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# “NATURE IS PART OF ME AND I’M PART OF NATURE”:

# EXPLORING HOW PEOPLE UNDERSTAND THEIR RELATIONSHIPS WITH NATURE AND HOW THESE RELATIONSHIPS DEVELOP

**JAMIE DEE SUTCLIFFE**

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of Doctor of Philosophy

The University of Huddersfield

May 2018

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And finally, Tabatha, my cat, the best writing companion anybody could ask for, whom, without fail, sat on every draft chapter, transcription and journal article on my desk.

# Abstract

The research presented in this thesis aims to explore people's current relationships with nature and how these relationships develop throughout their life time. It does so by taking a constructivist perspective.

In-depth interviews, involving three different tasks, were carried out with sixteen participants. Participants with a variety of different relationships with nature were recruited. The use of the Personal Construct Psychology (PCP) methods Rivers of Experience (RoE), Construct Elicitation and Laddering in the interviews allowed me to gain an understanding of both how people construe nature at present, as well as exploring how this construal of, and relationship with, nature has developed throughout their lives.

The key contributions to knowledge were that participants created narratives which drew upon the idea of nature being of higher importance than them, creating a narrative of spiritual relationships with nature. The findings also suggested the importance of learning and mental engagement with nature, in both people's development of a relationship with nature, as well as their current relationship. The effect of nature on well-being was also discussed as part of the process of developing a relationship with nature. The level of human impact on nature was also of central importance to participants in the construction of different environments. Finally, the research provides a look at the different structures which the stories of their relationships with nature developing took.

In relation to the methods used, this research offers a contribution the literature by providing an example of approaches which can be taken to the analysis of RoE data. The analysis of the laddering data provides some support for viewing people's construct systems as nests of meaning rather than hierarchical structures.

# Disseminated Findings

## Publications

Sutcliffe, J., Burr, V. and King, N. (2016). 'Using Rivers of Experience to explore people's relationships with nature'. In P. Denicolo, T. Long and K. Bradley-Cole (Eds.) *Constructivist Approaches and Research Methods: A Practical Guide to Exploring Personal Meanings*. (pp. 182-184). London: SAGE Publications Ltd.

Burr, McGrane, Sutcliffe and King (forthcoming). 'Personal Construct Methods for Qualitative Research'. In P.A. Atkinson, S. Delamont, M. Hardy and M. Williams (Eds.) The SAGE Encyclopedia of Research Methods.

## Presentations

Sutcliffe, J. (July 2015). Exploring people's relationships with nature and how these develop. Internation Congress for Personal Construct Psychology: PCP at 60: Past, Present and Future. The University of Hertfordshire.

Sutcliffe, J. (July 2016). Exploring Relationships with Nature. European Personal Construct Association Conference: A new spirit in PCP: linking people, ideas & dreams. Padua, Italy.

## Poster Presentation

Sutcliffe, J. (April 2015). Exploring Relationships with Nature. Postgraduate Research Festival. The University of Huddersfield.

Sutcliffe, J. (June 2017). Exploring Relationships with Nature. Nature Connections Conference: Getting Connected to Nature. The University of Derby.

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# Chapter One:

# Introduction to the Thesis

This thesis explores the way people construe nature in their current relationship with it and also explores how these relationships with nature develop. The research is a culmination of my interest in the natural world from my perspective as a psychologist. This introductory chapter will discuss the importance of the issue at hand and outline my personal interest in it. It will then end with an overview of the way the thesis structured.

## 1.1. The Human-Nature Relationship as a Global Issue

*Instead of controlling the environment for the benefit of the population, perhaps it is time to control the population for the survival of the environment*

Sir David Attenborough

While I sat here pondering how to write this introduction I remembered a series I watched last year, along with millions of others around the world; Planet Earth II. As demonstrated in the quote above, Sir David Attenborough and the team he works with are keen advocates for looking at the natural world as something of which we are a part. This holistic view was reflected in the choice for the habitat chosen for the series finale, “Cities”. If my thesis could have started with a video introduction, this is the episode I would have aired. The episode explores urban cities and landscapes

which have become habitats for not only us as humans, but the wildlife which lived there before urbanisation. In the episode we see humans living alongside hyenas in Ethiopia and langurs in India, relatively peacefully. We are also introduced to turtle hatchlings, whose lives are put straight to the test as they are drawn to the bright lights of the towns instead of to the moon's reflection on the sea. This episode powerfully explores the effects we, as humans, are having on the other living beings we share this planet with and how people from around the world are gradually trying to better this relationship.

As the quote above demonstrates, Sir David Attenborough advocates an approach to conserving the natural world, and other living beings, which involves changing us as humans and our behaviour first and foremost. This is something which is becoming increasingly important in different aspects of our lives and is becoming increasingly part of the political world. The incorporation of regulations and initiatives to change human behaviour in favour of the natural world, into the political world, demonstrates a movement in societies to conserve the natural world via changing the human part of this relationship. Examples of such initiatives can be seen in the UK's Conservation 21, where one of the key principles is to "*drive a fundamental change in mind-set, to make a healthy natural environment a central part of health, wealth and prosperity*" (Natural England, 2016, p.7). Here Natural England are including changes in our behaviour and mind sets as humans, to be a key part of how conservation of natural spaces will be achieved. This is also seen in the United Nations Paris Agreement (2015), where a major focus for the nations involved is to reduce their carbon footprint and greenhouse gas emissions to try slow down the effects of global warming (United Nations, 2015, p.4).

## 1.2. My interest in humans and nature

One of the things which brings me the most pleasure in life is animals. For as long as I can remember I have been fascinated by other species, both domesticated and wild. If it lived and breathed I was interested in learning about it. This interest took hold in my childhood in the form of watching nature shows such as “The Really Wild Show”, blackberry picking and fishing with my dad, collecting factsheets for my Wildlife Factfile, trips to the zoo as frequently as I was allowed and collecting and inspecting insects from the garden and local park as well as many other activities. This interest stayed with me into my teenage years but became much more of a side interest, watching nature documentaries in my free time after school and walking dogs at my local animal shelter.

This is where my interest remained until the final year of my undergraduate degree where I chose to explore the human-dog relationship for my dissertation. It was in this study where I found a whole new area of psychology of which I had been previously unaware. The realisation that there were areas of psychology where my interest in both nature and human psychology may meet was revelatory to me and I began to search the literature and found myself asking questions I might be interested in.

The decision to focus on my area of study came from my reaction to another nature documentary. A polar bear was hunting for food and had taken to the water to move to another area in search of food. As I sat and cried while the narrator explained that at one time this whole area would have still been frozen, I looked across at my

partner who was watching with me. He laughed affectionately at how “me” that reaction was. I sat there confused at how he could be watching the exact same thing as me, but not be feeling this deep gut wrenching sensation I was feeling. How had my relationship with nature developed into the relationship it was then? How did I, and people who would have reacted in the same way, develop these connections to the natural world?

## 1.3. The Current Study

This research takes a qualitative approach, with the aim of gaining insight into participants’ understanding of both their current relationship with nature and how this relationship has developed throughout their lives.

### 1.3.1 Thesis Structure

The research focused on two areas: how participants understood the development of their relationship with nature and how they currently perceived this relationship. Data were collected from 16 participants in a single extended interview. This includes one task to elicit understandings regarding the development of their relationship and two tasks focused on participants’ current relationship.

As the two aims of the study were addressed within the same interviews the methods chapter addresses all three tasks together. The findings of the thesis are, however, split into three sections, as the approaches to the analysis of each part of

the data are different. This is outlined now as a brief overview of the contents of each chapter is provided.

Chapter Two offers a review of the literature. This includes a discussion of the history of the human-nature relationship and how this has changed throughout time. The concept of nature being a social construct is then discussed with critiques, providing some context to the ontological and epistemological position of this research. Theories which have been put forward to explain the human-nature relationship are then briefly discussed before moving on to discuss the empirical research in the area. This chapter concludes by providing a rationale for the current study by flagging up the gaps in previous literature and then states the research aims.

Chapter Three is the methods chapter. This begins by outlining the philosophical position that the research takes, which is a contextual constructivist approach. Contextual constructivism is then explained, including a rationale for its use in this research. Personal Construct Psychology is then explained as a theoretical framework. This is then followed by the design section which addresses the development of the interview schedules and each method which was chosen, discussion of trial interviews and reflections on this process. Sampling is then discussed including brief introductions to each participant. Then finally the procedure is outlined and ethical considerations are addressed.

In Chapter Four I then outline the approaches taken to the analysis of data. This is split into three sections to address how data from each individual task was

approached. Firstly, the Rivers of Experience (RoE) data analysis is discussed. This includes both analysis of the drawn rivers, which was approached using content analysis, and analysis of the discussions of these rivers, with a form of narrative analysis called the Listening Guide (Doucet and Mauthner, 2008). In this chapter the analysis process is detailed, step by step. I then outline the approach taken to the analysis of the constructs elicited from the construct elicitation task. Qualitative thematic content analysis (Green and Thorogood, 2014) was used to categorise constructs into themes. The process of categorising these into themes is outlined step by step. Finally, I then outline the approach taken to the analysis of the data produced by the laddering task. Literature in this area is briefly outlined providing context for how ladders have already been analysed and then my analysis process is described. This involves discussion of a check which was run with research assistants to judge the superordinacy of the constructs produced by laddering. Then the process of looking at the journeys the ladders take is discussed, before observing the different meanings of similar constructs through the ladders.

Chapter Five then presents the findings from the analysis of the data produced by the RoE task. The content analysis of the drawn rivers offers some insight into what participants chose to include on their drawings. There is some discussion then of the way participants used the RoE task differently, with examples of different rivers. In the narrative analysis, six different narrative threads were interpreted and these are outlined and discussed with reference to the data. Where relevant there is some reference to constructs or ladders from the participant if this helped to illustrate the meaning.

Chapter Six offers findings in relation to the second research question; to explore how participants construe their current relationship with nature in different forms and settings. The beginning of this chapter presents the findings from the analysis of construct elicitation task. This gives us an insight into how participants currently construe different environments. It begins by outlining some of the participants' initial reactions to the images used in the task and then goes on to discuss the eight different themes which were interpreted from the constructs. Again, this involves some reference to other aspects of the data where this aids the discussion. Th chapter then moves on to present findings from the analysis of the ladders produced in the laddering task. The results of the research assistants' judgments of the superordinacy of constructs at the top of participants' ladders is discussed first of all. This is then followed by some discussion of how laddering allowed for the journey between constructs and therefore an insight into participants' construct systems, with examples from the data. Finally, the different meanings of similar constructs are explored, with examples again from the data.

Chapter Seven then completes the thesis by summarising the key findings from each findings chapter and then discussing the key issues which came out the analysis processes, drawing on the data as a whole. This also includes some reflection on the methods used and on my role as a researcher before ideas for future research are proposed and concluding comments made.

# Chapter Two:

# Literature Review:

# Exploring what nature is and the human relationship with nature

## 2.1. Introduction

The aim of this chapter is to contextualise my research by, first of all, examining the debates around what nature is and how people understand nature. This is then followed by discussion of how the human-nature relationship and conceptions of this have changed throughout history, concluding that nature can be best be understand as a social construct. There is then a discussion of different theories which have been proposed to explain the human-nature relationship. Then finally my research is contextualised within the empirical research in this area, by looking at the key issues addressed in previous research in this area and exploring where there are important gaps in this literature.

## 2.2. Understandings of Nature

Before I can explore literature around the human-nature relationship it is first important to address “What is nature?” and explore the different understandings of nature throughout time. This question, on the surface, would seem an easy question to answer, but when we explore the different meanings which nature has taken on to

different people and societies, the different positions it has played in different people's lives, then we realise it is a complex topic with many debated views.

To begin, the Oxford Dictionary definition of nature is as follows;

*Nature:*

- *Noun- [mass noun] the phenomena of the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations.*
- *the physical force regarded as causing and regulating the phenomena of the world… (See also Mother Nature)*

*Mother nature:*

*noun*

- *nature personified as a creative and controlling force affecting the world and humans*

These give us a dictionary definition; however, it is in the area of "human creations" where the lines can become blurred. It would appear that, anecdotally as well as within research, people do not particularly have the same shared opinion on what constitutes nature. An example of such a difference in opinion can be seen when we consider subject of parks. As part of their research into human connectedness to nature, Vining, Merrick and Price (2008), asked participants to define what nature was to them by listing words that came to mind when asked to think about natural environments. One of the main findings was that participants most frequently mentioned words such as "unspoiled" or "untouched by man" (p. 7). This is in line

with the definitions above which depict nature as being products of the earth, as opposed to the product of humans. However, Maller, Townsend, Pryor, Brown and St Leger (2005) incorporate parks and gardens into their definition of nature. They emphasise that parks provide people who live in cities and urban areas with nature on a day to day basis. They argue that these parks, like natural places without man's influence, provide an environment *"where the majority of ecosystem processes are present (e.g. birth, death, reproduction, relationships between species)* (p. 46). Kaplan and Kaplan (1989) refer to places such as parks as 'nearby nature' and suggest that it is equally as important to consider nearby nature as it is to consider places untouched by humans as nature, even if, to some, it may seem like a contradiction in terms. Vining et al (2008) and Maller et al (2005) are just two of many studies on the human-nature relationship which hold quite different views of what nature is and what this can therefore encompass. These different views of what nature is, within the same field of research, highlight the complexities which must be taken into account when studying this area.

These were just a few of the first items of the literature which I found when beginning to search the topic and it was already becoming apparent to me that context is an important part of our conceptions and constructions of nature and directly affects what we class as nature. If we are surrounded by buildings and manmade objects, then nature could potentially be anything that is living around us.

It could be argued that most land has been or is still managed or maintained to some extent, especially here in the UK. This is clear by simply visiting the "natural" places around us. Conservation parks and protected areas of forest are often maintained so

that we can connect with nature, in an accessible, safe and pleasant way. We have constructed and maintained footpaths through many of the “natural” areas we like to visit, so as to allow us to control our experiences with nature. Furthermore, in the UK, we have eradicated and, in some cases, are still trying to eradicate and manage, the wildlife with which we share our country. An example of this is with the recent badger culls, started in 2013. The UK government deemed wild badgers a nuisance and dangerous because of the effects they propose they have on the species we breed for our own needs. For this reason, the cull has meant we have already lost a large number of these wild animals. This is clear example of how even the wild animals we share our country with are controlled by us as humans.

Vining et al’s research also highlights the contradiction in definitions which we, as humans, appear to have over what nature encompasses. While their findings show that participants, as stated above, define nature as places without human interference, they also found that 76.9% of the same participants consider themselves as part of nature. This would suggest that we can hold quite inconsistent views on what nature is, because a belief that nature is something without human interference would, on the surface, suggest that humans themselves cannot be considered part of nature, as we are the interference that makes something not natural. It may be the case that even when we feel we know and have made our own definition of what we believe nature is, then our other beliefs can contradict or question this definition.

It could be argued that a limitation of Vining et al’s research is in how the researchers did not account for whether the participants came from urban or rural

environments. In their research there is only a brief mention of one part of the sample being participants who lived in a location which included a national forest. The amount of urbanisation in the other areas from which the sample was taken is not mentioned and, furthermore, at no time in the discussion of the findings do the researchers discuss or account for whether participants are urban or rural dwelling. As past research has suggested that our relationship with and views on nature are affected by our childhood (Asah, Bengston and Westphal, 2012; Ewert, Place and Sibthorp, 2005; Linzmayer and Halpenny, 2014) and current time spent with nature (Richardson, Hallam and Lumber, 2015), it could be argued that this may have had some effect on their definitions. This would suggest that, if Vining et al had recruited participants who lived in urban settings, their views of what constitutes nature may have been very different.

These two examples of research alone demonstrate that the definition of nature is not consistent between people. Further support for the inclusion of managed places such as parks to be included within the definition of nature for research is provided by Richardson et al. Richardson et al (2015) explain how people's connections with nature today are largely with green spaces in urban environments and therefore we must encompass these in research. However, as Vining et al's findings suggest, are participants necessarily including these in their perceptions when we are asking them about nature? This gap in the literature has meant that some researchers have begun to explore people's views of what nature is and encompasses as part of their research (Liu and Lin, 2014). This has meant that some ideas of how people see nature have been explored.

What are the understandings and definitions of nature that writers and researchers have offered? In theoretical terms, Macnaghten and Urry (1998), in their discussion on “contest natures”, highlight how nature has been defined and considered as different things over time as well as at the same time. They cite multiple writers such as Strathern (1992), Szerszynski (1993) and Williams (1976) as providing just a few of these definitions (p. 8 and 29). Where some of these definitions focus on the spiritual aspects assigned to nature, such as seeing nature as an “underlying force” or the “essential quality or character” which underlies something (p. 7 and 8), other definitions discuss more concrete things around us like the “primitive or original condition existing prior to human society”, “the rural countryside” or “the physical as opposed to human environment” (p.8).

In the empirical research reviewed later in this chapter, it is clear that many researchers refer to the terms “nature” and “natural environments” in their own research; however, they do not explicitly give a definition of what they mean by these terms and what they encompass in their discussion of them (e.g. Asah, Bengston and Westphal, 2012; Berman, Jonides and Kaplan, 2008; Fox and Xu,2017; Gosling and Williams, 2010; Kals, Montada and Schumacher,1999; Lumber, Richardson and Sheffield, 2017; Mayer and Frantz, 2004; Moffat, Johnson and Shoveller, 2009; Müller, Kals and Pansa, 2009; Nisbet, Zelenski and Murphy, 2009; Prévot, Clayton and Mathevet, 2016; Richardson, Cormack, McRobert and Underhill, 2016; Schindler, Cimadom and Wrbka, 2011; Sonntag-Öström a et al, 2017). There appears to be little effort made by researchers to define nature, and one is left to work out what they mean by nature through a process of elimination and deducing what nature is through the scales they have used and conditions they have set in

their research. Within these we then find out what it is the researchers were assessing when they were assessing connections to “nature” or experiences in “nature”. To explore the meanings that these studies had assigned to nature, the literature was reviewed. Empirical research articles which mentioned “nature” in the titles were reviewed to explore what it was they were looking at and what they meant by nature. If the research was focused on finding out participants own construction of nature, then these studies were excluded from the review as these did not rely upon a definition of nature but explored constructions of it. Here I was only interested reviewing the understandings of nature focused on by other researchers.

As mentioned above, the scales used in the research are one way by which we can explore what the researchers were considered as nature. Gosling and Williams (2010), for example, use the Environmental Concern Scale, which was adapted from other nature connectedness scales and gives some definition of what is considered nature in its items, where they refer to wildlife and wildlife habitats, landscapes, other living things and trees. The scales measure how participants react to these particular aspects of nature, therefore, give some reflection of what researchers were referring to when they referred to nature. Similarly, Lumber et al (2017) use the Uses Nature Relatedness Scale (Nisbet et al, 2009) to measure connection to nature. This scale mentions weather, outdoors, non-human species, wilderness, dirt, earth, spirituality, wildlife, birds, plants, woods. They also add some more definition through the Biophilic Values they measure, where they mention; rivers, hills, sunrises, sunsets and the anatomy of plants and animals.

Another way by which researchers in practice defined what nature meant in their research, was through the conditions they used in their study designs. One example of this can be seen in Sonntag-Öströma et al (2017). Sonntag-Öströma et al looked at “Nature’s effect on the mind”, as they explain in their title. In this research, they chose to focus on the effects of the use of forests in rehabilitation programmes. In choosing to focus on forests but discussing their research as “nature’s” effect on rehabilitation, these researchers are using forest interchangeably with nature. In reality, when this question is considered, they are only exploring one type of natural environment’s effect on the mind. The same findings may not be present from people’s experience of rehabilitation programmes in the arctic, in a desert, in a garden or on a farm, which could all also be considered nature through consideration of what is included on the scales discussed above.

One of the main things which was evident in reviewing this literature was the use of “natural” in opposition to “urban”. Fox and Xu (2017) is one example of research which makes such a distinction. While they research the economic and social influences on attitudes towards nature, they do not pinpoint what aspects of nature they are referring to. Instead, they explain what they mean by contrasting nature to urban. Similarly, one experiment in Berman et al (2008), is described as involving 50 photographs of nature and 50 photographs of urban environments. In this, the nature and urban are not operationalised, but are used to contrast and define each other. Hartig (1993) offered an explanation for this in the Transactional Perspective of nature. Hartig explained that the human and the natural are interconnected and it is the features and aspects of the human or unnatural, and the environment or the

natural, which act as defining features of the other. To define one, the other needs to be considered.

This discussion of different understandings of nature offered by the literature provides just a brief insight into how complex a question “what is nature?” is to answer. Another interesting part of this debate can be seen when we consider the different understandings of nature which have been offered throughout time and gain an insight into how the human-nature relationship has changed throughout history.

### 2.2.1. A Brief History of the Human-Nature Relationship- From Pre-industrialisation to Environmentalism

To provide some context around how much the human-nature relationship has changed throughout history, we can take a look at how western society as a whole has changed the way we view and value nature multiple times, for multiple reasons, including religion and industrialisation. For the purposes of contextualising my own research I will only briefly focus on the changes in relationships with nature in the UK over the past six centuries, as this exemplifies a period with a lot of change.

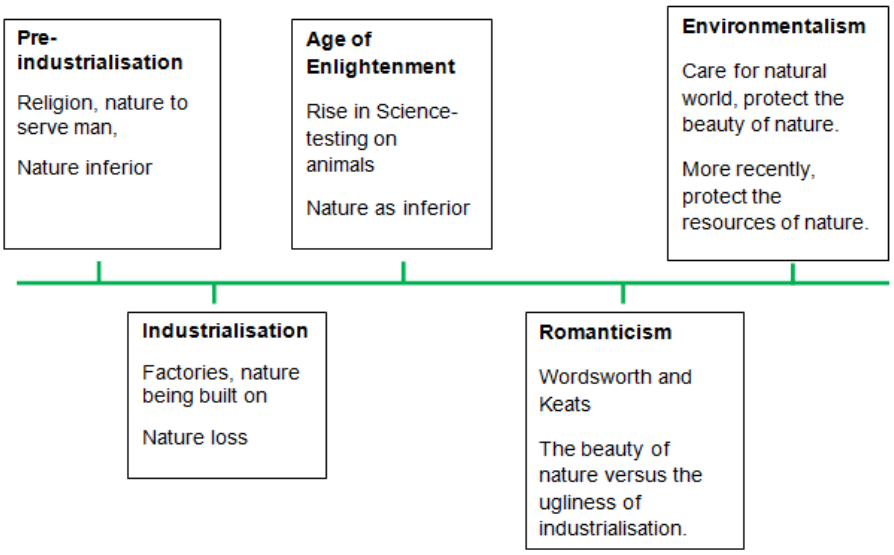


Figure 1. A timeline of the relationship between humans and nature in the UK, adapted from information from Thomas (1984).

#### *2.2.1.1. Pre-Industrialisation*

Firstly, within the pre-industrial UK, in the sixteenth century and prior, most people lived very closely with nature, directly relying on the natural world for a variety of different resources. However, during this period of history, where thinking was dominated by religious doctrine, society held the anthropocentric view that every other living thing on this planet was put there, by God, for humans (Thomas, 1984). People believed that plants existed to feed animals and animals existed to feed and entertain humans. Meanwhile, the church also voiced concerns about guarding oneself from the inner “animal instincts” and behaviours that were not socially acceptable and were seen to be a result of this “animal nature”. The common view at this time, therefore, was that the natural world and the variety of lives that it encompasses were inferior to human life. A “dichotomisation” between nature and society was created (McNaghten and Urry, 1998, p.7).

#### *2.2.1.2. Industrialisation*

This disconnection between the human and natural world was then further enforced during the eighteenth century, due to the Industrial Revolution. The Industrial Revolution was the rapid growth of industries and production within the UK and beyond, seeing vast numbers of factories, railways, mines etc., appearing throughout the country (More, 2000). As industry grew, these factories needed more and more space, therefore urbanising and cultivating the natural world began to happen on a large scale and as such, people's lives became less entwined with the nature around them. Thomas (1984) highlights how the Age of Enlightenment, which was growing in Europe and flourished in the UK in the eighteenth century, brought with it the rise in the scientific study of animals. During this period of growth for the scientific world, the common view was that studying, taming and controlling the natural world was important in this journey. Although the widely held view was now that humans were part of the natural world, rather than superior to it due to understandings in science, society's study and taming of nature still demonstrated a superiority of humans.

