection to nature. Participants who experienced a sense of connection to nature did not see non-human nature as part of themselves, for them, nature was separate and external; it was something that they could leave, forget about, or lose and come back to. Rather, this research suggests that a connection to nature is best described as a sense of belonging to the natural world, drawing on the description suggested by Leopold. It was typical for participants to describe their sense of connection to nature by saying that they felt that they 'previously knew' or had 'recently realised' that they were 'part of nature', phraseology which is most resonant with Leopold's conception of a connection to nature as an understanding of oneself as being part of a community of non-humans (Leopold 1966, p. x). From this case, it would seem that a parsimonious conceptualisation of connection to nature is one that is about belonging to a wider community of non-humans.

Participants' experience of connection to nature, or in Leopold's terms, being 'part of nature' was specific to their life experience. Participants' sense of connection to nature built upon their previous experience of nature. Participants related their experience of connection during hands-on restoration as an addition to their nature 'biography', they drew on events where they had felt a sense of connection in childhood or adolescence to describe their current experience. For

those who had limited prior experience in nature, the sense of connection was rather described as an epiphany, and this first time experience of feeling connected to nature often provided a catalyst for further exploration. These findings again have implications for work concerned with measuring connection to nature, suggesting that future research would benefit from a focus on the theme of belonging that arises in Leopold's work. A focus on belonging may enable more focussed and distinct understandings to arise about specific factors that enable a sense of connection nature.

Perhaps most importantly, as we saw in the previous Section, a sense of connection to nature required two factors. Firstly, an underlying understanding of nature as the natural world: an all-encompassing and autonomous entity to which it was possible to feel a bond, and secondly, the presence of something that is understood to be non-human. Participants could feel a sense of connection to nature by interacting with biotic organisms such as plants or animals, but a sense of connection was also facilitated by interacting with non-living abiotic phenomena such as rocks or wind. Similarly, the specifics of the 'naturalness' of participants' surroundings were secondary, participants were able to negotiate these details to feel connection, thus 'degraded' or 'humanised' nature was sufficient for enabling a sense of connection. As has been observed elsewhere, affective immersive experiences in nature do not necessarily require a rich, distinct or diverse ecology (Cocker 2015). This experience of connection to nature transcends ecological details and only requires something that seems non-human to provide a channel. Thus, counter to Wilson's biophilia, a sense of connection to nature was only peripherally connected with living non-human nature. This raises the possibility that a focus on developing an affective sense of connection with nature risks minimizing the importance of biodiversity and living non-human nature. It also raises the sobering possibility that ecological destruction could continue unabated and humans would still be able to feel a sense of connection to the natural world via the rocks and wind that will likely continue to exist irrespective of mass extinctions caused by climate change and over exploitation of resources. Finally, if the nature to which people feel a sense of connection does not need to be alive, perhaps the motivation it provides to protect life is limited. This finding presents a major stumbling block for wider hopes that inculcating a sense of connection to nature will motivate humans to protect life and prevent environmental crisis.

9.5 The contribution of restoration

Among other factors, we have seen that the research demonstrates that a sense of connection to nature is task specific, tasks such as planting trees, collecting seeds, nurturing seedlings, and carrying out ecological surveys facilitate a sense of connection to nature, whereas removing non-native plants, fertilising trees and installing or removing infrastructure do not. As these tasks are commonly used in a range of conservation, habitat creation and protection activities, it is plausible therefore that the findings of this research are generalizable to these similar practices and that, in line with other recent findings (Schild 2018), a variety of forms of outdoor activities can enable a sense of connection to nature. This ability to generalise suggests that, contrary to the implications of claims made by advocates of restoration, that the broad heading of 'restoration' is less important than the specific practices involved.

Nevertheless, as was acknowledged in Section one, Jordan's assessment of hands-on restoration as well positioned to enable revaluation of relationships with nature is accurate. Whilst it shares much with other practical environmental activities, the intentions of restoration, and the justificatory narratives with which it is often accompanied, are what sets it apart from other practices. Since its beginnings restoration has referenced human destruction of the non-human, in choosing to restore, practioners acknowledge previous destruction and tend to emphasise human responsibility for that destruction, placing humans in a much longer ecological timescale. Other environmental practices may do this, but the use of the term restoration is explicit in its acknowledgement that something has gone wrong with the relationship between humans and non-humans: that there was something to repair. It also suggests that it is possible for humans to make reparation and, considering the long timescales involved in restoration initiatives, that there can be hope for the future.