#### *2.2.1.3. Romanticism*

However, in reaction to the age of enlightenment and urbanisation, some began to emphasise the importance and value of the natural world and wilderness (Worster, 1994). This movement, referred to as Romanticism, saw poets such as Wordsworth and Keats write about the beauty and preciousness of the natural world in contrast to the ugliness of the now industrial towns filled with factories. This began the growing romantic view of the natural world and our duty to protect it, ultimately sparking the environmentalist movement in the late nineteenth and early twentieth centuries

(Milton, 1993). While western societies grew through industrialisation and urbanisation, romanticism and environmentalism grew in reaction to this (Taylor, 2005), making the relationship between humans and the natural world more complex, as people were pulled by the romanticism but surrounded by a quickly developing urban society.

#### *2.2.1.4. Environmentalism*

Although the environmentalist movement then began to take hold, with people hoping to foster better relationships with the natural world, Wilson (1984) discusses how humans in urbanised societies appeared to only contribute to conserving areas of specific species of the natural environment or wildlife for selfish reasons, such as our need for them to provide us with something. He highlights how societies have developed for the good of the here and now, for example, with our use of non-renewable energy sources, and on the whole, have only recently begun to research what these developments might mean for future generations.

However, for the past few decades and in the present day, the environmentalist movement can be seen to be gaining momentum. In terms of politics, environmentalism and “The Green Movement” (Martell, 1994), are relatively new paradigms which are growing to stand independently as they become widely known narratives. Martell highlights how, until the 1970s, preserving the world around us was not something on the agenda of mainstream politicians, or even within the political sphere. “The Green Movement” is described by Torgerson (1999) and Martell (1994) as the movement in political arenas towards promoting sustainable

behaviours. They both discuss how this movement has grown alongside other, what were seen as radical changes in politics, such as feminism. Torgerson highlights how this time of radical changes, in the last 50 years, in western politics gave hope to many people that there was going to be a social transformation, both in relation to the political systems of the time, as well as in the way sustainability was considered in the way people lived. Therefore, this was the opportune moment for environmentalism to become an important part of the transformed western society. He argues that environmentalism, as it grew in the political sphere, has grown from being a movement purely in reaction to industrialisation, to a movement which is for change in legislations and ultimately behaviours and which now stands independently of industrialisation. Environmentalism and its merging with other movements, for example eco feminism, illustrates how, as a movement, it has grown (Torgerson, 1999). Alongside this growth in the political spheres, the introduction of conservation organisations and charities for the protection of non-human rights began to grow throughout the western world; for example, the World Wildlife Federation, People for the Ethical Treatment of Animals and Royal Society for the Protection of Cruelty to Animals.

Research which has been conducted within this environmentalist period appears to suggest that western societies now see the natural world as of equal importance to human life and have begun to want to connect with nature in a non-destructive way. Newell (1997) cited in Clayton and Myers (2009, p.17), conducted research surrounding people's favourite places and found that 60% of participants named natural environments as their most valued places. More recently Van den Berg and Koole (2006) found that their participants preferred 'wild nature' over nature

‘managed’ by man. Furthermore, Thomas (2013) (cited in Fox and Xu ,2017, p.190), highlights the preference for images of nature for things like background images on phones and computers and calls this “Technobiophilia”.

#### *2.2.1.5. From Connecting with Nature to Conserving Nature*

It may be argued that, although conservation and respect for nature has been seen in the past, preserving nature for future generations is a relatively new idea, with it only recently beginning to move into the political agenda (King, 2012). Wilson (1984) proposes that the human relationship with nature has been and still is a selfish one. He discusses how humans have manipulated nature throughout history in ways which serve our needs, not thinking about or considering nature itself. He therefore argues that our new found need to preserve the natural environment comes from these selfish desires to benefit our future generation and ensure that the human race survives. Alternatively, it could also be argued that the recent technological and scientific advancements which have allowed us to see the effects of greenhouse gases for example, have meant that the way we have affected the world and the repercussions of this have only just been truly explored. It may be that as a result of this we are acting now to preserve nature as, until now, we have been ignorant of our impact on the environment around us. The important thing is, however, that this movement in environmentalism towards sustainable behaviour and conservation of nature is now present. This can be seen in political initiatives, such as the Paris Climate Agreement, as well as in research.

When reviewing recent research on the human nature relationship, one comes across a variety of different areas of research from a multitude of different disciplines and this is reflected in the references for this research; for example, research in tourism (Glavas, Pike and Mathews, 2014) and health (Hanson and Jones, 2015). Equally, within Psychology, there is expanding interest in this area. Areas of study within Psychology which become apparent are Environmental Psychology, Eco-psychology and Conservation Psychology, all working to understand the human nature relationship. A brief outline of these areas of Psychology is given a little later in this chapter when the empirical research within these areas is discussed.

## 2.3. A Constructivist View of Nature

This section of the chapter aims to provide some context for where this research sits in this ontological discussion of what nature is, taking into account the different understandings that have been considered. Overall, it is clear that what nature is and what it includes can change between contexts and the constructivist view of this research takes into account that there are and have been different understandings of nature. Furthermore, it is clear that the way we have constructed nature as part of our lives throughout history has changed multiple times. This ever-changing relationship demonstrated here, with discussion of the history around nature and discussion of the conflicting beliefs, is in line with Clayton and Myers' (2009) proposal of nature as a socially constructed concept. Our views of what it is, and what our relationship with it should be like, are dependent on a variety of other factors happening in societies at any given time, such as developments in politics and science.

Although considering nature as a social construct is common in a number of fields, it has however, been critiqued and been the topic of complex debates. Firstly, Demeritt (2002) critiques this view by suggesting that the literature around the social construction of nature does not clarify what social constructionists mean exactly by social construction. He suggests that a lack of a clear account of what this viewpoint proposes has meant that the term has become overused by writers in different fields. In turn, the use of the term by many writers has made way for more misinterpretations to be made and exactly what is meant by the social construction of nature has become even further blurred. For example, Demeritt discusses social construction as refutation. He describes how people began to use the idea of nature being socially constructed to refute claims about environmental problems happening to the world; while others used the idea as a way to gain an understanding of the phenomena.

The main debate however, can be best reflected if we think of the arguments for the social construction of nature being along a dimension, where at one end social constructivists believe nature is entirely a construction of society and at the other realists argue for the idea that nature is something which exists in the world and is there to be seen. Peterson (1999) critiques the idea of a socially constructed nature by suggesting that too often it is considered to be at the extreme end of the scale, assuming that there is no “nature” but our constructions of it. Peterson goes on to dismiss the idea of a universal concept of nature through our social construction and acknowledges the idea of nature existing, that is, what she says is non-human life, existing. She advocates an ontology put forward by Hayles (1995) called constrained

constructivism. From this ontological position, Hayles suggests that there is a real world that exists and therefore “nature” exists, but it is important that we recognise that we are a part of that.

Further criticisms have also been raised by writers such as Crist (2004), whose paper I read as an attack on “social constructionism” from a realist position. Crist argues that nature has intrinsic meaning rather than meaning assigned to it by humans. She suggests that the constrained constructivist view outlined above still places too much emphasis on the human role in constructing nature. However, she does little in the way of providing an idea of what this alternative intrinsic meaning is or how it has been evidenced; only claiming that farmers have, for centuries, seen the intrinsic meaning of nature. She further argues that holding the constructivist view of nature diverts the attention away from the natural phenomena and dilemmas we are facing and in doing so “mutes” nature’s part in these. However, it could be argued that this view does not take away from addressing these dilemmas, but further helps by critically addressing how those who oppose environmentalist activism do so, enabling their views to be challenged.

In considering these points, this research takes the viewpoint that nature exists and to some extent provides us with experiences that influence our meaning making. This is evidenced in the idea that constructions of nature throughout time have not changed so much that they encompass entirely different concepts altogether. However, the evidence discussed above of alternative constructions of nature throughout time cannot be denied. I contend that we can only construe nature from the experiences it affords us. We make our own personal constructions of nature,

which to some extent will be influenced by the cultures and societies we live in. As demonstrated by this brief discussion, when we consider the ontological question, “what is nature?”, it becomes clear, very quickly, that this is a very complex debate and perhaps it is unnecessary to seek an objective definition of nature as this would ignore the powerful social and cultural influences on how it is constituted in very different ways over time and culture. It may be more important to consider the way people have and do understand nature and what they personally mean by ‘nature’.

## 2.4. Why do we have relationships with nature?

Following on from the idea that nature is now valued by many people, there have been a variety of different theories put forward as to why we feel the need to interact with nature. If we consider the social construction of nature in relation to the park example outlined previously, this connection is demonstrated. As previously mentioned, Maller et al (2005) and Kaplan and Kaplan (1989) highlight ‘nearby nature’ is a type of nature. Maller et al explains how parks constitute nature for people within urban areas, as it is a quick and convenient way in which they can feel a connection with nature. The popularity and continued construction of parks makes it evident that humans living within these urban areas use and appreciate these opportunities to connect with nature. This then poses a question about why we feel the need to make and have these connections with nature. Why do we visit parks? Why do we choose to connect with nature?

Wilson (1984), Ulrich et al (1991), Kaplan (1995) and Shipman (2010) have proposed the key hypotheses which are drawn on by those exploring the human-nature relationship. Both Wilson’s Biophilia hypothesis and Shipman’s Animal

Connection Hypothesis suggest that as humans we have an innate affinity, connection and fascination with parts of nature and the natural world due to our evolution as part of it. While Wilson's theory focuses largely on nature as a whole, Shipman's focuses on our connection with wildlife and other species. Both suggest that it is the times before industrialisation, and even at the very beginning of humanity, that mean we still maintain a connection with nature in today's society. During these times we lived alongside and utilised nature in our everyday lives. They highlight that developing into the species we are today we have had to maintain an interaction with the natural world around us for survival and sustenance. As a result of these dependencies, even in a built-up urban society today, we have evolved to feel an innate connection to it.

Alternatively, Kaplan (1995) proposed Attention Restoration Theory, suggesting that we have a preference for nature and natural settings, as unlike busy manmade settings, nature does not demand our attention. This theory distinguishes between voluntary attention, where we consciously decide to direct our senses towards an object, and involuntary attention, where we are subconsciously attracted to or fascinated by objects. Kaplan suggests that as nature does not demand our attention, but somewhat captures and fascinates our senses, that this is using our involuntary attention, which is beneficial for us as we find this less mentally fatiguing and therefore subsequently enjoy and prefer to be around nature. We have evolved, therefore, to seek out these places which benefit us. An example of empirical research to support this can be seen in Berman, Jonides and Kaplan (2008). Berman et al asked participants to perform a task which needed their directed attention in order to fatigue their attentional abilities. They then split the participants into two

groups and asked half to walk out in nature, while half went for a walk an urbanised area. They then asked them to repeat the task and found that participants who had walked in nature performed significantly better than those who walked in the urban area. They also found similar results from participants viewing natural environments in pictures. This supports Kaplan's theory, as natural environments did not fatigue participant's attention and rather allowed for participants to rest, whereas, when viewing urban environments, participants' attentional abilities were found to be fatigued and impaired. They would propose that this is because these environments demanded their attention and therefore did not allow for it to be restored.

In contrast, Ulrich et al (1991) argues that Kaplan's Attention Restoration Theory places too much emphasis on cognition, specifically attention, and ignores the affective results of contact with nature. Ulrich et al alternatively focus on nature's ability to reduce stress from an evolutionary perspective. Their research found that natural environments have a higher stress reducing effects than urban environments. Ulrich et al claim that this beneficial and positive psychological effect is the reason why we feel the connection we do to nature and prefer natural spaces. As long as it is not a dangerous or threatening environment, nature provides a place where less stress is felt and inevitably we have evolved to prefer this. This theory has been supported by a large amount of empirical research, finding that natural environments have a larger stress reducing effect than that of an urban environment. Some of this research will be discussed in the section to follow on empirical research in the area, however, an example is given now to demonstrate. Tyrväinen et al (2014) looked at the effects of urban green space on the stress levels of their participants. They took both psychological and physiological measures of stress, including psychological

scales and cortisol levels of saliva. Their findings for both measures suggested that green space helps to alleviate stress, with participants perceiving these places as restorative and measuring lower on cortisol levels after their stay.

These theories provide some explanation of why we may show a preference for nature as humans and why we may choose to connect with it, drawing on our biology and the environment around us. These theories also pose questions, which have then been the focus of empirical testing. What are the experiences which ensure a connection with nature is formed? What makes this not just a passing preference but a connection or relationship with the natural world? Research on this area is discussed as part of the following section.

## 2.5. Empirical Research on Humans and Nature in Psychology

Psychological research into how people relate to and are affected by the natural world has developed in different sub-disciplines, with distinctive (though overlapping) concerns. We have seen the rise of research areas such as Environmental Psychology, Eco-psychology and Conservation Psychology alongside each other within the last half a century. Where Environmental Psychology was established in the 1950s, Conservation and Eco-psychology have only begun to emerge much more recently (Clayton and Saunders, 2012).

In relation to Environmental Psychology, Steg, van den Berg and de Groot (2013) discuss how research in this area began as “architectural psychology”. This area of research explored the impact on people of interacting with environments, which at

this time were mainly built environments. It was in the 1960s, which Novotny (2000) argues marks the beginning of a new environmentalist movement, when the growth of this field of study moved towards addressing environmental concerns. This is a broad domain which includes research which addresses any questions around the human-environment relationship, be that built or natural, and the interactions these involve.

Conservation Psychology then began to be built as a discipline when researchers began to bring together research which could aid the conservation of the natural world. Saunders (2003) p.138, defines Conservation Psychology as

> *…the scientific study of reciprocal relationships between humans and the rest of nature, with particular focus on how to encourage conservation of the natural world… it is motivated by the need to encourage people to care about and take care of the natural world.*

Clayton and Myers (2009) highlight how, in the domain of conservation psychology, it is extremely important to gain an understanding of the reasoning behind our attitudes and behaviour. They argue that the more we can learn about the psychology behind the attitudes, the more we can harness this to promote sustainable behaviour. Fisher (2012) explains that Conservation Psychology was a development on Environmental Psychology as it offered a domain for research which had "an exclusive focus on promoting care for the natural environment" (p. 202). This area focuses largely sees researchers trying to understand the human-nature relationship, with a conservation agenda.

Reser (1995) cites Roszak (1992) as being the academic who first began to shape Eco-psychology as it is today by exploring the relationship between psychology and ecology. Although there have been a number of attempts to define Eco-psychology (Fisher, 2012; Greenway, 2010; Reser, 1995), there is little clear and decisive literature on what its studies include and do not include in modern psychology research. Fisher (2012) and Jordon, Stevens and Milton (2010) discuss the idea that Eco-psychology is the movement towards bringing ecology and psychology together with their overlapping interest in nature. Fisher expresses that;

> *Ecologists study nature, while psychologists study human nature. Assuming these natures overlap, psychology already has potential links with ecology.* (p.4)

Fisher goes on to position Eco-psychology away from Environmental and Conservation Psychology, arguing that it is a more radical movement which asks questions from a point of view more critical of mainstream psychology. In the study of Eco-psychology, the human is not separated from the environment but is indeed a part of that, as ecology suggests. He explains that

> *[conservation and environmental psychology] …do not go deep enough or adopt a truly ecological mode of thought or practice… Ecopsychology is not about solving 'environmental problems' but rather understanding how psyche and nature internally relate, how they are the interior and exterior of the same phenomenon.* (p.205)

However, despite their different origins and concerns, inevitably these disciplines all explore aspects of the way humans feel, identify with and behave in relation to the natural world, the lines between them are quite blurred. Therefore, I am going to outline the key issues which are apparent across these disciplines thematically, in terms of research areas which I interpreted from my literature search. I initially searched for articles using the key phrases “relationships with nature”, and “humans and nature”, using search engines such as Google Scholar and the University’s “Summon” system. This returned literature from a variety of different disciplines and covering a variety of different topics. Major areas which were uncovered at first were nature’s effect on well-being and research into attitudes and values. It was through reading these I then became aware of other areas of research and began following links to other relevant journal articles and books. As part of this search I also came across Clayton and Myers (2009) book on Conservation Psychology, which gave an interesting overview of a variety different topics of interest. On identifying key texts of interest through these initial searches, I then followed up relevant references and used citation indexes to extend my search further. Once I had a wide variety of literature I began to notice that these could be grouped into themes of what they exploring.

I have organised my review around two main research areas, each with a number of subsidiary topics, these themes, as shown below:

Current responses to nature

- Nature and well being
- People’s attitudes towards and values concerning nature

- Understanding pro-environmental behaviour
- Nature Connectedness
- Identity

Development of perspectives on and relationships with nature

- How attitudes and values develop
- How a connection to nature develops
- How environmental identities develop
- Significant life experiences

### 2.5.1. Understanding people's current responses to and relationships with nature

#### *2.5.1.1 Nature and well being*

The study of humans and nature within psychology cannot be fully reviewed without acknowledgment of research on the effects of nature on our physical and mental well-being. This is a body of research which has been explored substantially from a variety of different areas of interest.

A few areas of research which explore nature's effect on well-being include the study of the effects of gardening on both physical and mental well-being (Scott, Masser and Pachana, 2015; van den Berg and Custers, 2011; van Lier et al 2017), the effects of nature in urban spaces on mental well-being (Beyer et al, 2014; Korpela, Ojala, Lanki, Tsunetsugu, Kagawa and Tyrväinen, 2014), nature's usefulness in

rehabilitation programmes (Sonntag-Öström et al, 2017) and the effect of exposure to green spaces on income related health problems (Mitchell and Popham, 2008).

Beyer et al (2014) looked at the mental health of a sample of the non-institutionalised general population from Wisconsin in the United States via a large-scale survey, controlling for a wide range of confounding variables, including age, marital status and educational achievement. The researchers measured stress, depression and anxiety using Depression, Anxiety and Stress Scales (DASS), which measures mood symptoms such as whether participants feel panic, pessimism about the future, are easily upset or irritable and other such symptoms. The amount of green space in an area was calculated using the Normalised Difference Vegetation Index, which is a tool used by researchers to look at the density of vegetation in spaces. The records were coded so that researchers could compare locations of participants, so when looking at their mood researchers could also see how much green space they are surrounded by. The survey found that participants living in places with a higher percentage of tree and vegetation coverage reported significantly lower levels of the mood symptoms of depression, anxiety and stress.

Mitchell and Popham (2008) explored whether exposure to green space might have some effect on income related health problems. They hypothesised that due to nature's effect on stress levels in studies like the one above, this may help to prevent the inequalities in health problems which are a result of income deprivation. Their results suggest that in populations where they have access to green space, there are lower levels of health problems related to having a lower income.

Sonntag-Öström et al (2015) looked at the use of forest-based rehabilitation for participants who had been diagnosed with exhaustion disorder. They took a qualitative approach to the research, using semi structured interviews with participants after their time in one of their nine forest-based rehabilitation programmes. In these interviews they explored the experiences of participants and their thoughts and feelings around different aspects of the rehabilitation. They then thematically analysed the interviews and found that participants perceived the forests to be a place which enabled them to be reflective and gave them peace of mind, which then ultimately meant that they were able to become relaxed.

Another area of such research, which explores the effects of nature on both physical and mental well-being, is the study of the effects of Green Exercise (Brown, Barton, Pretty and Gladwell, 2014; Calogiuri et al, 2016; Pretty et al, 2007; Rogerson and Barton, 2015). Green exercise is used in research to refer to physical activity or exercise in natural places (Barton, Wood, Pretty and Rogerson, 2016). Rogerson and Barton (2015) looked at the effects of visually perceiving nature, whilst on a treadmill, on participants' directed attention abilities in a small task after exercise. In this experiment, the researchers set up 3 groups of participants, who exercised whilst viewing scenes of different environments: natural, built and a control group. They found that there was a significant improvement in participants' direct attention, for a backwards digit span test, after all exercise where participants were viewing nature. However, there was no such improvement for exercise in the other groups. They suggest, from their findings, that seeing nature helps to promote attention restoration during moderate intensity exercise. Similarly, Calogiuri et al (2016) looked at the effects of nature-based activities on the physiological and affective

symptoms of workplace stress and fatigue. They found that both conditions of exercise, indoor (not green) and outdoor (green), provided restorative qualities for participants' physiological symptoms of stress and fatigue. However, participants reported greater affective results for green exercise, suggesting its potential to have greater psychological benefits.

#### *2.5.1.2. People's attitudes and values towards nature*

My search identified a substantial amount of literature which looked at people's attitudes and values towards different species and different areas of the nature world.

In exploring this topic, some researchers have tried to understand why some beings are more highly regarded and protected by humans than others in the natural world. Both Knegtering, Hendrickx, Van Der Windt and Uiterkamp (2002) and Schlegel and Rupf (2010) found birds and mammals are regarded as of higher importance to conserve than animals such as insects and reptiles, when they explored participants' attitudes using questionnaires based on Likert scales. Schlegel and Rupf explored the attitudes of young sample, by asking students from a variety of different educational institutions to rate whether a number of different species of mammals, birds, reptiles, amphibians and insects are 'likeable', 'fairly likeable' 'fairly unlikable' or 'unlikeable'. They found that students, while also showing higher regard for the conservation of birds and mammals than insects, also showed higher regard for animals which would be deemed "love-able" or attractive to look at than those which were less aesthetically pleasing to them. Knegtering et al. (2002) found that non-

governmental organisations appeared to want to conserve birds and mammals before other species and also showed higher regard for conserving a species the larger it was. One argument which has been suggested to explain this is the Similarity Principle proposed by Plous (1993), who studied people's attitudes towards the use of animals in science, for recreation and for food. Plous found that, the more human-like a species is, the more likely we are to protect it and it is this which he named the Similarity Principle.

More recently Colléony, Clayton, Couvet, Jalme and Prévot (2017) explored how willing people were to donate money, via adoption, for different species and what it was about species which made people willing or not willing to donate. They looked at the biological factors including how endangered the species is, how phylogenetically similar to humans the species was, as well as the 'charisma' of the species and found that the species which were judged to be more charismatic, were the species which drew more people in to donate to them. Their findings supported those of Schlegel and Rupf research and Plous' theory, with more people donating to species which are similar to humans. In relation to charisma, the researchers explain how complex a concept charisma is and explain how they chose to measure this via Google searches for the animal. They explain that they take the definition of charisma to mean "charm or appeal" and they, therefore, chose the number of Google searches for the animal as a reflection of this appeal, as it is a way measure people's interest in the species. It could be argued that this decision in itself is flawed, as Google searches for an animal will undoubtedly not only be driven by its appeal, but possibly interest in its habitat or even fear of the species.

Some researchers' findings have suggested that direct experiences with nature affects people's attitudes and values towards nature and conservation. Swanagan (2000) carried out research in a zoo and asked people leaving the zoo about their attitudes towards nature conservation. During this research the zoo had an elephant exhibit which meant visitors could touch and hold different things relating to an elephant, for example a tusk. They were also able to view the elephants and learn about them as part of an elephant show. People leaving the zoo were asked twenty-five closed questions via a survey and also given the opportunity to fill out a card and fill that in and send it back to the researchers. Swanagan does not include the questions used in the research in their article, therefore, it is difficult to evaluate the effectiveness of these questions. Their findings suggested that people who had experienced the elephant exhibit held more positive attitudes towards conservation than those who did not. They were also returned more of the cards back to researchers with information about their attitudes.

Another area of attitudes to nature which has been researched is that of whether different personal factors have an effect on our environmental attitudes and values. These studies suggest that age, gender and education level all have an effect on environmental identity and attitudes towards conservation (Mehta and Heinen, 2001; Schindler, Cimadom, and Wrbka, 2011 and Yang, Zhang, and Chen, 2010). In Mehta and Heinen (2001) and Yang et al. (2010), gender differences are highlighted, with Yang et al finding that the women in their sample showed more positive attitudes towards conservation and the local environment researched. Furthermore, Mehta and Heinen found that the men in their sample held more positive attitudes towards local conservation in their research. As these two studies demonstrate, these

findings are not consistent and it may be interested to explore these differences in larger scale research. These findings suggest that is important to study both men and women's relationships with nature. Both of these studies used Likert scale questions and collected only small amounts of qualitative data through short informal interviews or open-ended questions at the end of the questionnaire. Questionnaires involved statements such as "The conservation area was created for the betterment of our community" and "I am generally satisfied that my village is included in the conservation area.' (Mehta and Heinen, p. 170) and "How do you rate your attitude to WAC" (Yang et al, p.63) and participants were asked to circle to what extent they agree with the statements. Sodhi, Davidar, and Rao (2010) discuss research surrounding conservation and highlight that women appear to be more positive in terms of conservation than men. They argue that, for this reason, more women need to study sciences such as conservation biology to really harness this asset within conservation.

Although I found no research which has focused solely on looking at the relationship between age and conservation attitudes, some researchers have addressed this alongside other factors. Schindler et al. (2011) found that there was a significant difference between the conservation attitudes and behaviour of different age groups, with their sample ranging from people in their twenties to over their sixties. They found that their younger participants, aged 25-39, were more knowledgeable about conservation topics, as well as better at predicting the impact of their own behaviour on the environment. This has also been found in more recent research by Masud and Kari (2015), who suggest that younger people are more aware about

environmental issues because of the knowledge which is readily available to them through social media and other media forms.

Schindler et al. (2011), like Mehta and Heinen (2001) and Yang et al. (2010), found that educational achievement or level appears to have an influence on people's conservation attitudes. Schindler, Cimadom and Wrbka are researchers from conservation biology backgrounds, who interviewed participants with questions related to attitudes and behaviours around conservation. Their findings showed that the higher the educational level of the participants, the more familiar they were with what biodiversity means and how human behaviours may affect it. Although the educational level of participants was not the focus of these studies, the difference between the conservation attitudes of those with different educational achievements was significant enough to the researchers for them to discuss it in their findings, therefore this may warrant further research or exploration and suggests it may warrant consideration in sampling in future research.

Although it is important to understand our societies' conservation views and behaviours it is also very important to understand and learn about the conservation attitudes of those living within protected areas or in areas also occupied by endangered or protected wildlife (Harcourt, Pennington, and Weber, 1986). Western societies appear to want to save cute and large mammals, however, to the people living with these animals, they are often the ones causing damage to their livelihood. Although many of the problems with biodiversity come from the greed of western societies, the people living alongside these animals are ultimately the people who are the ones choosing either to live peacefully with them or to try to exterminate

species (Harcourt et al., 1986). Therefore, their attitudes towards conservation are particularly important. The findings of such research have found that when local people feel that conservation projects might benefit them, with jobs or tourism, then they feel more positive towards them (Black and Cobbinah, 2016). In this study, the researchers found that in one of their sample communities, the impact of conservation projects was clear and visible with projects being tangible to locals. However, in the community where these benefits cannot be seen, there were less positive attitudes towards conservation. Furthermore, if people feel direct losses due to the projects they are likely to feel negatively towards them (Kidegheshor, Røskaft and Kaltenborn, 2007). Kidegheshor et al found that participants in their research were opposed to the conservation projects where they saw constraints and restrictions put on their land which would affect their own livestock. Again, these studies used primarily closed questions in questionnaires to assess participants attitudes towards conservation. Finally, in relation to this area of research, a number of these studies would also suggest that the more involved and informed the local communities are, the more positively they feel towards the conservation (Fiallo and Jacobson, 1995; Mehta and Heinen, 2001; Udaya Sekhar, 2003;Yang et al., 2010).

The literature discussed above gives a brief overview of the research which has been done surrounding people's attitudes and values towards nature and particular areas of nature. This research gives us an insight into what can affect and influence these attitudes and provides a basis for understanding different feelings towards nature. However, the studies above largely used attitude scales, closed questionnaires and quantitative analysis (Fiallo and Jacobson, 1995; Masud and Kari, 2015; Schelegel and Rupf, 2010; Swanagan, 2000; Udaya Sekhar, 2003 and

Yang et al, 2010), with only few using qualitative methods alongside these to gain further support for the attitudes discussed (Black and Cobbinah, 2016; Mehta and Heinen, 2011). One limitation which has been suggested of the use of such scales comes from Heberlein (2012). Heberlein criticises the wide range of attitude scales which have been developed around the human-nature relationship. He argues that the people making the scales are often people who have no prior knowledge of the theories behind attitudes and attitude formation, coming from backgrounds in biology. When reviewing the authors of the literature discussed above it is clear that this a valid observation, with Schindler et al coming from biological backgrounds and Masud and Kari coming from a background in economics. He suggests that although tackling conservation needs to be a multidisciplinary effort, psychologists who have studied attitudes in all different areas are the ones who should be developing these measures. An example of where this may have been useful may be in Masud and Kari (2015), who used a questionnaire with nine yes or no questions, such as “are you aware of environmental the problems in the Marine Park?” and “Is waste generation increasing due to tourism?” and then discussed the findings of such questions to demonstrate participants’ attitudes. It may be argued that these questions touch upon attitudes by exploring what participants perceive to be happening in their local area, however, they primarily focus on beliefs rather than attitudes. Eagly and Chaiken (1993) define an attitude as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavour” (p. 1). The questions above make it difficult for participants to express any favour or disfavour and therefore it is purely the belief and not the attitude which may be uncovered by these questions.

The use of scales more generally, whether created by a psychologist specialising in attitudes or not, may be that we do not gain a full understanding of how participants feel towards nature, only to the aspects of this which have been considered through the pre-planned scales. The use of scales means that participants are not given the freedom to discuss their feelings and beliefs about different aspects of nature or express them in their own way. Instead, they are asked to what extent they agree with a statement about a predefined aspect of nature, this leaves a gap in the literature for research which takes into account people's personal constructions of nature. Although attitude and value scales help us to gain some understanding about how people feel towards certain aspects of nature today, looking at how people construe different environments may allow further insight people's current relationships with nature and further enrich this understanding by gaining knowledge about how people make meaning out of nature.

#### *2.6.1.3. Understanding pro-environmental behaviour and motivations for this behaviour*

Following on from this, another developing body of research is that surrounding what actually motivates and ensures pro-environmental behaviours. While understanding how and why we may develop the attitudes we do towards the natural world is important, research also needs to look at what actually affects our behaviour. As with other areas, it appears that conservation attitudes do not always reflect behaviour (Clayton and Myers, 2009). People may feel strongly about the environment, however, in practice they fail to take part in sustainable behaviours.

Tabernero and Hernández (2011) looked at self-efficacy and motivation as a factor to explain this dissociation between attitudes and behaviours. They used a questionnaire involving closed questions with multiple choice answers and Likert scales. This involved; asking participants their reasons for past recycling behaviour, where participants then had to circle an answer which most accurately reflected their reason, then questions which were about their beliefs in their capability to recycle, for examples “To what extent do you feel capable of separating all the paper and cardboard generated in your home and taking them to their respective containers?”, questions about how satisfied they felt while carrying out this recycling, questions about their own goals regarding recycling, such as “What level would you attempt to achieve in the near future?” and finally questions about their current behaviour such as “Do you separate paper and cardboard from the rest of the waste?”. Their findings suggest that people with higher self-efficacy, believing in their own ability to recycle efficiently, will engage in recycling more. They also found once people believe in their ability, motivation then mediates whether or not they participate in pro-environmental behaviour. Those with higher intrinsic motivation appear to engage in more of these behaviours. That is, if they have more reason personally to motivate them into behaving in an environmentally friendly way, they are more likely to do so. Perhaps with a higher focus on conservation matters socially, extrinsic motivation may also play a part.

Kals , Montada and Schumacher (1999) use the term ‘emotional affinity’ to describe the concept of having an emotional connection to the natural world as part of how people see themselves. They used questionnaires to measure to what extent their participants had this “emotional affinity” with nature and to what extent they would

commit to protecting nature. They highlight in their conclusions that this emotional affinity comes from direct experiences of nature, particularly with significant others. They also conclude that emotional affinity with nature was confirmed as a powerful way to explain pro-environmental behaviours.

Hinds and Sparks (2008) looked at affective connection with nature and its effect on planned behaviours regarding nature. To explore this, their adult participants were asked four pages of questions, answering on Likert scales, surrounding their perceived control over their behaviour, their environmental identity and their affective connection. Affective connection with nature was measured with the use of only four statements; ‘‘Sometimes when I am unhappy I find comfort in nature’’, ‘‘It makes me sad to see natural environments destroyed’’, ‘‘Being out in nature is a great stress reducer for me’’ and ‘‘I need time in nature to be happy’’, to which participants had to express to what extent they agreed (p.113). Participants who had rural childhoods reported a greater affective connection and also greater behaviour intentions, than those from urban environments. A critique of this research could be made in the measurement of connection through the use of four statements. Although these cover some of the emotions which could be felt through connection with nature, four statements only allow for a limited range of emotions to be explored.

As was seen in the discussion of attitudes and values being affected by experiences with nature, some researchers in the study of pro-environmental behaviour suggest that it is the way these experiences help to create a personal connection with nature, which, in turn ultimately motivates people into wanting to protect it. This suggests the

need to consider not so much the experiences themselves, but rather the way people construct these experiences (Hinds and Sparks, 2008; Kals et al. 1999).

Furthermore, engagement with nature through a variety of different tasks, both hands-on and vicariously, was seen to improve people's connections to nature and pro-environmental behaviour in The Wildlife Trust's 30 days Wild campaign (Richardson, Cormack, McRobert and Underhill, 2016). In this campaign members of the public signed up to take part in a challenge to engage with nature for 30 days consecutively. When participants signed up they were given a guide of '101 random acts of wilderness', which provided them with ideas for ways they could engage with nature. While some of these were hands-on experiences, others included engaging with it in a more abstract way, for example, drawing an animal or thinking of the implications for nature of a purchase you are making. Here the act of engaging with nature directly, or through simply considering it, was seen to boost people's connection to it. This develops on research cited earlier by Swanagan (2000), which suggested the importance of direct experiences in forming environmentally positive attitudes. It does so by exploring the idea that direct experiences are not the only way to develop positive relationships or attitudes towards nature. This brings into question whether, while direct experiences foster positive attitudes to nature, other ways of engaging with nature can be used to foster a more in-depth connection and pro-environmental behaviour.

Research in the area of pro-environmental behaviour suggests that our feeling of connection to nature is an important part of understanding the human-nature relationship and whether people are likely to act in pro-environmental ways.

Alongside understanding the attitudes and values people hold, a person's feeling of connection to the natural world is an important part of gaining a full picture of the human-nature relationship. However, once again, as we can see from the discussion of individual research papers above, research in this area has largely used closed questionnaires and Likert scales to explore this connection of affinity and how it effects our behavioural intentions (Hinds and Sparks, 2008; Kals et al, 1999; Tabernero and Hernández , 2011).

#### *2.6.1.4. Connections with nature*

Following on from this, nature connectedness, nature relatedness and an affinity with nature are all growing areas of research which look at how we create an emotional connection to the natural world. The concept of nature connection is becoming a popular term used by a variety of different nature charities and initiatives like the RSPB, The Wildlife Trust and the World Wildlife Federations (Lumber, Richardson and Sheffield, 2017).

Part of this research has focused on developing ways of measuring how connected people are with the natural world. For the purposes of this literature review, I will only discuss a few examples of these measures, however, see Tam (2013) or Martin and Czellar (2016) for a more comprehensive insight. Mayer and Frantz (2004) created their Connection to Nature scale (CNS) and Nisbet, Zelenski and Murphy (2009) and Nisbet and Zelenski (2013) created the Nature Relatedness Scale (NRS) and NR-6 (a briefer version of the scale) respectively. These scales aim to measure to what extent people feel they are connected with the natural world by asking participants to

say to what extent they agree or disagree with a range of statements regarding the natural world and their place in it. Examples of the statements used in the NR-6 include “I feel very connected to all living things and the earth.” and “I always think about how my actions affect the environment.” (Nisbet and Zelenski, 2013, p.11). The level to which the participant agrees with the statements are then used to give the researcher a score or level by which they can determine the relationship between the participant and nature.

As can be seen above in discussion of motivations for behaviour, it is again largely quantitative research, that has suggested that the more connected we feel to the natural world, the more likely we are to want to protect it and act in pro-environmental ways (Kals et al, 1999; Gosling and Williams, 2010; Müller, Kals and Pansa, 2009; Nisbet and Zelenski, 2011). This quantitative research does not allow for people’s own constructions of these connections to be explored. Although these studies show promise in understanding the links between connectedness to nature and active pro-environmental relationships, Beery and Wolf-Waltz (2014) suggest these results should be considered with caution, especially regarding the direction of any causal relationship. Müller et al. (2009), in reflections after their own study, encourage expansions and follow-up studies from their results, emphasising particularly the need for developmental research to explore how relationships and connections with nature develop. Beery and Wolf-Waltz also argue that in exploring connectedness as an emotional attachment to nature, researchers are neglecting the idea of nature as social construction. Where some societies may construct nature in a way that aids this, looking at nature in a romantic way, others hold more practical views of nature as a source of sustenance. This leaves a gap in the research for

work that looks at relationships with nature, not focusing on a measure of how connected people are according to a scale and exploration of the meaning of experiences to people in a qualitative way (Beery and Wolf-Waltz, 2014).

Another area of research related to connecting with nature is that of identity. The idea of incorporating nature into one's sense of self or identity is an area which has been considered by multiple writers (Cantrill, 1998; Clayton and Opotow, 2003; Thomashow, 1995). These writers suggest that our relationships with nature can be part of our identity and the way we see ourselves.

As with attitudes, a large amount of the research in this area has focused on measuring this concept. There are a number of researchers who, as with connection to nature scales discussed above, have tried to measure the extent to which people incorporate nature into their identity or sense of self (Clayton, 2003; Kals et al, 1999; Schultz, 2001). These scales, like the ones discussed above in relation to Nature Connectedness and Nature Relatedness, measure participants' connections with nature. However, I have chosen to discuss these separately as the ones above focus on measuring a particular concept, connection or relatedness, whereas these scales have different focuses, with identity being part of their considerations. While Kals et al (1999) focuses on emotional inclination towards nature, Schultz (2001) on cognition and building schemas of the natural world into one's sense of self or self-concept and Clayton (2013) who tries to cover different dimensions of connection with nature such as identity, emotion and interaction.

Both Clayton's Environmental Identity Scale (EID), and Kals et al's Emotional Affinity Toward Nature (EATN), use scales which involve statements which revolve around to what extent participants feel that nature is part of them, such as "Being a part of the ecosystem is an important part of who I am.", from the EID and "By getting in touch with nature today I have the feeling of the same origin.", from the EATN (cited in Tam (2013). Participants are then asked to rate to what extent they agree with the statements and a score is given to reflect how much they include nature in their sense of self.

Schultz (2001) however, with the same aim in mind (i.e. to explore to what extent people include nature in their sense of self), is quite different in two ways. Firstly, the focus of this measure is people's inclusion of nature in their sense of who they are, their self-concept or their identity. This makes this the sole focus of this measure as opposed to the ones already discussed. Secondly, the INS uses a very different method to those described above, by asking participants to pick an image which best represents their relationship with nature.

Again, although these scales allow us to gain some insight into whether participants see themselves as part of nature, they do not allow participants the freedom to explore what this means to them personally. There is a gap in the literature for research which allows participants to discuss these ideas further than purely agreeing or disagreeing with a statement. A more qualitative approach may open a dialogue and allow people to explore and discuss their feelings on their position in relation to nature without predetermined questions.

Another large amount of the research, in the area of identity and nature, has explored the developments of these identities. These studies are discussed in a section below where development is the focus and some of these scales are used in research.

### 2.5.2. Understanding the development of perspectives on and relationships with nature

#### *2.5.2.1. How attitudes and values develop*

As well as research exploring attitudes and values towards nature, research in this area has also focused on how pro-environmental attitudes and values develop. In relation to development, the importance of childhood has been raised in multiple areas of research and this can be seen throughout the different areas of research discussed. Some writers have even proposed from looking at the literature that a lack of contact with nature in childhood is a contributing factor in the growing number of behavioural problems in children (Louv, 2005).

The study of the development of pro-environmental attitudes has largely focused on the importance of childhood and when in childhood these attitudes and values emerge (Evans et al, 2007; Ewert et al, 2005; Kidd and Kidd, 1996; Hinds and Sparks 2008). As previously mentioned, Hinds and Sparks (2008) found that children who grew up in rural areas tended to show more emotional connection towards nature. Evans, et al. (2007) used attitude scales to assess the environmental behaviour and attitudes of children at the beginning of their school

lives. They found that these children began to be concerned about conservation and hold positive attitudes towards nature at around the age 6. Kidd and Kidd (1996) found that their child participants also began to develop similar attitudes towards conservation and nature between the ages of 6-8. Kidd and Kidd explained their findings in terms of Piaget's theory of development and the development of being able to take on alternative views in the concrete operational stage. They propose that as children become capable of developing perspective taking and alternative positions, they become able to empathise with other living things. Kidd and Kidd further discuss how this develops through experience, either with pets or wild animals they come into contact with and that these experiences help them to develop empathy for animals, expanding to animals which they have not had contact with.

Later research by Evans et al. (2007) provides further similar findings in relation to when attitudes and values towards nature develop. They found that their participants between the ages of 6 and 8 began to hold environmental beliefs. Notably, they also found that these were found to be moderately highly positive attitudes towards conservation and wildlife. Kidd and Kidd's explanation of this would argue that, for children who have not been able to take on other beings' perspectives before, these feelings of empathy are strong and therefore positive attitudes are formed towards conservation. These children are viewing other living things as beings which react in the same way as them. They are able to empathise by reflecting on how they do or would feel and therefore do not separate, for example, wild animals, not holding the same emotions as them. For this reason, to them, a wild animal is as important as themselves.

This research allows us to gain an insight into the importance of childhood in the development of pro-environmental attitudes and values. It provides consistent findings which highlight the importance of the ages of 6 to 8 in harnessing positive attitudes towards nature. However, research looking into the development of attitudes and values has neglected to explore the development of these attitudes into adulthood. Although the ages of 6 to 8 are important, the development of attitudes later than this and even the maintenance of these attitudes throughout teenage years and into adulthood has not been considered. Furthermore, as previously discussed, the focus on attitudes and values held by people does not always reflect our behaviour and actions. Clayton and Myers (2009) highlight how in the study of sustainability, the environment and conservation, like other areas, attitudes and behaviour are found to not always be in line, therefore the study of the development of identities and connections to nature may enhance this understanding.

#### *2.5.2.2. How connections with nature and environmental identities develop*

As the previous section outlines, research into nature connections is an expanding topic. The most recent research in this area considers how connections to nature develop and what factors aid the development of these connections, in the hope of helping people to connect or reconnect with nature (Lumber et al, 2017; Richardson et al, 2015; Richardson et al, 2016). Unlike with other areas of research into development, these studies focus on how connections develop with nature in the short term, what it is that helps facilitate these connections developing. Richardson et al (2015) asked participants to note three good things which they had noticed in nature every day for five days. The aim of this research was to explore what is

perceived by people to be good in nature, so that aiding people to develop a connection with nature through these “good” things can be considered. Participants’ answers were all considered together and coded into themes. Within these, there were a variety of different aspects which were used as “good” things by participant including, the beauty of nature, growth and change and the sensations provided by nature. Lumber et al (2017) also looked at pathways to connecting with nature and considered these in relation to the Biophila hypothesis. Lumber found that activities which involved engaging with the beauty of nature meant participants felt more connected with nature than those who completed activities without such engagement. They suggest that increasing the sensations which are felt through an activity with nature may increase how connected a person feels. This highlights the importance of people engaging with their senses during contact with nature in order to develop a connection with it.

Although these studies begin to provide some insight into what pathways could potentially lead to a stronger connection to nature developing, it could be argued that the quantitative methods used in such studies narrow what can be discussed about their participants’ pathways into connecting with nature. In focusing on the aspects of the Biophila hypothesis, they did could have missed important aspects of participant’s experiences which may have been an important part of develop these connections. Furthermore, this research fails to consider the life course of participants and whether aspects of their life history may have meant that these experiences fostered a connection with nature for these people. An exploration of the meaning participants make out of these experiences may help us to gain a further insight how these connections develop.

In relation to environmental identities, as in the development of attitudes literature, recent research has largely focused on the importance of childhood in the development of environmental identities, paying particular interest in the effects of education (Prévota, Clayton and Mathevet, 2016; Stapleton, 2015; Williams and Chawla, 2015) and school science lessons (Blatt, 2014; Tugurian and Carrier, 2016) on the development of environmental identities.

Prévota et al. (2016) looked at the roles of education courses and personal experiences on the development of environmental identities. They used questionnaires which included both the Environmental Identity Scale (EID) (Clayton, 2003) and the Inclusion of Nature in self (INS) scale (Schultz, 2001) to measure the level of environmental identity in students from a variety of different university courses. They then asked participants to fill out Likert scale questions to do with their personal information, how rural the place they lived as a child was, how much they go out into nature etc. They then looked at how the correlations between these factors. Whilst they found positive correlations between the personal factors, for example the more rural a person lived the higher the environmental identity, they did not find an effect of educational course. The only significant difference found regarding course was the ecology course, which they suggest can be concluded as a result of environmental identity rather than a cause.

While this research provides some insight into what sort of factors may affect people developing an environmental identity, the quantitative methods used again means that the influence of factors not considered on their scales is missed. Furthermore, this research fails to consider the personal meaning participants make of their

experiences such as the place they lived and the amount of time they spend in nature, which may help us gain a further insight into why these factors influenced their environmental identity.

#### *2.5.2.3. Significant Life Experiences*

Another area of research which explore the development of identities tied to nature is that which considers the life-span and significant life experiences. This research, while focusing on participants who have a connection with nature through their professional lives, does not measure participants' environmental identity but takes their involvement with nature as a sign of their relationship with nature. Tanner (1980), Sia, Hungerford and Tomera (1985), Palmer (1993), Palmer et al (1998), and Chawla (1999) have all studied participants who they define as active conservationists due to their professions, however they have approached such research using a variety of different methods.

To begin, Tanner (1980) looked at the development of identities in people working in the domain of environmental conservation. Forty-five participants, from companies working towards conservation of the natural world, filled out autobiographical information which detailed their significant life experiences which have influenced their relationship with nature, their current age and finally a list of their current conservation activities. Tanner found a variety of different categories of factors which seemed to be prominent influences for the development of their current environmentally aware identity, these are as follows; experiences of the outdoors, the place which they live/lived (habitat), parents, teachers, books, adults other than

parents or teachers, alteration of the environment around them locally, solitude and adult experiences reawakening their interest.

Although this research begins to address the area of interest in this research, there are a number of limitations. The use of forms filled out and sent back to Tanner means that further probing on issues and the meaning of these influences could not be explored. The focus on those working within environmental conservation also leaves questions for how useful this may be in terms of understanding those who do not. Although it is useful to have insight into those working in this field, the majority of people do not and will not work within conservation.

Palmer (1993) and Palmer et al's (1998) studies were strongly influenced by Tanner's work and developed this area of research by looking at the development of environmental concern during early childhood for those who now worked in education, with the focus of aiding curriculum planning. Once again, the importance of childhood is emphasised as Palmer focuses mainly on formative experiences after the findings of Tanner. Following on from Tanner's research, Palmer asked participants to fill out autobiographical statements; however, this time highlighting what they thought were the most significant influences on their current environmental attitudes. Similar to Tanner's research, Palmer found that people, experiences, work and formal education were key to participants developing their connection to nature. Also similar to Tanner's research, Palmer provides categories of influences which were discussed having carried out a content analysis of the accounts. Palmer's research looked at a much larger sample of participants, from a variety of different

countries, however, it still focused on those working professionally in a field to do with the environment and conservation.