Hands-on restoration produced an ambivalent nature that was not an accurate representation of past ecosystems: though the vision of restoring the Caledonian forest is to recreate what has been lost, the project inevitably falls short and it forces volunteers into recognising the role of human agency in the natural world, breaking down dualistic ideas of humans and nature. Debates about novel ecosystems in restoration scholarship reflect how the role of human choice and values is exposed by practioners' limited ability to accurately restore what has been lost (Hobbs et al. 2006; Murcia et al. 2014; Higgs 2017). The practice of

restoration is caught up in other issues concerning the impacts that humans are having on ecosystems, for example the introduction of invasive species (Gardener et al. 2010; Pagès et al. 2017) and the impacts of climate change (Harris et al. 2006). Opinion is mixed within current scholarship about the extent to which many ecosystems affected by impacts such as these can be understood as non-human. Thus, the discourse surrounding restoration is ideal for those interested in exploring the relationships between humans and nature. In this light, the ecological outcomes of restoration form part of its strength as a practice as it enables an examination and re-evaluation of the human role in nature. In its inevitably flawed attempt to create a facsimile of non-human nature, it entails deducing what non-human nature requires and making compromises in the face of ecological and social limitations. The ability of restoration to raise these issues raises the possibility that restoration does have particular attributes which cannot be generalised to other forms of physical work in nature. An interesting avenue of research would be to establish whether environmental activities such as conservation or habitat creation are as capable of encouraging reflection upon the human place in nature, and creating similar sensations of feeling connection through conductive tasks such as tree planting.

9.6   Resolving environmental crisis by connecting to nature?

Research into connection to nature aims to improve understanding about human-nature relationships, and much of it makes a causal inference between individual ability to connect to nature, and the possibility of pro-environmental social change which resolves environmental crisis (Schultz 2002; Hartig et al. 2011; Lokhorst et al. 2014). This research demonstrates that, while particular tasks and discourse are powerful tools for enabling a sense of connection to nature, the temporary effect of these activities is unlikely to be enough to achieve such an ideal. There are elements of hyperbole in claiming that practical environmental work can have such far-reaching consequences, when human interactions with nature are dependent on so many other factors. Although some aspects of restoration and associated environmental activities may nudge participants into considering nature in new ways, and perhaps reflecting upon their own and society's environmental destructiveness, there are substantial uncertainties in making such leaps of faith.

As indicted above, a sense of connection to nature itself was temporary, there was real difficulty in sustaining the sense of connection to nature that

participants felt during the practice. The connection was rooted in a certain time and place, and its intensity did not travel well beyond its own borders. Thus, Higgs' (2003, p. 240) claim that hands-on participation can enable humans to see themselves as part of nature was only valid at the time and in the place that the practice was carried out. If a feeling of connection to nature is not to fade it has to be sustained by ongoing engagement in similar practices. Without similar practices, which maintain or develop a sense of connection to nature, the relationship with nature that participants felt during their experience often faded or became fragmentary after their return home. The ability to maintain a long-term sense of connection with nature was enmeshed with other obligations and life practices. Urban living, long indoor working hours and commuting by car or public transport mitigated against a resilient sense of connection whereas ongoing environmental volunteering, nature watching hobbies and similar nature focussed activities maintained it. Thus, a sense of connection to nature is nuanced and fluctuating. To endure a connection to nature requires regular engagement in enlivening practices. After Macnaughten and Urry (1998), this suggests that the notion of a stable connection to nature as used in recent scholarship (e.g. Zylstra et al. 2014), is misleading. Rather, this research demonstrates that there are different practices which lead to different understandings of nature and relationships with nature. This finding suggests that there is potential for practices such as those detailed in this thesis to be carried out in everyday life to enable people to sustain a feeling of connection.

The prospect of carrying out these practices in the everyday exposes some other challenges to the idea that environmental crisis will be addressed by enabling people to feel connected to nature. Although an experience of connecting to nature often made participants more amenable to changing their behaviour, the possibility of making such changes was profoundly shaped by the opportunities they had available in the modern, high consumption environment in which they lived day to day. The desire to do things differently was present in participants, but they were constrained by their access to alternatives, thus this research indicates that there is potential for socially informed technology to provide alternatives that enable pro-environmental behaviours to be more easily adopted in everyday life. Although White (1967) may be right in saying that how societies think about nature is of critical importance in relation to environmental crisis, science and technology also have a role in creating material alternatives.