Chawla (1998), in her essay which reviews the literature around significant life experiences and nature, highlights the limitations of focusing on those working within what the researcher defines as conservation professions and suggests that this means we are not gaining an understanding of those who may hold interest and have had similar experiences but do not work within this area. Chawla (1999) addresses this by expanding her definition of what this includes, speaking to participants who have been identified by leaders with environmental organisations to be particularly active. As a result of this, her sample included participants from a variety of different areas with conservation and environmental work. However, it could be argued that this still does not widen the sample enough. Although from different areas of this such as waste management and environmental education, the sample is still taken from only those who work with environmental or conservation work. It does not take into consideration those who are actively involved with nature and hold a concern for it but do not work in the area.

Chawla's work also differs from both Palmer and Tanner by having face to face interviews with participants to explore their significant life experiences. This allowed participants to discuss their significant life experiences and for Chawla to then explore these further by probing for more information, which previous research had not allowed for. The research found that experiences of natural areas (both positive and negative), family influences and formal education were discussed most often by participants, as ways by which they developed their connection to nature. The

qualitative data which was produced also allowed for some further insight into how participants discussed these experiences. Chawla (1998) discusses how significant life experience research needs to explore not only the experiences themselves but the construction of these experiences. However, Chawla's (1999) approach to the analysis of her data did not address the construction of these experiences and therefore the meaning these experiences held for her participants, rather reporting the content and not exploring how this was constructed, still leaving an important gap in the literature for research such as this from a constructivist perspective.

## 2.6. Rationale for the Current Study

This research aims to build on the body of research around the development of relationships with nature. A large amount of the research discussed above has relied on measuring to what extent people are connected to nature or to what extent they feel this is part of their identity through scales and quantitative measures. This present research takes an alternative approach, using qualitative methods to explore relationships with nature, for the reasons outlined below.

Instead of focusing on measuring connections or identities, this research will look at relationships with nature. As someone who would consider myself passionate about the natural world, I feel that focus on only those who work within conservation professionally is too narrow. There are people from a variety of different walks of life who would consider themselves to hold concern for and a relationship with the natural world and as we cannot all work within this sector, I feel it is important to gain

an understanding of those who do not. Understanding people who chose to maintain a relationship with nature in a variety of different ways will help to broaden our understanding. By including participants from a variety of different backgrounds and with a varying degree of concern for and interaction with the natural environment, this research aims to expand on previous research. This research will allow participants to express their own view of the environment and their own level of concern and activity in terms of the environment. As research has also suggested that age, gender and educational level can all Affect attitudes towards the natural world I aim to gain a sample which includes people from a variety of different backgrounds in relation to these factors too.

Another gap in the literature which this research aims to fill is that of meaning making. As this research focuses on relationships with nature, it is proposed that a qualitative approach to the research is best suited as to allow participants to explore what this means for them. This approach serves to allow participants to explore their own relationships with nature and express these without any pre-determined measure of this. As discussed in the section above on significant life experiences research, although there has been research which explores what events and experiences can have an influence on people developing a positive relationship with nature, it does not address how participants make meaning out of these experiences and construct their relationship with nature as a result. A constructivist approach to the research, already briefly outlined, will allow for this to be explored. The importance of childhood in connecting with and developing a relationship with nature, also means that this research aims to look at participants entire past, giving participants no specific instructions on where to start their discussion.

As distinguished in this chapter, previous literature has focused on the aspects of developing a relationship with nature, through significant life experiences research, or alternatively focused on current connections to or attitudes about nature. However, there are no previous studies, to my knowledge, which address these together, with the same participants. The connection between looking at development, alongside how people currently understand nature appears to have been neglected. This research aims to fill this gap in the literature by exploring how people construct their relationship with nature today, whilst also considering their narrative of how this has developed. Myers (cited in Chawla, 1998) proposes that as well as exploring the significant aspects that have contributed to the development of environmental concern, it is important to focus on how people construct these events. He discusses how although it is clear from past research that childhood experiences, outdoors, role models and books all contribute to the development of active conservationist identities, people can experience these and not develop the environmental concern that others do. It is necessary, therefore, to explore alongside this how people currently construct their own reality and the events they experience in these different manners.

## 2.7. Research Aims and Objectives

The aim of this research, therefore, is to use personal construct psychology methods in order to; explore how people construe their relationship with nature. This overall aim encompasses two objectives:

- To explore how participants construe the development of their relationship with nature;
- To explore how participants construe their current relationship with nature in different forms and settings.

## 2.8. Summary

This chapter provides a review of the literature around the connection between humans and nature. An overview of the evolution of this ever-changing relationship was provided, followed by a justification for taking the view of nature as a social construct. Empirical research was then reviewed, looking at the variety of different areas which have been addressed by research. This has provided a rationale for the current study and the research the aims of the thesis, which have been outlined above. The following chapter addresses the methodology which will be used to carry out this research.

# Chapter Three

# Methods

## 3.1. Introduction

This research takes a qualitative approach to exploring people's relationships with nature, as outlined in Chapter 2. Within qualitative research, there are a variety of epistemological positions which impact on the way researchers approach their data. Epistemology is the theory of knowledge; it asks how and what can we know? One's epistemological position is one's belief about knowledge itself, the sense of what kind of things one thinks it is possible to find out. In psychology there are a number of epistemological positions regarding what we can find out, through research, about people in relation to the world around us (Willig, 2013).

For the reasons outlined in Chapter 2, this study focuses on how people make sense of their own experience of nature and how this relates to their self or the identity they have constructed. It takes the stance that it is not the experiences themselves which help people to build a sense of self, but their interpretations of these experiences. In focusing on people's own understandings of their experiences, rather than the experiences themselves, this research takes a contextual constructivist epistemology. This is in line with the view of nature as a social construct, from the constrained constructivist ontology outlined in Chapter 2. As previously outlined, this ontological position proposes that nature is a social construct which acknowledges our place within nature and the existence of a world including other living beings.

A contextual constructivist epistemology acknowledges that the social systems and people around us have an impact upon how we construe experiences and construct our own realities. This is in line with constrained constructivism as they are both essentially arguing for more acceptance of the 'real' world than radical constructivism provides. The term Contextual Constructivism will be used throughout to refer to my epistemological position. In this section I will go on to provide a more in-depth discussion of the underpinnings of Contextual Constructivism, followed by a rationale as to why this epistemological position was chosen for my research. I will then outline how this epistemological position shaped my research aims and the adoption of Personal Construct Psychology as my theoretical framework.

## 3.2. Contextual Constructivism within Constructivism

Constructivism, in its broadest sense, is the epistemological position that people create systems by which they then understand their experiences, the world around them and themselves. Raskin (2002) highlights how constructivism comes in several different varieties. These can be considered along a dimension, from radical constructivism to social constructionism. Radical constructivists believe that we all privately and individually construct our own realities and that there is no objective reality which informs this (Pidgeon and Henwood, 1997). A key part of radical constructivism is their challenge of the idea that language can represent reality. As they believe there is no one true reality, they also believe this is the case with language. They suggest that as we all individually construe words; an absolute meaning of a word is therefore unattainable. People may have similar definitions for a word; however, their personal experiences mean their definition is unique. This, in

turn, means that the status of any accounts which people might make of the world, are problematic. By contrast, Social Constructionists believe that language and social structures are what create our constructions of the world. They believe people are outcomes of the constructive process, rather than active agents (Burr, 2015).

Contextual Constructivism can be described as sitting between these two extremes along the dimension. Contextual constructivism appears to be a perspective which has been glossed over by other writers, with researchers placing themselves in this position on the basis of it not being either of the approaches described above. Where researchers have classified themselves as having taken this position, there has been little written to clearly define what taking this epistemological position means. Accounts of this position, however, appear to share the view that it is an epistemology which acknowledges the importance of our context as human beings, the social and material world around us, but places emphasis on the interpretation and internalisation of this (Madill, Jordon and Shirley, 2000). They believe in the existence of a real world, both physically and socially, which we experience, but that our experiences of this reality are only accessible through our interpretations of it. Our interpretations are not just fabrications with no relationship to the world around us, like radical constructivism suggests, nor are they solely manifestations of social constructs like language and discourse. Our interpretations are our own personal constructions of our experiences within a social and material world.

Contextual constructivists believe that to understand people's participation in a social world, research has to engage in exploration of their constructions of it (Pidgeon and Henwood, 1997). Research taking this epistemological position, therefore,

acknowledges and explores the context in which a participant is discussing their experiences, both in the interview and gaining background context into which their experiences of the subject fit.

Within this epistemological position, this research takes the theoretical framework provided by Personal Construct Psychology (PCP). Burr, King and Butt (2012) highlight how PCP can be considered a contextual constructivist approach and explain how it is well suited to research where the aim is to explore rather than address particular questions.

## 3.3. Personal Construct Psychology (PCP) as a theoretical framework

Personal Construct Theory is the theoretical framework of this research in its aim to understand how people construct and understand their relationships with nature. Denicolo, Long and Bradley-Cole (2016) outline that a constructivist perspective takes the stance that to understand the person we must explore how they interpret their experiences, rather than observe the experiences themselves. It is through exploring this that we can gain an insight into that person and the systems they use to construe their world. As part of this, our interpretations of our experiences and events in our lives are internalised by us to make meaning out of future events and experiences, in line with the contextual constructivism explained above. They outline that;

> *Significant others and events have the greatest influence. Contextual factors, including family and culture, create a deep underpinning about the way things are. These integrate internally to form our sense of reality. This internalising and integration is a continuous process of negotiation and assimilation of new experiences with the existing sense of self* (Denicolo et al, 2016, p.16)

Kelly's (1955) Personal Construct Theory sits nicely within this contextual constructivist approach. It proposes that, rather than experiences shaping people, it is our construction of experiences and events that informs how we then react or the action we take. Kelly (1955) defines the nature of a construct as "a way in which some things are construed as being alike and yet different from others" (p.105). They are dimensions of meanings which we use to make sense of our experiences. Kelly argues that we all hold a finite number of constructs which are dichotomous. We then see and experience the world according to these bipolar constructs. He describes how these constructs are formed when we compare elements in our world and see how they are different from and similar to another. For example, we may create the construct fun versus boring when we consider elements in our world such as, a park, a beach and an empty room. Which elements we consider to be at which side of the constructs depend on our personal experiences, for me, personally, I construe the park and the beach both as fun when comparing them to the empty room. In this manner, bipolar constructs are formed.

Butt (2008) clearly highlights how constructs and the construing of the world around us should not be viewed as something we hold in our mind's psychological structures, like attitudes, but should be viewed as the questions we enter into

situations with and the anticipation we have for different events. The same experience can happen to a variety of different people; however, depending on the bipolar constructs about the world and situations that they enter an experience with, they will react to this experience differently. This concept is called constructive alternativism and highlights that there are no right or wrong ways to see the world and construe events, only an infinite number of alternate ways that people may construe these events and therefore their world. In the case of this research, the aim is to gain an insight into what constructs people hold around the natural world and understand how they construe the development of their relationships with nature.

Kelly believed that some constructs are personal, idiosyncratic ways we interpret the world, which he called the individuality principle, while other constructs are more widely held by the society that we live in, which he called the commonality principle. So, for example, the binary of heterosexual versus homosexual in society means that people often construe others and themselves as either hetero or homosexual. This bipolar construct influences how they perceive their own and others' relationships. In terms of nature, like sexuality, there will undoubtedly be some commonly shared constructions we should expect to find when researching individuals from similar cultures. This research aims to gain an insight into some of these. However, individuals also construe events according to the experiences they have had in their lives. So, for example, someone may approach a fairground ride terrified as they bring to bear the construct of 'danger versus safety' to it. However, the same situation to someone else may be experiences in terms of the construct 'exciting versus boring'. Here individuals' experiences are influenced by the personal constructs they hold.

Furthermore, Kelly (1955) suggests that our constructs are organised into a hierarchical system in his “organization corollary” (p. 56). In this Kelly proposed that;

> *Each person characteristically evolves, for his own convenience in anticipating events, a construction system embracing ordinal relationships between constructs* (p. 56).

In these systems we hold superordinate and subordinate constructs, the superordinate ones subsuming the more concrete and subordinate ones. Kelly explained that a superordinate construct is a “construct is construed as superordinate to another if the other is utilised as one of its contextual elements” (p. 479). This means that superordinate constructs are overarching constructs which have many subordinate constructs to which they can be applied. An example of this can be seen with the construct ‘good versus evil’. This could be considered to be superordinate and to subsume subordinate constructs such as ‘kind versus cruel’ and ‘selfish versus selfless’. Butt (2008) highlights how superordinate constructs are the aspects of situations of high importance to us and are central to our anticipation of events. Therefore, these constructs are applied first and more frequently to various different events. Kelly describes this wide applicability of a construct as the construct’s range of convenience. If a construct has a wide range of convenience, then it can be readily applied to more situations and experiences. Inevitably then, as superordinate constructs are central to our anticipation of all events, they have a wider range of convenience than more subordinate constructs.

## 3.4. Design

### 3.4.1. Developing the methods

Kelly's Personal Construct theory was originally proposed for a therapy context so there are a variety of different methods and interview techniques which have been developed for working within this setting. However, many of these have been used within research as well, in a variety of different topics. Some researchers suggest that PCP is more commonly known for its methods than its theory (Burr et al, 2012), especially the repertory grid. However, PCP practitioners and researchers have developed a number of other methods that are less well known.

Burr et al (2012) propose that PCP methods are particularly suitable for research which explores experiences which may be hard to articulate. This could be explained by its origins in therapy where people may find it difficult to articulate their feelings. As people are not often asked about their relationships with nature this may well be the case for this study. When I, myself, began to think about my relationship with nature, I found it hard to put into words and think about what nature was to me and why it was I might construct it in that way. My relationship with nature was something which seemed to be so intrinsically related to who I am and part of my everyday life. It was because of this feeling, that I had never really considered it in this way before, that I realised some direction would be needed to help participants. For this reason, I decided purely questioning participants would not be sufficient and chose a number of PCP methods. For this research I chose three methods which were carried out in interviews with 16 people: Rivers of Experience (RoE), construct elicitation and

laddering. The RoE was chosen to explore the development of participants' relationships with nature, while the construct elicitation and laddering were chosen to explore how participants construct nature presently.

Before the interviews with the final 16 participants, I trialled the use of the methods mentioned above with four of my acquaintances, a friend with whom I go on walks, a friend who had recently moved back to her rural home after living in the city, a friend who had no relationship of note with nature (so as to see if the research could accommodate someone who didn't class themselves as having this relationship) and a friend of my sisters who is a recreational gardener and who I knew was a lover of all things animal and wildlife. As well as helping me to practice the techniques I used within my research, the trials also helped me to create an interview guide to best address my research aims, with use of the most facilitative techniques. My trial interviews were audio recorded so that I could listen back to them and make any improvements needed before going on to the research sample.

The aim of the study was to gain an understanding of how people construe their relationship with nature. As discussed in Chapter 2, people can struggle to define exactly what nature is to them and their relationship with it. With this in mind, it was clear that an interview involving only a list of possible questions would not gain the depth of understanding and exploration desired. Nature is something which is readily translatable into visual stimuli and artefacts. Therefore, visual techniques were considered, as they would be not just appropriate, but beneficial to this research, in helping participants express what may be abstract concepts and relationships to them. Reavey (2011) discusses the use of visual methods in psychology and

highlights that they have been increasingly used in the social sciences over the past few decades as a result of growing interest in experiential research. Reavey highlights how these methods have been used with “vulnerable” groups, to elicit ideas which they may have otherwise struggled to articulate and argues that this demonstrates their usefulness in exploring experiences with samples of participants who might otherwise have struggled to discuss their ideas (p.27).

As previous research has made clear, people’s relationships with nature and views of nature are not always clear and concise. Pain (2012) reviews the use of visual methods and suggests that the use of visual metaphors, in particular, often helps participants to communicate abstract ideas. She also discusses how visual methods are often useful in encouraging reflection.

After consideration of different visual techniques, trials were carried out using those which I deemed the most appropriate for what I wanted to explore, as outlined at the beginning of this section. These methods were the “Rivers of Experience” (RoE) method, where a river-like timeline is created by participants (Iantaffi, 2011). Construct elicitation, where participants are asked to view a triad of elements, in this case photographs, and asked to describe how two are the same and different from the third, so as to elicit bipolar constructs. Element is a term used within PCP to refer to the stimuli, the things or events, which are described by or elicit a construct. The final method trialled was laddering, which enables participants to explore their central constructs.

#### *3.4.1.1. Rivers of Experience (RoE)*

The first section of the interviews used the "Rivers of Experience" method (Iantaffi, 2011). This technique aimed to address the second objective of the research, gaining insight into how participants' relationships with nature have developed over time. The RoE is an interview technique adapted from the "Snake Method" created by Denicolo and Pope (1990, cited in Day, Denicolo and Pope, pp.158-159). Denicolo and Pope use the "Snake Method" as a participatory tool to invite participants to explore their past in a timeline fashion, using their own timeline and wording. Participants are asked to think about the topic at hand and how this has developed or been present throughout their lives and then display this in a river or snake-like timeline on paper. The bends in the river represent significant moments, people, places etc. Iantaffi's (2011) adaptation of this method into a river helped him to explore the use of this in his PhD research on the experiences of disabled women in higher education. Iantaffi highlights how this technique allowed for an exploration of participants' past experiences in a way which would invoke more depth than a standard interview method.

Iantaffi (2001) argues that this method allows for "a far more unstructured, but clearly mapped, dialogue with each participant" (p.277), than a purely verbal interview. As discussed previously, Pain (2012) suggests that such methods aid reflection in participants, therefore this rivers technique was chosen. The river metaphor was also particularly appealing as it fits with the research topic of nature.

This technique was trialled adopting the same process as Iantaffi (2011, p.275). I asked participants to think of their relationship with nature and how they feel it has developed and then to draw a river, with bends in the river signifying important events, places, people, books, films or animals that they feel have influenced the way the connect with and feel towards nature today. Participants were then given post-it notes, on which they wrote their important influences. Post-it notes were used as to allow them to move these around and try to gain a timeline that they were happy with. The river would then represent a timeline of the events the participant chose to explore. In this, participants could start their timeline from wherever they felt relevant to their current relationship with nature. Once the river was drawn, it was explored by both me and the participant, using it as a reference to discuss and explore how they felt the relationship had developed.

Within these trials, participants expressed that the rivers of experience technique was useful in allowing them to explore the timeline of their relationship with the natural world. They told me that having the visual aid to refer to allowed them to reflect on the significant life events which had contributed to the development of their relationship with nature today. The trials also highlighted that the rivers of experience also helped me, as a visual aid, to keep track of participants' memories and helped me to visualise how these memories interacted with each other to form their current relationship. During trials with the rivers of experience it also became clear that post-it notes were useful, allowing participants to change their timeline once we were discussing it, as in retrospect we often change our perspective on the chronology and meaning of events. This also allowed for participants to add extra information that may have only come to mind once we were discussing their river.

### *3.4.1.2. Construct Elicitation*

The use of triadic construct elicitation began with my interest in photo elicitation. While exploring the use of visual aids in my research and reading around different methods that could be used to gain a timeline, I came across a number of papers which used photo elicitation in their exploration of people's relationships with the environment around them (Van Auken, Frisvoll and Steward, 2010 and Alexander, 2012). Van Auken et al (2010), in their research focusing on people's lives in their local areas, carried out interviews with and without photo elicitation methods and found that interviews with photo elicitation tended to be longer and more focused on the topic than their interviews without. One example they give for the depth of data provided by the interviews with the photographs is from a participant who had taken a photograph of their favourite recreation spot. When asked about this photograph the participant explained that it was where he takes his daughter to fish. However, he can't afford a boat. What could have been a discussion about his favourite place then turned into a discussion on wider societal topics and discussion about class (p. 377) They highlight how photo elicitation invokes more in-depth discussion and suggest that this is because it can trigger thoughts that may be glossed over in standard verbal interviewing. They describe the use of the photographs as being a "conversation anchor" which helps to spark further conversation when the area of discussion appears to be exhausted, while also providing focus (p. 382).

I began to trial the interviews using participant driven photo elicitation. After asking the first two participants to bring and discuss their own photographs of places that

were significant to them in the natural world, it became clear that this was not being facilitative in allowing me to explore their current construing of the natural world. This may be because of the RoE having already been done and therefore a story been established. Participants' own photographs were embedded in their own narrative therefore this method often brought up and repeated things which we had already discussed in the use of the rivers of experience section of the research. It was clear that a method which offered more structure and variety of responses was needed. Triadic construct elicitation offered a method by which an insight into peoples' current construing the natural world could be explored in a way that reached beyond any existing narratives they held.

Construct elicitation is (not always but typically) where triads of elements are displayed to the participant and they are asked to explore how two are the same and one differs, so as to elicit the bipolar constructs by which they construe world. Kelly used the word 'elements' as above, as these prompts do not always have to be photographs. Participants can be given a triad of any objects or words. As we find how two elements are the same and how one differs for us, the constructs by which we experience these elements are elicited. As photo elicitation had sparked my interest in construct elicitation, photographs were chosen as the elements to use in triads.

The trials of the construct elicitation technique used photographs of nature-related scenes to explore participants' current relationships with nature. Seventeen images, of a variety of different environments representing the natural world in different ways, were chosen to show participants. These can be found in Appendix 8. These

photographs were selected, by me, to show a wide variety of different scenes, from children's play areas surrounded by trees, to a scene in the middle of a jungle. A wide variety were explicitly chosen to try and understand what it is about different scenes in the natural world that they like or dislike, or how people relate to these differences. There was a clear decision made to focus on environments as "nature" in this task, rather than other elements of nature which are discussed in Chapter 2, for example organisms or cells. This was partly because of the task chosen. In a construct elicitation task, it is important for the elements being compared by participants to be similar in kind to each other. If images were of a wider range of different aspects of nature, the constructs elicited would only be those with a wide range of convenience. This would not allow for exploration of the subtleties in participants' construing of nature. Additionally, the focus on environments instead of images of other aspects of nature, was due to the breadth of different elements of nature these images could then encompass. The environments were able to represent different climates, weathers, landscapes, habitats, plant life, rivers, forests etc. As discussed in Chapter 2, section 2.2., these are different understandings of nature which have been offered by writers and researchers. No images which were solely urban or built environments were included in the task, in order to gain insight into construing of environments with differing degrees of 'nature' in them. For this reason, urban environments containing some level of nature were included.

In this search for images I was then looking for diversity along dimensions such as; land or water, degree of human impact, degree of vegetation and the climate to allow for a variety of images which would cover these different aspects of nature. There were a few different aspects of nature which had been offered by previous

researchers and writers which I chose to not encompass in the images used. The absence of human and animal life was a conscious decision, as to avoid participants' responses becoming complicated by what the person was doing or by the emotive topic being portrayed by the images, which is usually particularly evident in images of animals. Inevitably, as these photographs were chosen by me, as the researcher, my own construction of what nature is and includes will be reflected in the choices I made. The number of photographs and the aim to capture a wide variety of different images was in response to this. These photographs were also seen by my supervisors before the interviews took place, allowing for other perspectives to check that a variety of images had been chosen.

Firstly, participants were asked to place the pictures into three piles, one of scenes they like, ones to which they were indifferent and scenes they disliked. This was asked of participants so as to allow me to try and include a mix of both scenes they liked and disliked when making the triads for them to view. I then picked out triads of pictures, trying to include a mixture of those they liked and disliked where possible, and asked participants to tell me how two are similar and one different. This was repeated until participants could not come up with any new constructs. I then again separated the images into the three original piles. Participants were then asked to look at the three piles as a whole and view them as one large triad. They were asked whether there were any ways in which they could see the ones they liked were similar to or different from the other two piles etc. This was to allow participants to see if there were any noticeable ways by which they decided they liked scenes, in comparison to disliking them.

#### *3.4.1.3. Laddering*

Laddering was finally used to explore the constructs expressed by the participants, to try and gain an insight into what was of central importance to participants when construing the environments, they had been shown. Laddering is a technique developed by Hinkle (1965) to further explore previously elicited constructs. It has been used in marketing and tourism research to explore consumers core values (Glavas et al, 2014; Pike, 2011), as well as research within the social sciences (Berlin and Klenosky, 2014; Lee, Neimeyer and Chan, 2012). Lee et al (2012) used the technique to explore the personal meaning which IVF service users placed on childbearing.

As discussed previously, people hold construct systems, within which some constructs we hold are overarching and represent our core values and therefore are at the forefront of our construing of events and experiences. Bell (2014) discusses how laddering is widely accepted as a technique which allows us, as researchers, to view participants construct systems in an organised fashion, with researchers such as Neimeyer, Anderson and Stockton (2001) advocating its use as a way of helping us to gain insight into the superordinacy of constructs. Laddering was therefore relevant to this research as it aims to explore construct systems and gives us an insight into what the overarching issues are to participants in terms of the natural world and their relationship with it at present. Kelly (1955) would suggest that in gaining knowledge of which constructs are overarching in peoples construct systems, we are gaining access to their core values.

Laddering is accomplished by selecting a construct (a relatively concrete one), asking participants to choose which part of their bipolar construct they prefer and asking them why. When the 'why' is answered, a contrast pole is elicited from the participant, creating a new construct. The answers given to this are then further explored as the researcher asks participants which pole of this new construct they prefer and "why?" and then another contrast pole is elicited. This process is repeated until participants feel they can no longer give any further reasoning for their preference. Participants are, in this manner, explaining why they hold a preference for one pole of the construct and are exploring the reasons for this preference. This process is said to explore the core values people hold which affect the way they construe and make meaning of other experiences (Butt, 2008; Caputi et al, 2012). This method may be better explained with the following example, taken from my trials of this method. One participant provided the relatively concrete construct 'Open' versus 'Enclosed' in their construct elicitation stage. I then asked which of these poles they preferred and they answered 'open'. When I asked why they told me that it made them 'feel free'. I then asked free as opposed to what?', where they answered 'trapped'. The same was then repeated at this level, asking why they preferred to be free, where they answered that this allowed them to express themselves, as opposed to being kept in. Again, I explored this further and asked why they preferred this and they answered that ultimately that makes them feel happy as opposed to sad. Here we have arguably come to the core value that it is important to this person that they are in an environment which makes them feel emotionally happy and free.

A representation of the example above can be seen in Figure 2, with the preferred pole in bold:

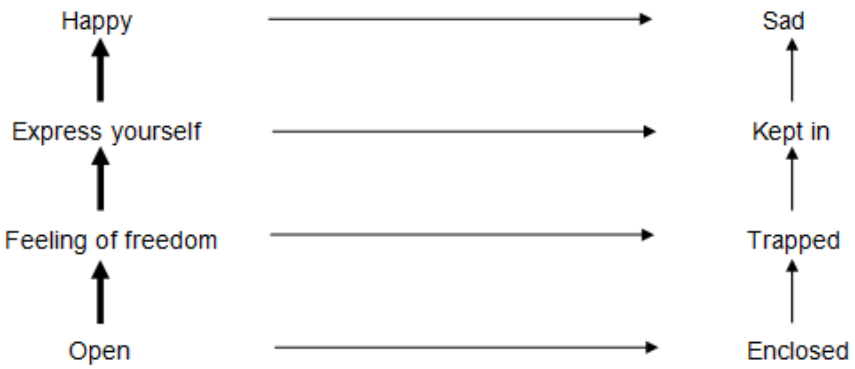


Figure 2. An example of laddering taken from a trial interview.

I began to use laddering after the first two of my trials as, although the rivers and construct elicitation had given me rich information, I felt that it was important to understand the constructs further. This further exploration allowed me to more fully meet the first objective of the research, as it began to uncover some of the core aspects of people's relationships with nature.

### 3.4.2. Reflecting on the trials

As these trials were the first interviews I had conducted, having only had experience of running focus groups in previous research, the chance to trial the techniques in interviews was a valuable opportunity. It allowed me to gain confidence in exploring the topic on a one to one basis, focusing on and deepening my understanding of one person's relationship with nature. During the four trials I also became comfortable and familiar with the individual techniques, which allowed me to make decisions

about how to use the techniques and about how to order the tasks logically for participants.

Firstly, the photographs chosen for the construct elicitation task worked well at eliciting constructs from participants in the trials, therefore they were kept with no changes for the interviews. In terms of the interview with a friend who, when asked, said they would not class themselves as having a relationship with nature, the interview worked surprisingly well. Although this revelation would suggest that an interview would not be able to explore anything, once the interview began it was clear that a relationship with nature did exist but was not at the forefront of who they perceived themselves to be. The interview explored how, although other things were a priority in their day to day life, the participant still felt a connection had been made with nature in their childhood and they became more aware of how they did have some connection to the natural world which had stayed in the background of their "self".

The first three trials were conducted with close friends. As previously mentioned, as I had not conducted individual interviews before, I held the belief that interviews with people I knew would be easier than those with people I had not previously known. However, these trials allowed me to see the difficulties in interviewing people when you already know about their past. During these interviews it was difficult to separate what I already knew about the participants from what they were discussing with me in the interview. Although this may not be the case in interviewing participants about other topics, as we were discussing their "rivers of experience" often topics would come up of which I had previous knowledge. This meant that further exploration of

the topic may not have been carried out when it may have been fruitful for the interview. Although this may have limited some of the discussion, as I became aware of this it helped me to focus on listening to the participant and what they were saying, distancing this from my own thoughts, which proved useful in the actual interviews.

The fourth trial was then conducted with an acquaintance, about whom I knew less. This interview helped me to gain confidence in my interviewing skills, as speaking to someone less well known to me allowed me to take the role of the interviewer, rather than that of the friend. I feel that the mix of participants I spoke to when trialling the techniques allowed me to practice speaking to the participants in a friendly way, allowing them to feel comfortable enough to explore personal topics, but also as a researcher, who was aiding the participants in exploring these topics in more depth than they perhaps might have done before. This final trial also made me realise that beginning with a few introductory questions “What is nature to you” and “How would you describe your relationship with nature”, allowed for an easier development into the river task. This allowed for participants to begin to think about their relationship with nature and how they perceive this relationship before being asked to look at where this came from, allowing them to position themselves in a place where they have vocalised where they feel they are now. It also meant that I was more aware of what their relationship encompassed and could address these things when asking about their rivers. During this final trial interview, I also experimented with the order of the tasks. I carried out the construct elicitation, then the laddering and ended the interview with the river of experience. Although this was not problematic in the interviewing, I felt more comfortable as the researcher getting to know the participant

with the use of RoE first so decided to stick to the order: RoE, construct elicitation and then laddering in the interviews to come.

## 3.5. Sampling and Recruitment

### 3.5.1. Inclusion Criteria for Participants

Through reading past literature, it was clear that research in this area was lacking 'non-specialist' participants. As I have previously discussed, past similar research has focused mainly on participants who are specialists within conservation and sustainability. However, I wanted this research to explore relationships with nature in people who are or have been involved with nature in a variety of different ways, so as to gain an insight into a wider sample of people's relationships with nature. For this purpose, I thought of a range of different jobs, hobbies and lifestyle choices that would mean people had a connection to nature, for example, a farmer, a fisherman, a vegetarian and animal rights activist and a wildlife photographer (See Appendix 1 for notes made when thinking of these). These notes were shown to supervisors so as to try to gain other insights into who I may be able to interview for this research. I chose these three categories, job, hobbies and lifestyle, so as to allow for participants who could hopefully bring a variety of different perspectives on nature, and connecting with nature, to the research. Whilst making notes on sampling ideas I was trying to take into account relationships with the different aspects of nature which have been put forward in previous literature (such as those described in Chapter 2, section 2.2.2), such as nearby nature, wildlife and non-human species. I wanted to include people who had relations to these particular aspects of nature. For

example, I thought of a gardener as someone whose focus is primarily on nearby by nature and flora, a wildlife photographer, to speak to someone whose day to day relationships with nature was with wildlife and a farmer, whose relationship with nature was through managing non-human species. In this process, the aim was to gain a variety of different participants who would have relationships with different aspects of nature as well as relating to it in different ways such as through their jobs, hobbies or lifestyle choices. Another consideration which was arose through review of the literature, was to try to gain a variety of participants who interact with what may be considered the wild or wilderness, like the photographer, and those who interact with nature in more of a management role, like the farmer.

The different relationships with nature which I came up with during this process were undoubtedly guided by my own construal of nature and construing of relationships with nature. I acknowledge that I am part of the same culture to which these participants belong and that it is not possible for someone, me, to extricate myself from my culture in order to see ‘nature’ in an ‘objective’ way. My choices, therefore, inevitably bear the stamp of my own culture. I have, nevertheless, tried as far as possible and appropriate, to set aside my own taken-for-granted assumptions about nature in sampling for participants.

There were to be no other restrictions on participation in this research. If participants had a connection with nature that was a hobby, part of their job or a lifestyle choice then they were eligible to take part in the research. After this I transferred the ideas into a table format and began to fill the table in with ideas of where it may have been possible to access these participants for sampling and recruitment purposes. This

involved searching the terms I had come up with the internet and finding either personal websites and contact information or contact information for clubs or associations. (As this table provided possible contact information and details I chose not to include this in the appendices.)

### 3.5.2. Recruitment

After deciding on inclusion criteria and creating a table of possible recruitment opportunities, participants were contacted via email. An example of these emails can be seen in Appendix 2. Email addresses for participants were found through organisation or personal websites. Where participants were recruited through an organisation website, the contact information on the website was used. In some cases, participants replied directly to this email and in others my email was passed on to potential participants after this initial contact. Once participants replied to this introductory email expressing their interest in taking part in the interview, an information sheet was emailed to them (See Appendix 3). There were only two people who expressed this initial interest and then did not carry on contact after the information sheet.

Within the recruitment process, I aimed to gain as wide a range of ages, gender and ethnicities as possible, so as to gain a diverse sample, without purposively sampling for these. Once interviews had begun, a recruitment grid was constructed so as to allow me keep track of these demographics and ensure that future recruitment took into consideration the desire for a diverse sample (See Appendix 7). Once I had

interviewed 14 participants I reviewed this table and decided to purposefully sample for more diversity. At this stage the majority of my participants were male, so I focused on finding female participants, and all my participants had been White British, therefore I wanted to speak to participants of other ethnicities. To attempt to fulfil this I posted on my social media page the information about my research and then stated that I was looking to speak to anyone female or of another ethnicity than White British. This was shared and two more females contacted me with interest in taking part, one of whom with a different ethnic background.

### 3.5.3. Participant Biographies

Sixteen Participants with varying relationships with nature were interviewed. Brief biographies of these participants are now provided, including a brief description of their relationship with nature.

1. Mark

Mark, 70, is a white British male. He is primarily a travel writer whose relationship with the natural world has developed throughout his life and is now a large part of both his hobbies and professional life. Both his hobbies and professional life include walking and geocaching. Geocaching is where people use GPS systems to both hide and find containers which include a list of who has found it before and also little gifts or tokens to pass on to others.

2. Britteny

Britteny, 23, is a white British female. She is a PhD student researching sustainable farming and food sources. Her undergraduate degree was in Animal Science. She also enjoys nature through her hobbies such as walking.

3. Samantha

Samantha, 23, is a white British female. She is a PhD student researching the effectiveness of peat bogs as a way to reduce the amount of carbon we put into the atmosphere. She has also studied climate change and sustainability at master's level.

4. William

William, 38, is a white British male. He is an undergraduate student studying Animal and Wildlife Management. He works part time as an ecologist, conducting surveys to ensure habitats for different species are kept safe. He also volunteers for as a bat carer and collects and rehabilitates bats which are sick or injured.

5. Harry

Harry is a white British male. He is retired and enjoys fishing and shooting. As well as joining clubs for these hobbies, Harry has been on the committees and therefore is involved in decision making and work with local communities.

6. Andrew

Andrew is a white British male. He is a retired civil engineer and a member of a bird watching group, a keen walker and gardener. As well as enjoying these on his own, Andrew has also been involved in guiding walks.

7. Carl

Carl is a white British male who has recently retired. He is a member of a bird watching club. Alongside bird watching, Carl enjoys walking and although he takes interest in some other areas of the natural world, his main interest is in birds which he feels add interest to his walks.

8. Max

Max is a white British male in his thirties. He is a Wildlife Photographer whose view of nature encompasses plants, flowers, wildlife and the outdoor environment.

9. Dennis

Dennis, 64, is a white British male. He is an ecologist, working in a partnership with his friend, doing ecological surveys of land for various companies. During his working life Dennis has also worked in museums as a natural historian and has also written a number of books.

10. Tony

Tony is a white British male. He has retired recently from the construction industry and enjoys orienteering where he communes with nature. Tony explains that he is a

“jack of all trades” when it comes to his interests in the natural world. He likes photography and takes some interest in birds and other wildlife.

11. Tanya

Tanya, 31, is a white British female. She is an animal rights activist and vegetarian. She explains how her vegetarianism is a moral decision and is one way by which she actively tries to help the natural world.

12. Shirley

Shirley is a white British female. She is an ecologist working in the UK. As well as working with nature day to day in her career, Shirley has set up and organised nature clubs and organisations for children in the past, as well as sat on committees for the protection of nature.

13. Grace

Grace is a white British female. She is middle aged and lives and works on a livestock farm. She explains how, working on a farm is a lifestyle rather than a job, as it is a job you are doing all the time. In any spare time that she finds, she will “explore” nature.

14. Ansa

Ansa, 43, is British Pakistani female. She approached me after circulating via social media that I was looking for participants who had a relationship with nature. She

expressed interest in taking part and explained that, as a Muslim, nature is something which is of high importance to her through her religion.

15. Kieron

Kieron is a white British male. His relationship with nature is through both his hobbies and profession. He works as a gardener so interacts with the natural world on a day to day basis.

16. Tim

Tim, 65, is a white British male. He is now retired after working with the National Trust. As well as working alongside nature in his line of work, he also takes enjoyment from the natural world in his hobbies; walking, reading and fishing.

## 3.6. Procedure

The interviews included three activities and participants were given the option to do these in one interview, taking approximately one and a half hours with a brief break in between activities, or to do the interview in two separate parts at different times, each section taking approximately three quarters of an hour. This decision was left up to the participants. All participants chose to take part in the interview in one sitting with small breaks where needed.

The interviews were conducted either at the university or at the home of the participant; depending on their own preference. Participants were also given the option of when they would like to do the interview and we negotiated times which were suitable for us both.

Before the interview began participants were given an information sheet again which they could look over to remind themselves what was being asked of them. After participants read this more detail was given verbally, as participants were told that the interview would involve three separate tasks and they would have the opportunity for a break at any time they wished. They were then asked to read, fill out and sign the consent form (an example of which can be found in Appendix 4), asking any questions if they needed to. Once this was complete the audio recording was started, which participants had been made aware of on the information sheet.

As previously discussed, the interviews then began with the question, ‘what is nature to you?’, so as to gain an understanding of what the word nature encompassed for the participant. This was then followed by asking participants to briefly describe their relationship with nature. Once these were briefly discussed participants were then asked to complete the three tasks. Although these are discussed in relation to the trials earlier in this chapter, these are now briefly outlined below as a reminder to the reader and to make clear the procedure followed in the interviews;

- Rivers of Experience

As described in the trial interviews, participants were asked to think of their relationship with nature and how they feel it has developed throughout their lives. Participants were given multiple sheets of A4 paper, a pen and post it notes. They were then asked to draw a river, with bends in the river signifying important events, places, people, books, films or animals that they feel have influenced the way they connect with and feel towards nature today. It was made clear that this timeline could start from as far back into the past as they wished to explore and could end wherever they felt relevant. It was then explained to participants that the post-it notes were there as they may help to create a river which was easier to edit during the process if they so wished. The hope was that this would allow participants to have a finished product which they were happy with. The river would then represent a timeline of the events the participant chose to explore. Once the river was drawn, it was explored by both me and the participant, using it as a reference to discuss and explore how they felt the relationship had developed. This process involved starting from the beginning of the participant ladder and exploring each influence they had chosen to include one by one. Asking the participant questions like why they had chosen to include it? How did it influence their relationship with nature? After discussion of the river had finished, participants were given the opportunity to review their river and asked if there was anything else they would like to discuss or add before moving on to the next task.

- Triadic Construct Elicitation

Seventeen images, of a variety of different environments representing the natural world in different ways, were chosen to show participant (these can be found in Appendix 8). The images were numbered one to seventeen and this was written in

small writing at the top of the picture on a white border so as to not affect the image. Participants were given these images in a pile, in no particular order. They were firstly asked to separate these into three piles; a pile of images they liked, disliked and then indifferent to. It was explained that this was meant to be a relatively quick process and participants were asked to make the decisions on these as a result of their initial reaction to seeing the image. Once these images were in these three piles, where they had been placed was noted on a piece of paper. This was to allow for a mix of images people liked and disliked to be used in each triad.

Next, I created triads of images by taking three photographs at a time and placing them in front of the participant. At the beginning of this task, triads were made so that they included images from both the pile of photographs the participant had suggested they liked and disliked.

When participants were faced with a triad they were asked to describe how two of the images were the same and how one differed, so as to elicit bipolar constructs. These constructs were written down on a worksheet which can be seen in Appendix 6. Once a list of constructs had been created for each participant, I read out each construct and asked the participant to pick a preferred end of the pole. This was then marked down with a plus sign next to the preferred pole.

The separation of these images into three piles also allowed for some exploration of what participants liked in an environment and what they disliked. Images were placed back into the three piles, as originally created by the participant. They were then asked to look at the three piles, as a whole ad view them as one large triad.

They were then asked again how two piles were the same and one was different, for example, how the ones they liked were similar to or different from the ones they disliked and were impartial to.

- Laddering task

At the beginning of this task I chose a number of constructs from those previously elicited from the participant, which I felt would be interesting to explore and were relatively concrete. The number of constructs chosen to be laddered was between three and six for each participant, depending on the construct elicited in the constructs elicitation task.

Each construct was written down on a separate piece of paper. For each of these constructs, I then asked why the preferred pole of the construct was the participant's preference. The answer was then written above the preferred pole and participants were asked "as opposed to?", which would then lead to the answer which was the other pole of this construct. A rung on the ladder would have then been completed as a new construct was created. The participant was then, again, asked which pole of this new construct they preferred, and asked "Why?" they preferred the pole they did. The answer would be written down and "as opposed to?" asked again to create another bipolar construct as another rung on the ladder. This was done until participants could not explore their reasoning any further, as discussed in the trials section above. This process was repeated for each of the chosen constructs. Examples of some of the ladders can be found in Appendix 13.

## 3.7. Ethical Considerations

This research adheres to the BPS code of conduct. The first of these is protection of participants from harm (psychological or physical). Although my research was not covering a particularly sensitive topic area, the psychological welfare of participants was protected by giving the participants the opportunity to withdraw from the research at any time if they felt this necessary. Participants were also given details of where to find support if they needed it after the study, with details of how to contact The Samaritans given on the information sheet which they were given to keep.

In terms of their confidentiality, participants were made aware before the beginning of the interview, on both the information sheet and consent form, of who would have access to the audio recording of the interview. Confidentiality was maintained by the interview recordings and transcripts being kept on a password protected computer. The data was and will only be available to me as the researcher, my supervisors and examiners where necessary.

The participants' right to privacy and protection of their identity was ensured as participants were given pseudonyms in the transcription and analysis of my data. Their anonymity is protected as I, as the researcher, am the only one who has access to the pseudonyms and which participants these belong to, which are stored on a password protected computer. All signed consent forms were kept safe in a locked drawer.

The participant's right to withdraw from the research at any time up until analysis was made clear on the information sheets and repeated again on the consent form (See Appendix 3 and 4). The information sheet gave the contact details for both me and my supervisor so as to allow participants to contact either of us at any time up until analysis if they felt they no longer wanted their data to be involved in the research. An email address, as well as a phone number, for my supervisor was given so that participants did not have to contact me directly if they felt they didn't feel comfortable doing so for this purpose.

An aspect which was important to consider within my research was my own safety as a researcher. As I was interviewing individuals from around the country, in their own homes, it was important to ensure that my own safety was taken into consideration. Participants were asked whether they would prefer to visit the university or whether they would prefer me to visit them. If participants were more comfortable with a home visit then I made my partner, who I live with, aware of the times I was leaving home to make the visit, the address at which I would be conducting the interview and the time which he could expect me home again. I also had my mobile phone with me at all times. In some cases, my partner attended the interviews with me and acted as an assistant in my research, helping to set up and check the recording equipment.

## 3.8. Summary

This research takes a Constructivist approach to people's relationships with nature and uses Personal Construct Psychology as the theoretical framework to explore

how people construct nature currently, as well as construct the narrative of their development of a relationship with nature. The interviews include three separate tasks, involving Personal Construct Psychology methods; Rivers of Experience, to explore the development of relationships with nature and Construct Elicitation and Laddering, to explore how participants construe their current relationship with nature. These interviews were carried out with 16 participants who interact with nature in a variety of different ways.

# Chapter Four

# Approaches to Analysis

The three separate tasks used in the interviews meant that there was a variety of different types of data produced which called for different approaches to analysis. The approaches taken to these different types of data are outlined in this chapter.

## 4.1. Approaches to the Analysis of Rivers of Experience

### 4.1.1. Introduction

The data produced by the Rivers of Experience (RoE) task includes both the drawn rivers (see Appendix 9 for all participants' rivers) and the interview discussion around these rivers for each participant, and analysis of these was approached separately. Firstly, a content analysis was completed of the drawn rivers. Secondly, these drawn rivers were then further analysed by looking at how participants had used this task in different ways. Finally, the interview discussions around the RoE were analysed using the listening guide (Mauthner and Doucet, 1998), a form of narrative analysis which looks at the content, structure and tone of participants' narratives. These analyses are now discussed in further detail.

### 4.1.2. Analysis of the Drawn Rivers

#### 4.1.2.1. Content Analysis of the RoE drawings

Content analysis was originally devised as a journalistic approach to analyse visual media such as poster campaigns, newspaper articles and adverts in the 1930s (Krippendorff, 2004). However, during the 1940s and 50s, it evolved into a method of analysis used in a variety of different domains, for example, Psychology, Sociology, Linguistics and History. As well as being adapted in multiple different domains, its uses have evolved to encompass a variety of different forms of data including interviews, diaries and pictures etc. (Stone, Dunphy, Smith and Ogilvie 1966 cited in Krippendorff, 2004). Content analysis thrived in the domain of Psychology as it offered a method of analysis concerned with structure and producing quantifiable accounts of data, in a time where experimental psychology and quantitative research were the major paradigms. However, as it became adopted by different disciplines, qualitative researchers adapted methods of content analysis for their own aims and began to explore the meanings within the content of accounts. As discussed by Hsieh and Shannon (2005) and Schreier (2013), qualitative content analysis aims to organise what can be very large amounts of text, into categories according to content. In categorising the data according to its meaning, the data is reduced to that which relate to the research questions (Schreier, 2013). This can be more easily explained by relating it to my own process of using qualitative content analysis. For this research this meant looking at the participants' drawn rivers with the research question, 'how did peoples' relationships with nature develop?', in mind. I then devised categories from the data itself. For example, many participants mentioned holidays, school trips and living abroad, therefore a "Travel" category encapsulated these as ways which people developed relationships with nature. Schreier also highlights the importance of the categories being developed from the data so that they are a true representation of the data being analysed.

The approach taken to content analysis in this research is that outlined by Miles and Huberman (1994) and King and Horrocks (2010). As outlined by Miles and Huberman, content analysis was used as the first stage of analysis and was approached as an initial and exploratory analysis. Although the rivers themselves did not include a large amount of writing on the whole, when looking at all sixteen rivers together there was a significant amount of written data. This step of the analysis aimed to look for common experiences across all participants' rivers and gain an initial insight into what participants had chosen to include on their rivers and had ascribed meaning to in terms of their developing relationship with nature. In this part of the analysis I was looking at answering the question; what events did participants include in their drawing? I approached this first stage of analysis by laying out all sixteen drawings together and identifying the common topics people had chosen to include on their rivers, whether they had done so in writing or through pictures alongside the rivers. These common influences were noted and then tallied.