Finally, participation in practices which foster a sense of connection to nature provide an opportunity to enact a commitment towards non-human nature, but can themselves be embedded within macro practices of environmental destruction. If one were being scrupulous, many of the criticisms of technical solutions to environmental problems explored in Chapter one can also be applied to hands-on environmental practices. For example, there are environmental costs to the fossil fuels used in transporting participants to remote areas. Smaller scale initiatives that occur close to where people live have the potential to minimise such a cost by enabling people to walk, cycle or take public transport to the restoration site. Participants in restoration gained a sense of belonging to, and ownership of, nature via their labour. Involvement at home may also enhance participants' sense of ownership of local nature, which may open them to the possibilities of environmental citizenship as it interacts with the political and economic structures of everyday life (Barry 2006). As Blühdorn (2017) points out, progressive environmental or social practices are unable to substantially undermine the logic which they may temporarily challenge. With this in mind, advocates for practices which foster connection to nature must acknowledge that they are not a substitute for structural change, collective political action or ethical debate with regard to environmental crisis. Examining methods that link the experience of connecting to nature to the practices of everyday life is a logical step forward for both research and practice.

9.7 Methodological reflection and emerging research agendas

Turner's (1974, 1995) concept of communitas was chosen as the lens through which to analyse the group experience in order to fully examine the claims of Jordan who sees communitas as central to understanding restoration as a social practice. Communitas itself describes a particular kind of heightened group cohesion and this was helpful in the examination of groups carrying out restoration in remote and isolated circumstances. Communitas enabled an analysis of the roles played by factors such as trust, isolation and compliance in enabling participants' rethinking of their ideas of nature, but the concept provided limited insight into the ways in which each group negotiated its cohesion (or lack of it). To remedy this deficit, different concepts of leadership were used in the analysis alongside the concept of affective labour to describe how communitas was enabled and maintained in groups. Nevertheless, the research may have revealed more of these dynamics had it drawn more upon ideas of identity centred

performance (Horton 2003; Ganesh and Mcallum 2009) or embodied performance (Cater and Cloke 2007) that were also used to guide the study.

This research takes the perspective that human practices produce particular ideas of nature. This retains a dualistic idea of nature and culture, in that it claims one leads to another. In retrospect, a 'post-dualistic' nature-culture perspective may have revealed more by taking account of the ways in which non-human actors limited and guided particular ideas of nature. The landscape itself likely played a role in the emerging ideas of nature that participants spoke of, indeed the research indicated ways in which non-human elements (weather, landscape, trees) shaped participants' interpretations of nature. Geographers in particular have been developing epistemologies which develop 'nature-society hybrid' concepts (Castree 2014, p. 235) and take these considerations into account (e.g. Whatmore 2002; Hinchliffe 2007). A perspective using Actor Network Theory (Callon et al. 2009) in particular, may be an interesting and productive way to take future research on connection to nature, although it may have passed over the role of intentionality and affect that are central to arguments about the social merits of restoration.

The choice of a remote and isolated "crucial" (Mitchell 1983) case was fruitful in this study as it enabled an examination of the full array of conditions which Higgs and Jordan suggest are required for connecting to nature, and exposed the processes and themes underlying the practice in circumstances where they were unadulterated by everyday concerns that may have obscured them. While participant observation and repeat interviewing produced rich data, which allowed analysis of both the embodied aspects of environmental volunteering, and the discourse surrounding it, there is potential to develop the temporal and spatial aspect of this research. The method chosen was to carry out two interviews with participants, one during the work and one after they had settled back into everyday life. Simply by interviewing people both during the restoration work and upon their return home it was possible to analyse how their relationship with nature changed according to context. Thus, the research gave some insight into the role that social and institutional context plays in shaping connection with nature, concurring with other research which suggests that the environmental identities and attitudes fluctuate over time and space (Horton 2003; Anderson 2004). Using this approach, the research found that the connections to nature created during this experience were almost as ephemeral as the practice that

produced them. There have been recent calls for a better understanding of connection to nature in everyday lives (Zylstra et al. 2014), and there is scope to build on these findings to use a longitudinal research design incorporating interviews over a longer period of time. With this method it would be possible to examine individuals who sustain a stable sense of connection to nature, with the aim of establishing how the sense of connection to nature that participants developed during their time away was affected by their ongoing experiences, as well as examining practices that foster a sense of connection in everyday life.

9.8 Conclusion

In conclusion, the original claims, which catalysed this research, are largely correct: hands-on participation in nature can create a sense of connection to nature. However, this research also suggests some interesting caveats to these claims: the connection is contingent upon ongoing involvement in similar practices, it does not rely upon the presence of living non-human nature, it can produce ideas of nature that reinforce the idea that nature and humans are separate and may be particularly conducive to producing charismatic natures. A sense of connection to nature built in this way was valued by the people who experienced it, enabling a sense of belonging to the world. However, practices that focus only on developing a sense of connection to nature among participants may disregard other ways of valuing nature, and minimise the complexities of the human-nature relationship. The physical and mental benefits of carrying hands-on environmental tasks such as planting trees can create the sense that one is 'doing something', providing participants with a therapeutic balm for coping with the reality of environmental crisis rather than a tool kit for averting it. It is unrealistic to expect that enabling a sense of connection to nature will be a major force in dealing with climate change or mass extinction. On a more hopeful note, this study suggests that people are likely capable of feeling connected to nature in highly humanised environments if they are facilitated to do so with the activities, ecological education, mindfulness and thoughtful leadership that was found in this case. This research demonstrates the potential of hands-on environmental work to create bonds between people and nature, albeit temporarily, and can provide a template for other everyday practices, which can be embedded in the cities and suburbs where people live most of their lives.