Similarly, to past research by Cabaroglu and Denicolo (2008), who used the snake method (where the RoE idea originates from), this research first used a content analysis to highlight common features which participants chose to include on their River diagrams. In terms of the drawings from participants, this is as far as analysis went for Cabaroglu and Denicolo, before moving on to thematically analysing their interview data. However, in this research, a further level of analysis was added by looking at how participants used the RoE task. This was before analysis of the interview data was approached and aimed to allow for a more in-depth understanding of participants' stories. By exploring the way participants utilised the

instructions given to them, interpretations are made about the way participants constructed their narratives.

#### 4.1.2.2 Content analysis of the process of creating the drawing

The process behind creating the visual RoE was something which was also considered in a form of content analysis. What does the content of their drawn river tell us about the way they interpreted the instructions given to them? Although all participants were given the same instructions, they all interpreted these in their own ways. I approached this section of the analysis by viewing all rivers alongside each other, as with the content analysis. In viewing them this way it was easier to observe the similarities and differences between participants' drawings. Once viewing them this way I asked myself questions about the rivers in front of me. How many bends did each participant's river have? How many words were included on participants rivers? Did participants use pictures as well as writing? Were the direction of the bends in the rivers and the size of these bends significant to what was written? Part of this process also involved listening back to the audio recordings where some participants described how they were using the river while drawing.

This part of the analysis allowed me to explore the use of this method for the purposes of this study. It also allowed for me to see how participants were constructing their narrative of how their relationship with nature developed. Was it a story that was clear in their mind? Did writing it down with many words signify this? These are questions the analysis aimed to answer. For some, the physical drawing

of the river also allowed for the narrative structure of the participants' story, which is discussed later in more detail, to be seen visually.

## 4.1.3. Analysis of the interview data

After using the Rivers of Experience method to elicit the stories of how participants' relationships with nature had come to be, a narrative-like interview had taken place. In this research I am using the definition of narrative as "story" suggested by Polkinghorne (1995), as the bringing together of events in an organised form. The interview data was each participant's verbalisation of how they construed the events in their lives, while organising these events into a narrative of how their relationship with nature had developed, with me as a researcher exploring different parts of this narrative throughout.

### 4.1.3.1. Narrative Analysis

Narrative was therefore chosen as the most appropriate method of analysis for this data. King and Horrocks (2010) highlight how narration is how people make sense of and explain their own personal understanding of the world around them. Sarbin (1986) suggests that narration of events and experiences allows people to make sense of their world, as vocalising their experiences allows them to add some structure to otherwise unconnected events in their lives. Taking this into consideration, we then have to consider what the narrative is telling us. Holding a constructivist view, I approach this research acknowledging that a person's narrative

may not be a direct and fully objective view of an event, but one person's way of making sense of that event and their experience of that event. I aimed to explore how participants make sense of their experiences and their current relationship with nature. Furthermore, as I approach the research with the belief that every participant is actively engaged in creating their own world, including within the interviews, I aim to explore how participants explain and construct their individual narrative around their relationship with nature.

This approach to analysis, as well as being in line with my epistemological position and aims, works well with the method of interviewing in this research. The metaphor of the river allows participants to narrate their experience with some structure, giving them some focus on the topic at hand. However, with its relative lack of constraints this method allows participants to narrate their experiences as they choose, telling their story as they see it.

#### 4.1.3.2. The Listening Guide

The Listening Guide allows for a thorough analysis by having four different readings of the data, each time "listening" for, or paying particular attention to, different things (Brown, cited in Mauthner and Doucet, 1998). King and Horrocks (2010), in their brief account of narrative analysis, outline that there are a variety of different approaches to narrative analysis, which focus on different aspects of the narrative. When reading about different approaches I was interested in a number of different aspects and 'The Listening Guide' appealed to me as it allowed me to systematically

examine each participant's transcript looking at a variety of different aspects; content, structure tone and positioning. A strength of taking this approach is that it allowed me to look at each interview individually and in depth, therefore retaining the individual narratives told, while allowing me to then consider them together across cases.

The Listening Guide has been applied to a variety of different research topics since its conceptualisation around 30 years ago; such as depression (Jack, 1991; Mauthner, 2002), unacknowledged rape (Johnstone, 2016) and gaining funding as a scholar (Forrest, Nikodemos and Gilligan, 2016). The common interest of the research questions tackled by this method is the exploration of participants' personal experiences of the topic and how they construct these experiences. As Gilligan (2015) proposes, The Listening Guide can and has been used to analyse data obtained through a variety of different methods, for example interviews, focus groups, diary entries and therapy sessions. If the data is a first-person account of an experience then their narrative can be analysed using the listening guide.

#### 4.1.3.3. My Listening Guide

As Mauthner and Doucet (1998) advocate, The Listening Guide can be adapted to fit different research projects by adjusting how many listenings are used, what is listened for and in what order things are listened for.

In terms of the practicalities of the listenings, for the purposes of this research I read the transcripts and only used the audio recording of the interviews if the tone in which something was said may have been of interest, for example, inflecting their words with sarcasm. Therefore, each reading is labelled as such, as a reading rather than a listening. The readings are then given a title which outlines what was being "listened" for during that reading. The reading refers to the physical action I was completing, where listening refers to the way I was paying particular attention to a certain aspect. Therefore, the terms listening and reading may be used interchangeably, depending on whether I am referring to what I was paying attention for, or my action. For example, I may refer to reading one, or I may refer to listening for something within reading one. In this research I committed to four readings, adapted to the questions I was asking of the data; listening for narratives in a reflexive manner, listening for the narrative structure and tone, listening for pronoun poems (which display how participants used pronouns to position themselves and others in their narrative) and finally listening for "relational related narratives" (Doucet and Mauthner, 2008). A rationale for these choices will be discussed below when each is further explained. However, it is important to outline that the four readings which were chosen because of the questions I wanted to ask of the data. After reading around different approaches to narrative analysis I was aware of different aspects of narratives which different approaches to narrative analysis had looked at. I then chose which aspects of the narratives in front of me may be interesting to explore.

At the beginning of the narrative analysis I made summaries for each individual participant. These summaries had four sections, one for each reading. I approached

the analysis by reading the transcripts for each reading with a different colour pen. With what I was listening for in mind for each reading, I highlighted words, phrases or sections of the narrative relevant to that reading. After each individual reading for each individual participant, I noted down the key observations from that reading in their listening summary, under the section for that reading. These summaries then, for each participant, provided an account of the key issues which had come out of each reading (See Appendix 9 for two examples of a “listening summary”). As part of this, reflexive notes were included into reading one. This is outlined below in more detail. Once all four readings had been done for each of the sixteen participants, I compiled these summaries into a “listening matrix” which allowed me to view these summaries all together and make any observations. (See Appendix 10 for full listening matrix and Figure 3 for an extract from the matrix). This included one row for each of the four listenings and a column for each participant. The listening matrix acted as a summary of key aspects from the data for each participant. Therefore, as the reflexive notes were for my own personal reference to keep myself in touch with my own thoughts around the data, these were not included in the listening matrix.

| | Grace | Shirley |
|---|---|---|
| Listening 1<br><br>PLOT | -Nature as controlling<br>-Hands on experiences<br>-Tradition with family<br>-Cycles<br>-Learning | -Passion<br>-Learning<br>-Understanding<br>-Travelling<br>-Hands on experiences<br>-Botany<br>-Life dominated by nature |
| Listening 2<br><br>FORM & TONE | Form<br>Gradual Growth<br><br>Tone<br>-Optimistic- focus on positives. 1 negative in positive light.<br>- Adventures | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- no negatives.<br>-Opportunities and experiences, choosing these. |
| Listening 3<br>PRONOUN Poems | -largely refers to "we"-tied to family<br>-"I" as active-verbs used after show active | -uses "I"-own construction<br>-active-verbs- first hand experiences<br>-all encompassing |
| Listening 4<br><br>RELATION SHIPS | -Father<br>-Children<br>-Mother<br>-Husband<br>-Brother | -Father<br>-Lecturer<br>-Husband<br>-Mother<br>-Brother<br>-Grandparents |

Figure 3. An extract from the listening matrix

These readings are now outlined, including what it was that was being listened for in each and providing some context as to where the idea to listen for this aspect of the narrative came from.

#### *4.1.3.3.1. Reading One- Listening for narratives in a reflexive manner*

The first reading was guided by Doucet and Mauthner (2008), in their approach to the listening guide. During this stage I read the data with the question "what is happening here?" in mind. What was this person's story about? While thinking of these questions, recurring words and topics were highlighted as the key elements of

each person's story as these were things the participant was focusing on. For example, if a participant was constructing part of their narrative about their experience of building their knowledge about nature, then learning was noted down as a key plot. This reading allowed me to explore the content of and themes in participants' narratives, which King and Horrocks (2010) outline as one of the key ways by which researchers approach narrative analysis.

This reading also involved making any reflexive notes alongside the story. As Doucet and Mauthner explain, this involves the researcher being aware of their own reactions to and thoughts about the data. A technique, similar to that outlined by Brown and Gilligan (cited in Mauthner and Doucet, 1998) was used to make these reflexive notes. When words and phrases were highlighted as main plots and themes, initial reactions to these were noted down at the top of the transcription. As I was highlighting these main plots I was asking, what are my initial reactions to the story being told? Do I have any connection to their stories? If so, what are these and am I portraying their story correctly in what I was narrowing it down to? Brown and Gilligan propose that this process can be done by making a separate table which outlines this alongside your notes on the plot. However, I chose to note these alongside my notes for reading one each participants' listening summary. As discussed above, the reflexive notes were included in this reading as they were considered at the same time during the process of analysis. An example of these listening summaries, including reflexive notes, where they were made, can be seen in Appendix 10. However, an example of some of the reflexive notes made as part of these readings can be seen below;

*Reflexive notes on first reading of Dennis' Interview*

- Passion for conservation clear and almost annoyed that others don't feel the same
- People as help throughout relationship however, a dislike for people

*Reflexive notes on first reading of Grace's Interview*

- Controlled by nature but breed and rear animals – controlling nature? Contradiction? Taking some control back over nature. This could be tied to my current mixed feelings about meat industry
- Reassuring self about job "i don't kill"- again my feelings about farming industry could affect interpretation of this as reassuring self.

As can be seen in the above examples, reflexive notes included both reflections on the contradictions made by participants which became clearer once doing this first listening and also reflections on my own reactions to what participants were saying. The constructivist perspective of this research suggests that not only are the participants active in constructing the world around them through their experiences, the researcher's perceptions of this will also be shaped by their experiences. It is therefore an important part of the analysis process to acknowledge and be aware of these initial personal reactions to participants' stories.

#### *4.1.3.3.2. Reading Two- Listening for narrative tone and structure*

Alongside analysis of the content of participants stories, exploring the tone and structure allows us to gain an insight into how participants have constructed these

individual events and then how they have constructed an overarching story of how their relationship developed using these events. As I approached the research from a constructivist view, I felt that looking at either of these solely and not considering the other would only give me part of the picture of the construction of these stories. To gain the depth of understanding I desired and felt reflected the constructivist view, my narrative analysis needed to encompass content, tone and structure.

Although these are two separate aspects of the narratives and are discussed as such in the findings, they were considered together in one reading. This decision was made as I faced this section looking at how participants were constructing their rivers into an overall narrative and both the tone and the structure address this question. The concept of considering the tone and structure of narratives together is something which has been seen before in previous research by Young, Freisen and Borycki (1994) on young adults' narratives of their career development. Although Young et al do not explicitly say that they are focusing on narrative tone, their exploration of structure also considers how this structure was developed. In this they look at what attitudes were portrayed which help to contribute to how the structure of the overall narrative is perceived. This aspect, of what they consider to be part of the exploration of structure, is what I have named separately as tone.

The idea of considering the tone of participants' narratives came from McAdams (1993). Throughout this reading I asked myself what the attitude of the participant was in the construction of their narrative. I began by trying to apply McAdams' guidelines for this, considering whether the narrative was pessimistic or optimistic. Although pessimism and optimism were appropriate for McAdams, after

consideration of my data I found that this did not fit the narratives which had been constructed. This decision was made because pessimism and optimism infer some level of prediction of the future within them and my participants were talking about their past, in some cases present, and very rarely their future. For this reason, I revised the strategy here and looked instead for whether the narratives were positive or negative. I then considered what it was in these narratives which had portrayed this tone to me. Were the participants using imagery to construct their narratives and if so how? I then highlighted the use of imagery and the words and phrases used to construct this tone and looked at how these accumulated for each participants' narrative. Overall, was their story positive or negative?

The idea of considering the structure of the narratives constructed by participants was introduced by my reading of Sarbin's (1986) writing on narrative psychology, particularly Gergen and Gergen's chapter (p. 22-44), and further inspired by Young et al's (1994) research. As Young et al demonstrate, analysing narrative structure can give us an insight into how a participant makes sense of and gives order to the influential events in their lives; whether they see and therefore construct their story as one of triumph over adversity, for example, or whether they see it as being an easy development. A few examples of past research which has studied the structure of people's narratives includes research on people's experiences of mental disorders (Hatala, Waldram and Caal, 2015), people's experiences of losing a loved one to sudden death through a stroke (Rejnö, Berg and Danielson, 2013) and narratives of career development (Young et al, 1994). However, through review of the literature, the study of narrative structure appears to not have been applied to the topic of relationships with nature.

In this reading I read through each transcript, thinking about the tone first, whilst also making notes next to any major direction the narrative took. Looking at how participants have arranged these events allows us to gain some understanding of how participants have constructed their relationship with nature, what has been important in this and the way they perceive the development of this relationship. Initial thoughts about the structure of the narrative were then noted down on the listening summaries for each participant. As I had read around Gergen and Gergen's identification of different narrative structures in Sarbin (1986), I already had the idea of progressive, regressive and stable narratives as an idea of narrative structures which my participants may have followed. Therefore, this reading was inevitably influenced by this. I read the transcripts looking for the direction of the narrative to or away from their current relationship with nature. I asked myself questions such as: Is this narrative portraying these events in a way that is moving towards their current relationship with nature? Does the narrative involve any movement away from this current relationship? Does the narrative portray any change as a result of the events they are discussing in the narrative? The structures noted at this point were a result of at least two full readings. Once the listening summaries were complete for each participant, the notes for the structure of each participant's story were considered together to then see if there were any similarities in the structuring.

#### *4.1.3.3.3. Reading Three- Listening for Pronoun "poems" and the narrated subject*

'I poems' are a form of data presentation, as well as a step in the analysis of data, which allows the researcher to explore participants' representations of themselves in

the construction of their story (Edwards and Weller, 2012). Murray and Sargeant (2011) refer to this as positioning and advocate its importance in narrative analysis. They suggest that in looking at how people construct and verbalise their role in their own story, we gain some understanding of how the participants see themselves, as well as the way they construct the role of others and their context. The aim of listening for and creating I-poems, as a researcher and audience to participants' stories, is to stay in touch with the complexities of participants' stories and their place within that story and therefore positioning was considered through this reading. After the interviews and while considering my approach to analysis it was clear that many participants had discussed the role of others in their development of a relationship with nature, as well as their feelings towards other peoples' relationships with nature. While considering participants' positioning of themselves I also wanted to ensure I was not ignoring the role of others and therefore used this listening to explore the use of the pronouns "You", "We" and "They" as well. In doing so I could gain a clearer insight into how participants saw others in relation to themselves and in relation to their story.

During this reading I went through each line of every transcript and highlighted in three separate colours. Green highlighting was used when first person singular pronouns were used, orange was used to highlight the use of first person plural pronouns and yellow was used for any second or third person pronouns. These were then listed in a separate document for each participant. They were listed in the order they came in the transcript and these lists included all three types of pronoun (An example of a part of two of these lists can be seen in Appendix 11). This meant that every participant had a list of all the pronoun phrases in their story, in the order they

were used. I then went through these lists with the same colour highlighters as was used on the transcript itself. This was done so that the pattern of pronouns used was clear. For example, in some narratives there were paragraphs which solely used the first person singular pronoun and then this may be followed by another section where they spoke with mainly second person pronoun. These lists allowed then for some exploration of any patterns which could become evident in the way participants were positioning themselves and others and at what point in their narratives. The effect of these pronouns was then explored by looking at these lists one by one and noting where and how these pronouns were used to construct the story and position the participant and others within this story. An example of these pronoun lists is provided in Appendix 11.

These pronoun lists were used to create small “pronoun poems” which could be used in the findings to demonstrate the points being made which were relevant to the participants positioning of themselves. The pronoun poems were extracted by viewing the notes I had made on these lists of pronouns (see Appendix 11, which gives an example of a highlighted and annotated pronoun list). These notes were made where, in sections of the text, participants repeatedly used one type of pronoun to emphasise the positioning of themselves, as the story teller, or of others. If there were sections which demonstrated clearly how a participant appeared to be positioning themselves, with the repeated use of a type of pronoun to create a certain effect in the narrative, this section of the original transcript was re-examined and used to create the poem. This is then displayed as a poem in the findings. The notes on lists of pronouns can be seen in Appendix 11, which gives an example of a highlighted and annotated pronoun list. In this way, the repeated use of certain

pronouns which may have created an effect could be seen easily and then the poems could be extracted.

An example of a pronoun poem can be seen below;

*we don't need to be there*

*I don't see us as with it*

*we are working with it*

*I think I see it as a going round*

*I feel like it's going round*

*we're on the outside following it, doing things with it.*

*No I don't feel like I'm part of it, but working with it*

This was pronoun poem was taken from the following extract from Grace's interview;

> *G: Well we don't need to be there. I don't see us as with it. But we are working with it. I think I see it as a going round, that's the nature, it's a circle or a cycle and I feel like it's going round there and we're on the outside following it, doing things with it.*
>
> *R: Right okay.*
>
> *G: But working with it, you know.*
>
> *R: Yeah we're working with it, so we are not particularly part of it.*
>
> *G: Not part of it, No I don't feel like I'm part of it, but working with it.*

As can be seen from this example, the parts of the extract with pronouns have been taken out and placed together in a poem format to emphasise how Grace positions herself. In this extract Grace is positioning herself, and all humans, as separate from nature. She begins with the use of first person plural pronouns such as "we" and "us"

to explain how she believes her view that humans are something separate from nature is something she applies to everyone, it is not just a feeling of separation that she feels personally. She does, however, then end with the clarification of her own personal feelings of separation with the use of “I”.

#### *4.1.3.3.4. Reading Four- Listening for “relational related subjects”*

The final reading was listening for the discussion of relationships or significant other people in participants’ narratives. The idea to listen for these relationships was sparked by reading Doucet and Mauthner (2008), who outline a listening for “relational related subjects” (p. 406). As previously mentioned, it became evident during the interviews that other people were a large part of participants’ narratives and the variety of these relationships was something which I wanted to explore further. Therefore, a listening was dedicated to it.

During this reading I asked myself: Who are the important people who have influenced the way the participant’s relationship with nature has developed? In this reading I highlighted any person other than the participant who was mentioned in the interview. These people were then noted in the participant’s listening summary, along with notes on their relationship to the participant and how participants constructed this relationship.

An example of this can be seen in the notes for this listening in Dennis’ listening summary:

- School teacher- supportive, encouraging. Positions self as rebel child, only interested in one thing and the teacher harnessed his only interest
- Parents- disapproving saw no value in his interest in nature. Positions self as victim, annoyance to them, disappointing
- Friends throughout adulthood- Shared interests, helped to grow knowledge, some as teachers. Positions self as student to some and teacher to others, sharing knowledge
- Business partner- Help in academia of job and writing for publications. Positions self as equal in knowledge

Dennis referred to a number of people throughout his river and it is clear from the notes above that they are all discussed in very different ways. While some were a discussed as a challenge or hindrance to his relationship, others were discussed as not only facilitative but active in encouraging and building his relationship with nature through their actions and interaction with him.

### 4.1.4. Analysing the Listening Matrix

Once I had compiled the listening summaries into a listening matrix I then used this matrix as a way of looking at all the participants' summaries in one place. Although I had listened to and read the transcripts independently for the analysis process, I did then observe the listening matrix both on my own and with supervisors. These observations of the listening matrix were to look for any patterns which compiling the

data in this way had highlighted. The findings and observations made during this process are discussed in Chapter 5.

## 4.2. Analysis of data from Construct Elicitation Task

Where past analysis of constructs elicited from participants has largely been quantitative (Goins, Winter, Sundin, Patient and Aslan, 2012; Pérez, Sala and Ortega, 2015 and Winter, 2017), this research takes qualitative approach to the analysis of constructs. The quantitative analysis in such research has allowed for comparisons to be made between participants' constructs and systems. However, qualitative analysis of constructs allows for further exploration of the topics these constructs address. An example of how this has been done can be seen in Pérez et al, who use qualitative content analysis alongside their quantitative analysis of constructs.

There is little published research which uses and outlines an approach to the analysis of constructs in a qualitative way. Pérez et al is one of these few and uses qualitative content analysis, however, the procedure involved is not outlined. Denicolo et al (2016) discuss a variety of different qualitative approaches to the analysis of constructs, including Interpretative Phenomenological Analysis, Grounded Theory and Thematic Analysis. Within this discussion they highlight how each of these approaches can fit within a PCP perspective and then give steps on how this process might be approached.

I chose to approach the analysis of the 287 constructs elicited from participants using qualitative thematic content analysis as defined by Green and Thorogood (2014). As Denicolo et al explain, thematic analysis is an “epistemologically flexible methodological tool for categorising qualitative data and identifying patterns across data sets” (p. 148). I chose this method of analysis as it became clear, through completing the task with participants, that there were overlapping themes in the way people constructed the environments in the photographs. As one of the aims of this part of the research was to gain an overview of how people constructed the environments in the photographs, looking at and exploring these overlapping themes helped to build a picture of what was important to participants in constructing the different “natural” environments. As Green and Thorogood explain, themes are created through grouping together data which are “about the same thing” according to its content (p. 210). In the case of this research, constructs which were perceived by me, as the researcher, as being related in the concept or issue they are addressing, were grouped together. It is important to keep in mind that these are my interpretations of themes as the researcher. As this research takes a constructivist perspective, Denicolo et al (2016) highlight the importance of acknowledging that analysis of data is “the researcher’s interpretation of the participants’ interpretation of their life-world” (p. 143).

### 4.2.1. Procedure for Analysing the Constructs using Qualitative Thematic Content Analysis

To begin, the lists of constructs from each participant were transcribed into one large word document. These were then printed off and cut out into single constructs, with

participant numbers written on the back of each so as to be able to identify which participant's construct it was. I then sorted these into separate piles depending on the theme of the construct. My original intention had been to group the constructs under overarching bipolar constructs, however, this proved difficult in practice. For some constructs which addressed similar topics, the contrasting poles were very different.  An example of this can be seen in the constructs "Manmade" versus "Natural" and "Manmade" versus "Harsh". Although these are both to do with the level of human touch on an environment, they could not have been grouped under the same bipolar construct as their contrasting poles to "Manmade" are very different. This was resolved by sorting constructs into themes which addressed the key topic, rather than themes which addressed both poles of the construct. This meant that if constructs addressed the same overarching topics, such as *Level of Human Contact,* like the example above, but had different meanings within the constructs, they would still be grouped together.

The themes were not predefined but came from my interpretation of the data. If there was more than one construct which addressed the same topic these began a theme pile. After all constructs had been considered and grouped there were originally 19 separate groupings formed by my initial reactions to the constructs, with one of these being a miscellaneous group including all constructs which did not group easily together.

These groupings were then reconsidered the following day, so as to allow me to approach the task with a fresh perspective. During this second stage of analysis many of the groupings stayed the same; however, others had clear areas of

separation. For example, many of the constructs elicited related to the human-nature divide and these were all initially grouped together with this in mind. However, after looking at this group again, in the second stage of analysis, it was interpreted by me as the researcher that there were different issues within this theme, for example, the level of management of the land in the picture. This theme was then split into three separate themes at this stage. After this stage of analysis there were 27 different themes.

At this stage I transcribed the constructs under the 27 themes and gave them relevant headings depending on what meaning they shared. The 27 themes were named the following; Pleasure, Safety, Interest, Openness, Exploring, Perspective, Depth, Play, Beauty, People, Movement, Escapism, Function, Familiarity, Health of nature, Species, Animal/Human, Natural/Manmade, Farming, Management, Wet or Dry, Colour, Level, Temperature, Type of place, Personal attachment and a Miscellaneous group. To give an example of this process and how constructs were grouped, one of the 27 themes was named “Interest” and included participants’ constructs such as “Interesting versus Bland”, “Boring versus Exciting” and “Like to go” versus “Not bothered about going”. After these were transcribed, the lists were printed out and laid next to each other so that each theme was clear to see. The process of viewing these themes in this way made it possible to see where themes may be grouped together into an appropriate overarching theme. An example of this can be seen with the theme discussed above. The theme “Interest” was grouped with another theme named “Exploring” as all the constructs in these lists had a similar underlying theme of being to do with engagement with the environment. “Engagement” was the overarching theme title which summed up and reflected what

all of these initial themes were addressing. During this process the number of themes was reduced down to 9, one of which being a group entitled miscellaneous as these did not fit comfortably under any other theme. These final themes are presented in Chapter 6. Where the miscellaneous are constructs are key to a participant's construction of environments, they are discussed separately after the other themes, in Chapter 6 (Section 6.3.9.).

Once these nine themes were clearly defined and given appropriate names the appropriateness of these themes was examined by asking a person outside of the research project (referred to as Assistant A) to categorise the constructs. This person had been involved in a trial run of the methods, however, I do not feel this affected their categorisation as there was a significant period of time between the trial and the analysis. Furthermore, this prior involvement helped as the Assistant understood what a construct was and therefore what it was they were categorising. The 9 different themes were written in a large font on pieces of paper and Assistant A was given the pile of 287 bipolar constructs. They were then asked to put each of the constructs under the heading which they thought encompassed the meaning of the construct. As this was all that was required of the assistant, they needed no further knowledge of PCP or the project to make these judgments. Part of the reason someone without this knowledge of the project was chosen was to allow for them to be unaware of other findings. As someone outside of the research process, Assistant A struggled at times to understand some of the constructs without the knowledge of the context in which they were elicited. These constructs were put into a separate pile and these were discussed after the rest of the grouping and categorised once the context had been explained. Assistant A's groupings were then compared to my

own and any differences in the placement of constructs were discussed until a decision was made about the most appropriate theme for each construct. In some instances, constructs which were categorised differently by myself and Assistant A highlighted where overlaps in themes were occurring. For example, the themes Engagement with the environment, Aesthetics, and Personal Attachment caused the most confusion between my own categorising and that of Assistant A. These themes were discussed and eventually combined under one overarching theme: Engagement with the environment. This then included: mental engagement involving how stimulating the environments were, aesthetic appeal, involving engaging with the environment through acknowledging its appeal or beauty and personal attachment, where participants were personally engaging with the memories the environments sparked.

As well as a way to look at the appropriateness of the themes, this process also highlighted an issue in the initial names given to the themes. When some of the theme names were unclear to Assistant A and had to be explained, this was noted and discussed. After having these unclear themes explained to them, Assistant A proposed some ideas for what they felt would best encompass what had been explained and I then renamed some of the themes. An example of this can be seen with the original themes ‘Physical’ and ‘Aesthetics’, which did not fully clarify what they encompassed as I had to more fully explain this to them. Assistant A then suggested that slight changes would help the distinction. This is when *Physical features of the environment* became one theme and *Engagement with environment* became another theme with *Aesthetic Appeal* as a subtheme within this.

## 4.3. Analysis of data from Laddering Task

As previously mentioned in Chapter 3, laddering, as a technique, has been utilised outside of therapy and psychology research, in the research areas of marketing and consumer behaviour (Pike, 2011; Glavas et al, 2014). The use of laddering in these contexts begun by Reynolds and Gutman (1988) who provide an account of how to use laddering to understand the core values of consumers. Following advice set out by Reynolds and Gutman, Pike (2011) and Glavas et al (2014) both use laddering as a form of analysis, to gain access to consumers core values after eliciting constructs through a repertory grid. A form of content analysis is then used, as researchers take the content of participants' ladders and display these using value maps of how participants construct and understand the topic. The process of making value maps could be described as quantitative as it purely gives a representation of the key content from participants' ladders in one map, these are then purely displayed as the participants' overall core values relating to the topic at hand. Although this helps to give some insight into the core values held, a more qualitative exploration of participants laddered was desired, looking at what the laddering process highlighted that was interesting not only in terms of the constructs from the top of the ladders, but the journey up the ladder and how this reflect the organisation of constructs for individuals. Laddering has also been used within research in the social sciences to explore issues such as motivation to exercise in older women (Berlin and Klenosky, 2014) and the meaning of childbearing to IVF service users (Lee, Neimeyer and Chan, 2012).

The analysis of constructs elicited through the laddering task is another area of the literature which offers little guidance to the qualitative researcher. Two studies were found as previous examples of how data from laddering was analysed and presented in a qualitative way and these were those that used the method to explore social issues (Berlin and Klenosky, 2014 and Lee et al, 2012). These offered examples of qualitative content analysis of the constructs elicited from laddering. In both these studies researchers discussed themes which had arose through laddering as being participants' core values. In their use of thematic content analysis, they displayed their findings using examples from the ladders as well as the interview data which surrounded this process to support their claims that these were the core values of participants. As I had already derived themes from the analysis of the constructs I elicited through the construct elicitation task, this did not appeal to me as a way of adding anything new to the findings.

Although this was an approach to analysis which may have worked for my data, I wanted my analysis to explore further than this and not reduce the data produced by ladders back down to themes. Ladders, for this research, were seen as a way of viewing the individuality in people's construing and construct systems and I wanted the analysis of this section to reflect that. Therefore, I began by asking myself what I wanted to know from the data and by being curious about what the data could tell me. The first question I asked of the data was whether the process of laddering had in fact elicited participants' superordinate constructs as assumed by PCP theory. I then followed this by exploring some of the individualities in participants' construing.

## 4.3.1. Examining Superordinacy

As some writers have questioned the ability of laddering to access participants superordinate constructs (Bell, 2014 and Butt 2007), I decided to explore whether the ladders in my research had produced superordinate constructs. To do this I decided to ask two people, who are experienced in PCP, to judge the relative superordinacy of constructs presented in pairs.

I paired the original constructs at the bottom of the ladders with their respective construct from the top of that ladder. I did this for each of the seventy-one constructs which were laddered producing 71 pairs of constructs (See Appendix 14 for example of sheet given to Assistants B and C). For example, the top and bottom constructs from Kieron's ladder in Figure 4, were displayed in a pair as in Figure 5.

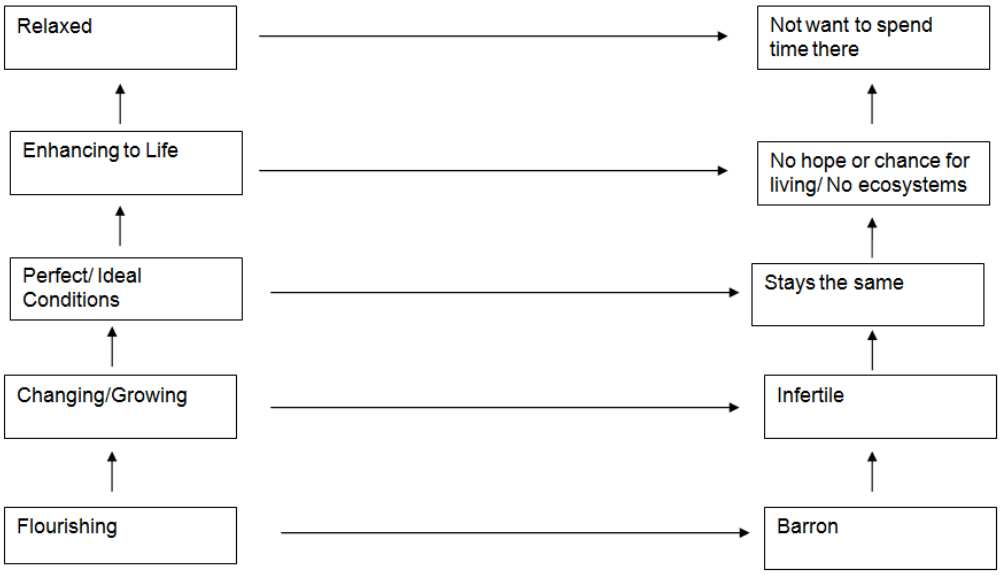


Figure 4. A ladder of Kieron's construct

| |
|---|
| Relaxed versus Not want to spend time there<br>Flourishing versus Barren |

Figure 5. The bottom and top constructs from Kieron's ladder in Figure 17 displayed as a pair.

I wanted to find out whether others (two further assistants) viewing these pairs of constructs would identify the top construct as the more superordinate of the two. In order to avoid cueing my assistants, top and bottom constructs were randomly placed first in each pair by flipping a coin. This document containing the paired constructs, (see Appendix 14) was then sent to two different Assistants B and C, with prior knowledge of personal construct psychology and therefore the concept of superordinancy (Assistant A is referred to previously as helping with the grouping of constructs in 4.2) A brief profile of the assistants used to assess this is outlined below to demonstrate their level of knowledge of PCP.

Assistant B- Assistant B is a research student using PCP as the theoretical underpinning of their research.

Assistant C- Assistant C is a prominent figure in the PCP community, contributing to the development of PCP theory and methods through their own work as an academic and practitioner.

Assistants B and C were independently asked to view each pair and judge which they thought was the superordinate construct of the two for each of the seventy-one pairs. Instructions were written at the top of this document explaining how they should demonstrate this. These can be seen below in Figure 6;

> Superordinate construct: These are constructs which are higher in the hierarchy of a person's construct system and reflect their core values. They are overarching constructs which have many subordinate constructs to which they can be applied
>
> Below are 71 pairs of bipolar constructs. Please highlight one construct in each pair that could be described as superordinate, according to the definition above. If you feel you cannot make this distinction for a pair, please highlight both bipolar constructs.
>
> If there is anything you are not sure of in this task, please contact me at: Jamie.Sutcliffe@hud.ac.uk

Figure 6. Instructions given to Assistants B and C

The assistant's role was to judge which construct from the pair they thought was the superordinate of the two, therefore helping to determine whether the laddering task had in fact led to superordinate constructs as described in the PCP literature.

In terms of analysing the data produced by these judgements, I first of all looked at how assistant B and C's judgements compared in relation to how many constructs from the top of the ladders they thought were superordinate and how many from the bottom. For the next step of the analysis I then looked back at the themes into which the bottom of ladder constructs had been categorised following the construct elicitation task. I did this to explore whether constructs laddered from certain themes were deemed to be more superordinate than constructs laddered from others. The

results of these judgments are shown in the following chapter and then implications of this task are discussed in the discussion.

### 4.3.2. Exploring the development of the ladders

During the transcription process, all ladders from each participant were transferred into a single Word document, so as to allow these to be observed together. As part of this transcription I became more familiar with the data and began to observe what the laddering process had allowed me to see of each of the individuals' construing. The first observation I made was that laddering allowed me to see the process of the development of the ladder from the initial construct to its top rung. The analysis process for looking at the ladders in this way involved looking at each ladder individually. When observing the ladders, I was looking for whether the bottom and top constructs from the ladder reflected all of the issues brought up during the laddering process. Where examining the journey up the ladder gave further insight or brought up new issues, this was noted and a number of these ladders are discussed in the following chapter.

### 4.3.3. Exploring the individuality of participants' constructs and construct systems

Another observation through looking at the ladders together was the differences in the direction the ladders took from constructs which had been categorised into similar themes in the analysis of these original constructs. So that this could be

explored, I noted down each of the themes, from the construct analysis in the previous chapter on, on separate pieces of paper. Under this heading I wrote down all the constructs, which had been laddered, and had been categorised into this theme. I then noted, next to these constructs, the key issues which had come out of exploring this construct through laddering, whether this is evident in the top of ladder construct or in the runs up the ladder, the journey. This left me with documents where I could clearly see the different meanings which these constructs which had been originally categorised as similar, held for different participants. An example of an extract from of one of these documents can be found in Figure 7. Some examples of these differences are explored in the following chapter.

**Level of Human Contact**

Andrew-Sheer beauty versus Man in the environment- Freedom
Andrew- Natural versus Created- Realness
Keiron- Natural versus Manmade- finding personal peace
Mark- Naturally evolving versus Clutter- how appealing an environment is
Mark-Pristine versus Manmade- Purpose of the environment
Mark- Wild versus Parkland- Sense of personal fulfilment, learning
Ansa- Fluid versus Planted and Developed- do with her conservation values and beliefs
Tanya- Naturally forming versus Manmade- Sense of perspective in the world
Tanya- Power/Force of nature versus Power of human- originality, realness, uniqueness
Tim- Moral imperative to conserve versus People ruin nature- conservation values, morals
Tim- Controlled versus Hostile- fulfilment, peace, and achievement

Figure 7. An extract from the document which collated all constructs from the Level of Human Contact theme and explored the meanings after laddering

# Chapter Five

# How participants construe the development of their relationship with nature

## 5.1. Introduction

As outlined in Chapter 2 the first research aim is: to explore how participants construe the development of their relationship with nature. Chapter 3 outlines how the RoE was used to explore this. To explore the findings in relation to the development of a relationship with nature, content analysis of the rivers and narrative analysis of the interviews around the RoE were carried out, as outlined in Chapter 4. This current chapter outlines the findings relating to the development of relationships with nature by firstly discussing the key elements included in people's drawn rivers and then the narrative threads which people weaved together to create an overall narrative about how they developed a relationship with nature.

## 5.2. Key elements in the development of relationships with nature

The first stage of analysis undertaken was a content analysis of participants' rivers. This part of the analysis has allowed me to familiarise myself with participants' narratives while highlighting the common features between rivers.

Table 1. Common features included on participants' Rivers of Experience.

| Participant | Common Features on Rivers of Experience | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Parents/ Grandparents | Teacher/ Schools | Partners/ Marriage | Other People * | Starting at childhood | Contact with animals while young | Holiday/ Travel | Walks |
| **Andrew** | | | | ✓ | ✓ | | ✓ | |
| **Ansa** | | | | | | | ✓ | |
| **Brittany** | ✓ | | ✓ | | ✓ | ✓ | ✓ | |
| **Carl** | | | ✓ | | ✓ | ✓ | ✓ | |
| **Dennis** | | ✓ | | ✓ | ✓ | | | |
| **Grace** | ✓ | | ✓ | | ✓ | ✓ | ✓ | |
| **Harry** | | | ✓ | ✓ | ✓ | | ✓ | |
| **Keiron** | ✓ | ✓ | | | ✓ | | ✓ | ✓ |
| **Mark** | | | | ✓ | | | | ✓ |
| **Max** | ✓ | | | ✓ | ✓ | | ✓ | ✓ |
| **Samantha** | | | | ✓ | ✓ | ✓ | ✓ | |
| **Shirley** | ✓ | | | | ✓ | ✓ | ✓ | ✓ |
| **Tanya** | ✓ | | ✓ | | ✓ | | | |
| **Tim** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Tony** | | ✓ | ✓ | | ✓ | | ✓ | ✓ |
| **William** | | | ✓ | | | ✓ | | |

*Other people includes; writers, family members other than parents, naturalist television presenters and friends.

Firstly, as can be seen in the first four columns of Table 1, 15 out of the 16 participants chose to include a significant person or significant people on their river, with only Ansa not including any people on her drawn river. Although these people turned out to play very different parts in the way they influenced participants' relationships with nature, the majority of participants included at least one significant person with one participant listing six different people, taking up the majority of his timeline.

Secondly, participants were asked to start their timeline from the first thing they remember influencing their current relationship with nature. Although they were not specifically asked to begin at childhood, thirteen out of the sixteen participants chose to do this and seven out of these thirteen participants included interaction with animals, either as pets or wild, on their river as something they feel has influenced the development of their relationship with nature.

Another common feature was a trip or holiday; twelve out of the sixteen participants felt that travelling, whether home or abroad, had influenced their relationship with nature. For some participants' holidays were times where they felt they could connect with nature, or their relationship with nature was facilitated through these holidays, while others had trips in which they felt their relationship with nature was drastically changed. For example, Ansa and Samantha, both drew a river which reflected the change in their relationship through travelling. This will be further expanded in the section below.

### 5.2.1. How participants chose to construct the story of development

Another way the rivers were analysed was in exploring how participants had interpreted the instructions given to them.

Table 2. A table to demonstrate how different participants followed the instructions to create a river of experience.

| Participant | How Participants used the Rivers of Experience Technique | | | |
|---|---|---|---|---|
| | Number of Events included | Number of words annotating river | Bends used as reflection of significance | Drew images on river |
| **Andrew** | 12 | 27 | | |
| **Ansa** | 2 | 4 | | |
| **Brittany** | 10 | 35 | | ✓ |
| **Carl** | 10 | 72 | | |
| **Dennis** | 9 | 32 | | |
| **Grace** | 10 | 28 | | |
| **Harry** | 12 | 38 | ✓ | |
| **Keiron** | 18 | 170 | | |
| **Mark** | 11 | 421 | | |
| **Max** | 10 | 37 | | |
| **Samantha** | 5 | 23 | ✓ | ✓ |
| **Shirley** | 10 | 28 | ✓ | ✓ |
| **Tanya** | 8 | 16 | ✓ | |
| **Tim** | 12 | 33 | ✓ | |
| **Tony** | 12 | 67 | | |
| **William** | 8 | 54 | | |

All participants were given the same instructions: to draw a river which would act as a timeline of how their relationship with nature has developed, starting from as far back as they feel necessary, with each bend in the river reflecting a significant person, place, book, moment or pet. However, each participant chose to take on this task differently. Table 2 demonstrates, for example, the vast difference in the number of words used by participants on their rivers, ranging from just 4 to 421. When asked to draw, many of the participants reacted nervously, expressing that they could not draw, so participants were told that their drawing could be as simple or as intricate as they liked and the results reflect this. Some of these differences shown in table 2 are now further discussed.

The first interesting thing to note was how participants chose to interpret the instructions about using bends in the river to signify significant events. Some

participants chose to produce a river where the bends were of all equal depth, while others expressed whilst drawing that the size and depth of the bends signified the importance they placed on this event. An example of this can be seen in Figure 8, where Samantha uses a much larger bend to signify the large impact she feels her trip to Africa has had on her relationship with nature.

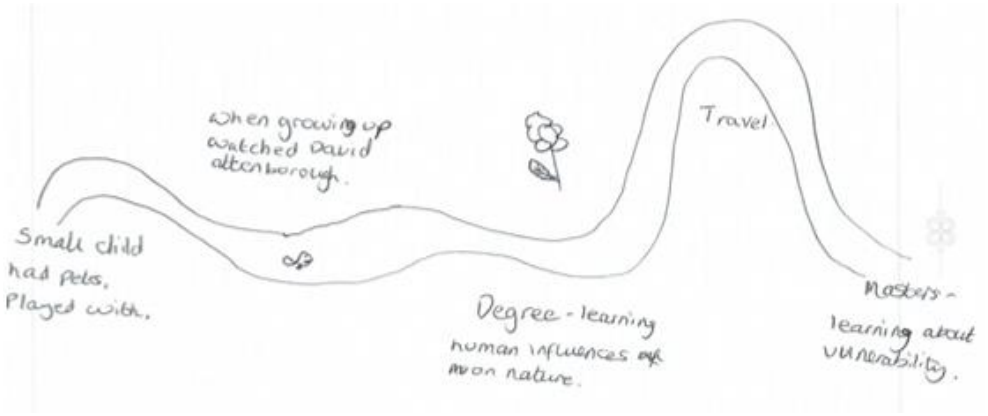


Figure 8. Samantha's River of Experience

Another interesting way in which five of the participants used the rivers was to view the river as having peaks and troughs in a lifeline-like manner, with bends in the river in the direction of the top of the page signifying high moments, bends in the direction of the bottom of the page signifying low moments in the development of their relationship with nature, and straight parts of the river signifying their relationship with nature staying the same. An example of this can be seen in Tanya's river, Figure 9, where she speaks of being overwhelmed by the information she was faced with after coming across PETA and the feeling that there was too much that needs changing to help nature that she could not possibly help in all the ways she wished.

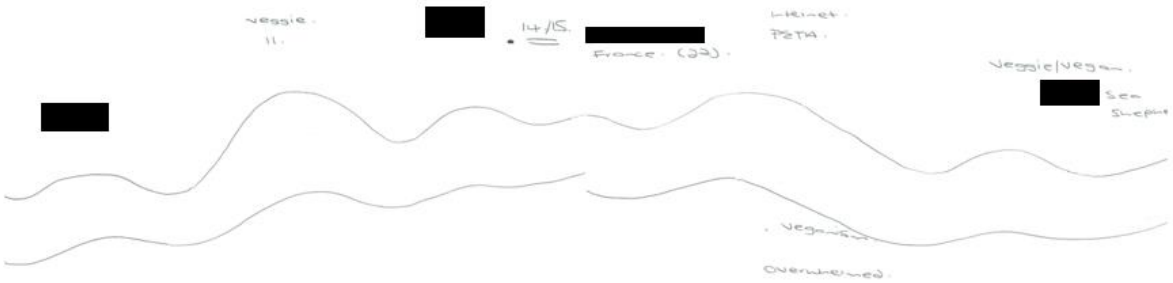


Figure 9. Tanya's River of Experience

(Note, blacked out sections cover personal names on all rivers)

Another difference in the way people drew their river was their use of pictures. Although the majority of participants chose to only draw the river and to annotate around this, three participants chose to draw pictures alongside or as part of their river. Within these three participants there was also a difference in how they decided to use pictures. Two of the participants added pictures at the end of their drawing, after any annotations had been made, and did this for seemingly decorative effect. In contrast, Shirley chose to draw her river timeline and, while doing so, draw representations of the significant events and experiences she was discussing. As demonstrated in Figure 10. Shirley chose only to annotate the river where she felt she was unable to draw a representation of her significant experience. She interpreted the task differently to the others and gave visual representations of the influences she discussed wherever possible.

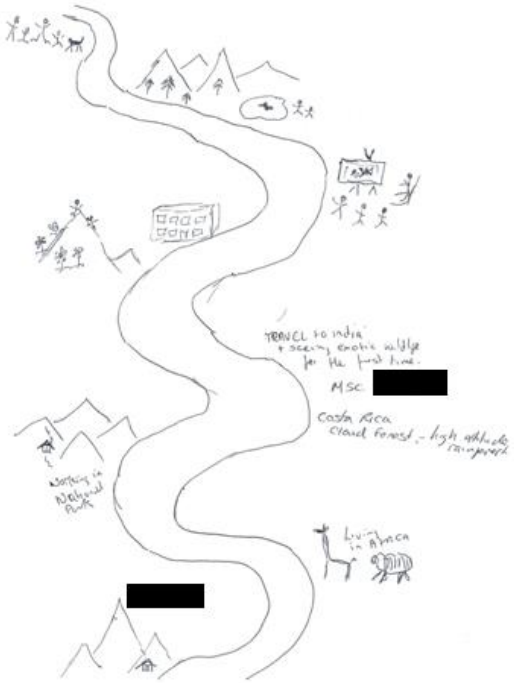


Figure 10. Shirley's River of Experience

Furthermore, the number of experiences participants included on their timeline varied dramatically, from one participant including only one experience, to another including eighteen, with others varying in between and averaging around 10. Although this could, on the surface, look as if participants who did not include many events did not engage with the task and the subject, this is definitely not the case. Instead this reflects on the nature of the participant's relationship with the natural world. For example, a participant who found it difficult to separate herself from the natural world only gave one major event which she felt had reinforced her relationship with nature and explained how this was the only thing she felt had influenced her relationship today as nature was tied in to who she is, see Figure 11.