Appendix 1: On site interview script

1. How do participants describe and carry out the physical work and activities of ecological restoration?
   - Would you mind explaining what you're doing here, just to give me some context?
   - And why are we doing it like this?

2. How do participants describe the purpose of the ecological project that they are engaged in?
   - And why is it important to the work that TfL are doing?
   - How do you think it is related to TfL's wider aims?

3. How do participants describe the ecosystem they are working in?
   - And where are we doing the work? Why are we doing it here? Why this ecosystem? Is there anything important about it?

4. How do participants describe the development of their relationship with the ecosystem they are working in?
   - Do you think doing this work has changed or will change what you think about or do in life?
   - Have you felt a sense of connection with nature during the week?
   - Can you describe it?

5. How do participants describe their role and identity in relation to the ecosystem they are working in?
   - What do you think draws you to this kind of work? What is your motivation for coming along?
   - What do you do when you're not here?
   - What do you think is important about the experience of coming here and doing this work?

6. How do participants describe their relationship with nature more generally?
   - Do you feel a sense of connection with nature in your life generally? Has it always been there?

7. What do participants value about the ecosystem and how has this evolved during their work in restoration?
   - What do you value about this ecosystem?
   - Have you done this kind of work before? What keeps you coming back? Have your reasons for coming changed over time?

Appendix 2: Follow up interview script

First timers

Did the experience of working at Trees for Life have an impact on you? If so, in what way? And why?

Is there anything, (eg. a habit, a skill, or a way of thinking) that you took home from Trees for Life and sustain in your everyday life now?

Are there any aspects of the Trees for Life experience that you would like to integrate into your everyday life but are difficult to maintain? For example doing outdoor work, eating certain foods, thinking about particular things?

If you think about yourself before you got involved with Trees for Life and yourself now, do you think working at Trees for Life has influenced any aspect of your everyday life?

Can you explain why these things are important and why they are difficult to integrate into your everyday life?

Do you think it has influenced your identity or how you think about yourself?

Now you've been back in your everyday life for a while are there particular parts of being at TfL that remain in your memory? Why do you think they stick with you?

Experienced

Does the experience of working at Trees for Life have an impact on you? If so, in what way? And why?

Is there anything, (eg. a habit, a skill, or a way of thinking) that you take home from Trees for Life and sustain in your everyday life?

Are there any aspects of the Trees for Life experience that you would like to integrate into your everyday life but are difficult to maintain? For example doing outdoor work, eating certain foods, thinking about particular things?

Can you explain why these things are important and why they are difficult to integrate into your everyday life?

If you think about yourself before you got involved with Trees for Life and yourself now, do you think working at Trees for Life has influenced any aspect of your everyday life?

Do you think it has influenced your identity or how you think about yourself?

I general, are there particular parts of being at TfL that remain in your memory? Why do you think they stick with you?

Appendix 3 Consent form

Hands-on ecological restoration: participant's perspectives and the work they do

Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. The research aims to explore the nature of restoration work in a number of cases, document how it is carried out and explore participants' experiences, understandings and reflections on restoration and its impacts upon them.

Please Initial

I confirm that I am willing to participate in the study and that I have had the opportunity to ask questions about it.

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

I understand that any individually identifiable responses will be securely stored in password protected files and/or a locked office and will only be available to the researcher and her supervisors. They will be destroyed 5 years later (or 2 years post-publication).

I understand that at the end of the study the findings will be anonymised and written up to be part of a PhD thesis, and maybe further used in academic articles and submitted to journals.

I would like to be sent information about the research findings.

I am happy with being identifiable in photographs which may be published.

I understand that if I have any concern about the conduct of the research I can contact the Chair of the research ethics committee Prof Adam Hedgecoe at: hedgecoeam@cardiff.ac.uk or 02920 870027

Participant name: Signature: Date:

Tel no.:   Email:

Researcher name: Signature: Date:

If you have any questions about the study please contact:

Ella Furness at the Sustainable Places Institute, Cardiff University on 07963 039937 or email furnessej@cardiff.ac.uk. The project is supervised by Professor Susan Baker and subject to the ethical guidelines of the School of Social Sciences at Cardiff University.

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