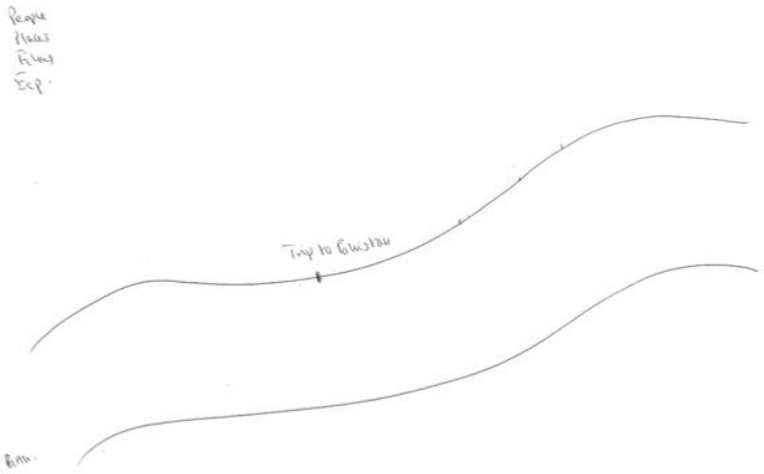

Figure 11. Ansa's River of Experience

The amount of information which was given alongside the river for these events also varied dramatically. A number of participants did ask how much information they should include and were told that this was up to them. While some participants then chose to include only one word next to the bend and to use this to refer to while we discussed their river, others wrote sentences explaining what the bend signified. Finally, in terms of the way participants chose to use the river, it is important to note that two participants chose to not draw a river when asked but instead wrote their timeline in a bullet point, list fashion. In one of these interviews a lack of engagement with what I was asking was apparent, I struggled to keep the participant on track with the topic of development and instead the participant gave me the bullet point list and chose to move discussion onto other questions. This being said, when they did focus on development, they gave some fruitful insights into their relationship with nature therefore their data was kept for analysis. However, the second participant who used a list like timeline chose to do this but engaged thoroughly with the task and it was due to this engagement and passion in the discussion that I chose not to pursue

asking them to make this into a river; the timeline itself had been sufficient in aiding our discussion.

## 5.3. Narrative Threads

The analysis of the interviews around the RoE was then approached using a form of narrative analysis called the listening guide, as described in the previous chapter. This process involved looking at a listening matrix where the storylines from each participant were displayed. When looking at this listening matrix and observing the first reading for each participant, it was clear that there were overlapping narrative threads which participants used to weave their overall narratives. “Narrative threads” is the term I have used to label what others have previously called narratives or narrative plots (Cassell and Symon, 2011; Moffat, Johnson and Shoveller, 2009; Papathomas, Smith and Lavallee, 2015; Simpson, Heath and Wall, 2013). I have chosen to do so as I have used the term narrative to describe the participants overall story as advocated by Polkinghorne (1995) and Sarbin (1986) and I felt the use of it to describe these overlapping parts of individuals’ narratives was not sufficient to explain their role. Like overlapping themes in a thematic analysis, these narrative threads cannot be discussed individually to get a full sense of the participant’s narrative. As the metaphor suggests, participants drew upon multiple narrative threads and weaved these together in different ways to create their unique overall narratives.

The discussion of other people as being influential in the participants’ lives, highlighted by the fourth reading, demonstrated to me that participants did not

necessarily need to have a interactive relationship with these people. It seemed to me that although some of the people discussed by participants were influential through their personal relationships with the participant, others were discussed as purely facilitators. These people introduced them to experiences with nature or information about nature, which ultimately lead to the participant pursuing a relationship with nature but not through a communication of this. They purely facilitated interaction with the natural world, and it was the participant themselves that then took this interaction and developed it into the relationship they have with nature today. Participants' discussion of other people and their memories of, or with, these other people are woven into their narratives, therefore, other people were discussed as a narrative thread. These narrative threads are now outlined in Table 3 and then discussed.

Table 3. A table to demonstrate the narrative threads drawn upon by participants to create their overall narrative.

| Narratives | Narrative thread | Which participants drew on this narrative thread |
|---|---|---|
| **Direct experiences with nature** | Hands-on experiences with nature | Grace, Max, Tony, Kieron, Britteny, Harry, William, Tanya, Shirley, Mark, Tim, Carl, Samantha |
| | Actively seeking out experiences with nature | Shirley, Britteny, Max, William, Grace, Mark, Tim, Andrew, Kieron |
| | Witnessing nature | Shirley, Britteny, Samantha, Harry, Kieron, Ansa, Tim |
| **A spiritual relationship with nature** | Nature as something bigger than us | Grace, Tim, Andrew, Samantha, Tanya, Max, Tony, Dennis, Ansa |
| | Values and Morals strongly tied to nature | Dennis, Ansa, Harry, Tanya, Tim |
| **Learning** | Developing of knowledge is important to developing relationship with nature | Mark, Grace, Dennis, Carl, Kieron, Tim, Andrew, Samantha, Harry, William, Shirley |
| **Nature through the day keeps the doctor away** | Nature as important to well being | Andrew, Mark, Ansa, Tim, Max |
| | Nature becomes something you need | Kieron, Max, Dennis |
| **Contributing to nature** | Teaching and passing on knowledge | Grace, Shirley, Carl, Mark, Dennis, Max |
| | Giving nature a helping hand | Harry, Samantha, Grace, William, Carl, Ansa |
| **People** | Interactions with others as key to development of relationship with nature | Grace, Shirley, Ansa, Harry, Dennis, Max |
| | Others as facilitators to a relationship with nature | Samantha, Kieron, William, Andrew, Tim, Carl, Tony |
| | Both as important | Tanya, Britteny |

### 5.3.1. Direct Experiences with/of Nature

*I did used to watch wildlife films and read books and all of that, definitely made me want to do it but I think the main thing was just being out there*

Max

The first narrative thread identified was of experiencing nature, which is exemplified by the above quotation from Max. Participants all constructed accounts of the development of their relationship with nature being influenced by their experiences with the natural world in some form. Three main types of experiences are highlighted, these are; hands-on experiences with nature, where they were directly interacting with the natural world, actively seeking out nature, where they told stories of finding nature and actively creating experiences with the natural world, and witnessing nature, where participants told stories of witnessing the difficulties faced by nature first hand. Participants drew on a variety of these different experiences to tell their stories.

#### *5.3.1.1. Hands-on Experiences*

Ten of the sixteen participants voiced stories of hands-on experiences with the natural world when discussing how their relationship with the natural world had developed. These hands-on experiences range from personally looking after animals, going on walks in places surrounded by nature, being part of activities outside involving making things with items they found in the natural world, helping to maintain and look after plants and natural spaces or even foraging for food.

Grace's interview involves many memories she has of hands-on activities with her father and her brother. She explains how they "*picked up leaves", "…did tadpoles, conkers, leaves, sledging and er then there were dad's legendary suppers"*. As well as "*playing*" hands-on with nature with her father and brother, she and her family would also go on holidays to a family farm where she explains she gained more

hands-on experiences: “we *used to just go and hay make. We were farming”.* She sums up speaking of her childhood by making a list of hands-on activities which were involved in her childhood and explains how these experiences have carried on into her later life:

> *So we’ve got this as kids, tadpoles, suppers, eating outside, sledging, farming in summer holidays, hay making, fishing. And that’s just carried on* (Grace)

Grace constructs the stories of these hands-on experiences in a positive light by describing them as *“adventures”*. The accumulation of these hands-on *“adventures”* make up the majority of the first part of her river of experience and appear to have influenced her current relationship with nature where she explains these experiences have *“carried on”*.

Similarly, Kieron voices stories of *“exploring”* the natural world around him as a child:

> *we were always sort of out in the fresh air, exploring through woods and fields and blackberrying… I also grew up in quite a rural farming village…I saw the lifecycle of a lot of animals right through from them being born through to sort of being slaughtered really…we were encouraged to sort of grow our own, we had sort of a little vegetable garden and things like that and we used to, we used to draw plants and flowers and we used to press flowers and things like that.* (Kieron)

Kieron, like Grace, lists activities which involved him going out into nature, collecting berries and pressing flowers. He also explains a little further on in the discussion that he *"used to help out with the animals"* as a child. He sums up the development of his relationship with nature by stating that he has:

> *always experienced nature I suppose, first hand in I suppose, in a way you do sort of take it for granted 'cause it's always been, it's always been part of you and you probably don't realise* (Kieron)

Kieron's hands-on experiences with nature as a child have meant that his relationship with nature is not something he sees as separate to who he is but is part of his sense of self. As well as nature being part of his construction of himself, Kieron also expresses that he feels part of nature. The hands-on experiences with nature, as with Grace, do not stop at childhood as Kieron explains that:

> *I feel part of nature because the job that I do is very, as I say, is very hands-on. And you're out, you're outside in all elements so you experience all weather and what nature has got to throw at you* (Kieron)

The hands-on experiences with nature in both Kieron's childhood and adulthood are discussed as important in the development of his current relationship with nature as they have created a relationship where he feels part of the natural world rather than separate from it.

Another participant whose hands-on experiences as a child and an adult make up a large amount of the discussion is Harry. As an angler, Harry's main hobby is very hands-on with wildlife and his hands-on experiences with the natural world began while he was young. Harry explains how when he was younger he used to do things *"outside"* like *"conkering and climbing".* Although these experiences meant he was outdoors and experiencing nature, Harry explains how *"angling was probably the start of my love of the environment*". Harry's love of fishing has meant that he has had experiences where he has been able to see different species first hand:

> *…I mean, the beauty of fishing is you are sort of sat for five hours, on one spot, somewhere, you might be in the woods or just in an open field, but things fly past you, run past you, run across you, run behind you and you know, you think what's that, you know, what the hell's that like? Your eyes go and one of the locals will say oh it's so and so. Are they? We've never seen one of those in us life, 'cause we from an industrial town* (Harry)

When Harry discussed this, it was clear from his widening grin that the memories of these encounters with wildlife were something he enjoyed recalling. As well as enjoying the fishing itself, the opportunities to encounter other wildlife first hand is something that he values.

William is a participant who, as well as speaking about hands-on experiences as a child, discusses the importance of these experiences in his adult life. His profession now, as a habitat surveyor, means that he is outdoors and working in nature. However,

it is the hands-on experience as a volunteer, to help sick and injured bats in particular, which he speaks of with the most excitement:

> *once you're licensed and you can go into a roost, you basically just pop your head in, have a look at what's going on and then leave again. You don't get hands-on. So, if you've got an injured bat, then you do, you can get hands-on but doing great crested newt surveys, you trap them and you have to empty your traps so you get to cuddle newts…And that is the best part of it for me. Is the, it gives you the opportunity to sometimes get hands-on and stuff* (William)

As well as directly explaining that these opportunities to be hands-on are *"the best part"* for him, this was made clear by the excitement with which he spoke of being able to help. When speaking of learning about nature through his studies he explains how:

> *you can sit in a classroom, and you can learn the theory but it's really no substitute for getting out there and being in the field and doing it.* (William)

The hands-on experiences which William has had with nature are the ones he speaks of with the most passion. They have helped him to learn about and help nature and these two narrative threads will be later discussed.

#### *5.3.1.2. Actively seeking out nature*

The majority of participants, 15 out of the 16, constructed stories where actively seeking out nature was part of the development of their current relationship with the

natural world. This includes actively seeking nature through their hobbies in childhood through to adulthood. For some participants this meant past experiences shaping their interest and now holding a desire to actively seek out these experiences throughout adulthood.

Shirley was a participant who told stories of actively seeking out experiences with nature throughout the construction of her narrative. Shirley and her husband live in a very rural setting, surrounded by nature, and she makes it very clear that this was a conscious decision of theirs:

> *we've kind of moved right up into the mountains… and that to me is a bit of a dream. To be able to wake up in the morning and just see mountains out of my window…we've got owls in the garden and that is just fantastic. Buzzards nesting above us and you know, it is again that being right in, amongst nature which is really important to me. To have it right on the doorstep*
> *after that I very much chose to go, you know, become more rural and live more rurally. And actually, we've become more and more remote from towns and villages, the older we've got. So, we have actually sought out a more rural life.* (Shirley)

It was when she moved to this rural setting that Shirley also began to immerse herself in nature even more, choosing to help with local wildlife charities and initiatives:

> *…a very small community, so, I got involved in everything. So, I worked for the wildlife trusts and I run a bat group for a while and you know, I just did all this different stuff. So, it was very much, my life became dominated by nature then.* (Shirley)

As well as working within nature as an ecologist, the above quotations demonstrate how Shirley actively seeks out different activities in nature to fill her spare time. She has actively sought a place to live where she feels close to nature and then has also actively sought out hobbies and interests. She expresses that this is when her life became “dominated by nature”. When discussing this Shirley spoke of this time as an exciting time and it was apparent that she was proud of her help in the local community.

Another time where Shirley speaks of actively seeking out nature was during her and her husband’s time living in Africa:

> *I am interested in everything so you know, I would go plant hunting and I would go looking for insects and Miles is keen on snakes so we would go looking for snakes*. (Shirley)

At this stage in her life Shirley was taking a break from her career in the UK as an ecologist and was teaching in Africa. She expresses how this was a “complete break” career wise but laughs when she speaks of the “nature clubs” she would run at the schools where she taught. Throughout the development of her relationship

with nature, it would appear that Shirley has actively sought out nature and ways to maintain and develop the relationship she has begun.

Another participant who speaks of actively seeking nature as part of their narrative is Mark. Mark's relationship with nature largely involves walking and geo-caching (which is a treasure hunting activity previously outlined in Mark's biography section in Chapter 3) and he speaks below of a time when he was working full time and his relationship with nature became a haven for him:

> *we got to a situation where it was, er, not a question of are we going walking this weekend, but, where are we going walking this weekend, and I can, I remember that distinct shift, we're going walking, where, even it was pouring down with rain* (Mark)

The quotation above demonstrates how Mark began to seek out nature through his walks on a weekend and this became something he actively did every weekend. He remembers a "distinct shift" where walks with nature became something he actively sought out no matter the weather.

Similarly, Tim speaks of walks with his wife as something they actively arranged and made plans to do. The quotation below is where Tim is speaking of his time living in a place where nature was not thriving and was being exhausted by the people who lived there through farming. He describes this place as being "flat" and "brown" and explains how he and his wife would actively seek out places to connect with nature on their walks and this often meant travelling further afield:

*it's more fields, it's more mud, it's more, it's more flat, it's more brown…So, that was, you know, well I guess we spent twenty five years there. And as time went on, we used to drive out further to do our, our walks.* (Tim)

#### *5.3.1.3. Witnessing Nature*

Another aspect of the experiences within stories was narratives of having witnessed difficulties faced in the natural world first hand. There are a variety of different ways in which participants drew upon this narrative thread of experiencing nature through witnessing it. The first is participants experiencing witnessing the problems in nature first hand. For example, Shirley, whose visits to a variety of different countries where humans and nature are living together in close proximity, has meant she has seen problems which nature is facing first hand:

*it wasn't until you go out there and you saw this, you saw, you know, horrendously polluted rivers and you know…It really started bringing it home*

*we went to India and Nepal… seeing the environmental degradation, that was when it first opened my eyes to all the problems of the world…So I think I then became very much more aware of all the issues about the environment* (Shirley)

Similarly, Samantha speaks of her trip to Africa mainly as a time where she witnessed the struggles within the human-nature relationship there:

> *I travelled to Africa… and sort of saw how there were communities worked alongside nature, like, quite sustainably, but then us westerners [laughs] came in with tourism and suddenly all their stuff was taken away and everything was just made for tourists basically. Like, nothing was sustainable anymore.* (Samantha)

This trip demonstrated to her the problems in sustaining the tourist activity in Africa to see the wildlife, while conserving and sustaining the wildlife that these tourists are there to see. She spoke of a particular visit on her trip that emphasised this problem to her:

> *We went down into the Ngorongoro Crater where there is supposed to be a huge lake and you can see the outline of where it was, but the actual water that was there was just so tiny… And you think, well, if there's no water for the animals, because we're there, like, there's going to be no animals* (Samantha)

When speaking about this conflict of interest it was clear that this was something that Samantha feels passionate about. There seemed to be some frustration in Samantha that these problems were going to mean the loss of the wildlife that was the reason she and others visit such places.

Samantha also discusses how it was the witnessing of these conflicts that influenced her relationship with nature as it prompting her decision to pursue nature conservation as a career:

*I sort of saw the reason why, the reason why I wanted to do something about it, from travelling…I went to Africa and just absolutely everything seems to be, like, it is the place of nature, but the people there couldn't care less about nature* (Samantha)

The trip to Africa to see nature meant that she witnessed first-hand the problems facing nature conservation and the impact of humans. Samantha's research, as a PhD student, focuses on using peat bogs to store carbon and she specifically chose to focus her studies on ways in which nature could be used to save itself from humans rather than tackling human impact as she believes this will take too much time. The witnessing of people who "couldn't care less about nature" began to build a relationship with nature where humans are the enemy.

Another way which participants constructed their overall narratives including witnessing nature was of speaking of witnessing the reliance of humans on nature and the life-giving properties of nature. Ansa, for example, discusses her trips to Pakistan where her parents grew up and speaks of witnessing first-hand how people work alongside nature and with nature on a day to day basis:

*So because it's kind of a developing country as well, there isn't an awful lot of money around that people tend to grow things. So, in our garden we had a massive kind of, orchard, where we had mango trees and orange trees and apple trees and pear trees, and we had to herb garden, so seeing that and just literally picking fruit and putting it on your table was something that I*

*found, not really strange but something that was quite a revelation to me.* (Ansa)

Living in the UK for Ansa had meant that she had not witnessed relationships with nature in this way before:

*So that was quite interesting for me. So that was the first time I kind of saw nature as being part of everyday life.* (Ansa)

*that trip to Pakistan was, for me, an eye opener when you're sharing your space with livestock but also growing things and people are kind of sharing… that was quite an enlightening experience* (Ansa)

The description of witnessing the use of nature as a life source as an "enlightening experience", "an eye opener" and "a revelation" demonstrates how this was influential on her current relationship with nature. Witnessing other relationships with nature in these ways meant that Ansa began to question her own relationship with nature when she returned home and wanted to reconnect with it.

Similarly, Harry speaks of visiting his family's farm in Ireland. The quotation below from Harry is discussing a time when they were visiting his family and he took some of the younger boys in the family fishing with him. When Harry caught a fish he was going to return it to the water as he usually did when one of the boys asked if they could take it home. Although this was different to what he usually felt comfortable

doing, Harry agreed to this and took the fish home where his auntie cooked it. He explains how:

> *We had at least two of those every meal for the fortnight that we were there. So one fish like that could feed a family for a month. And that's where it brings it home to you… Erm, fun, pleasure, or for gain, and for gain for them… they saw it as food source, which would put something different in the kid's bellies, er, for at least a fortnight.* (Harry)

Witnessing his family's utilisation of the nature around them, and his family's resourcefulness, "brought home" to Harry another dimension of nature. Instead of being something which he enjoyed for leisure, it was now something which he viewed as a life source, providing food. For Harry this was not a change in his relationship with nature but added to it.

### 5.3.2. A spiritual relationship with nature

Another narrative thread which was prevalent in many of the participants' stories was that speaking of their relationships with nature in a spiritual way. I have distinguished between two different ways in which participants discussed their relationships with nature as spiritual; discussing nature as something bigger and/or more powerful than themselves and discussion of their morals and values being tied to nature. These will now be discussed further.

#### *5.3.2.1. Nature as something bigger than us*

In drawing upon the narrative thread of a spiritual relationship with nature, a number of participants spoke of nature as an entity which is larger than themselves. An example of this can be seen in the pronoun poem below derived from Grace's interview:

*we don't need to be there*

*I don't see us as with it*

*we are working with it*

*I think I see it as a going round*

*I feel like it's going round*

*we're on the outside following it, doing things with it.*

*No I don't feel like I'm part of it, but working with it*

Grace pronoun poem

Grace here separates herself from nature and explains how she feels that rather than being a part of nature, like some participants express, she is working with it. She refers to "us" and "we" when she speaks of humans and makes the distinction that nature is separate by referring to "it". As a farmer Grace describes her life as being tied to nature:

> *We're farmers. If the grass doesn't grow, we can't work you know and as for if you mean weather, it defines our working day. We decide what to do with what the weather is doing. Even in winter. So, it's a very close relationship*

*isn't it?... If something ruins nature out there, our jobs gone. We'd have to find something else.* (Grace)

Although Grace never explicitly expresses that nature is something she sees as bigger than herself, she paints a picture of nature holding a powerful position over her and her day to day life. As a farmer Grace is reliant on nature to provide her with the conditions she needs to work and this reliance positions nature as something bigger than herself. Nature is positioned in a place of power, having more control over her life than she herself does at times.

Although Grace does not directly express that nature is something superior to herself, other participants do. Samantha, for example:

*I suppose I see nature as something to enjoy and like, respect. I see it as like, like, something above us. Like most people see humans as the best thing on earth and like the biggest thing but like, we are the worst. And nature's, like, better than us*. (Samantha)

Samantha also elaborates on her view of nature as "something above us" by exploring that she sees nature in a similar way to how others may see their god:

*I see it as a, just like a force. Like, I suppose, in like a similar way to how people see God. Like, I could, I don't believe in God. I see nature as just a force* (Samantha)

The repetition of the word “force” to describe nature, as well as the reference to nature being “god” like, implies a view of nature as something powerful, similar to the way Grace built a picture of nature in her life.

Both Ansa and Tanya create a narrative of nature being something bigger than themselves by directly describing its ability to give them perspective on the world. This is achieved for Ansa through her view of nature as part of her God’s creation and the scale of that creation. Ansa’s relationship with nature allows her to be confronted with the entirety of what her God created and gain perspective on where she fits within that, which she sees as only a small part of a “bigger thing”:

> *When you’re in nature you realise the mortality of who you are and how you’re so tiny in the bigger thing. And sometimes we need to just, kind of just stop and just appreciate who we are and where we are in the world. And that, I keep on going to God’s creation but that’s what we believe all these things are created by, God, and it’s about understanding that there’s so much more to this world than you and your tiny little world. (*Ansa)

Tanya creates a narrative of nature as something bigger than her by describing its ability to give perspective to what is important in her life:

> *…’cause it gives me a sense that there’s something much bigger and much more important than the things that we tend to think are important. So, there’s something else out there and stuff like what car you’ve got doesn’t matter,*

*what house you've got, what job you've got, that stuff, really, in the grand scheme of it, it doesn't matter, We are all just little, small things* (Tanya)

The relationship with nature that she holds reminds her that material things in her life are not what are truly important to her. Tanya discusses elsewhere in the interview her inner conflict about a materialist life versus a simple life living somewhere surrounded by nature and living off the land.

#### *5.3.2.2. Values and Morals tied to nature*

Another way in which participants drew upon a narrative of a spiritual relationship with nature is by discussing their values and morals. Many participants' discussions of the development of their relationship with nature involved the development of the morals and values they have which are tied to the natural world.

Dennis, Tanya and Ansa in particular created narratives where their morals were key to their relationship with nature. When a pronoun poem was created from an extract of Dennis' discussion about his concerns the importance of the morals he holds around protecting and conserving the natural world is emphasised:

*we've got a moral right*

*what gives us the arrogance*

*we as a species think that we can get on without it but we can't*

*We're not excluded from it.*

*We are certainly part of it*

*We destroy everything else*

*we would have got rid of us by now*

Dennis Pronoun Poem

Although Dennis works towards helping to conserve nature in his job as an ecologist and through his work documenting species voluntarily, he still includes himself using the pronouns “we” and “us” when he discusses the destructive effect he believes humans have had on nature. In doing this the moral right he is expressing is then shared. He also speaks of “arrogance” to describe the attitude of humans about other species which emphasises the positioning of humans as in the wrong for our behaviour.

Tanya also created a narrative where values and morals were central to her relationship with nature. As an animal rights activist, Tanya’s passion for helping nature drives her to become actively involved in helping it and deterring others from abusing their power as a species. When discussing this power as a species Tanya expressed how:

> *That really makes me quite angry. Just the sense that people have of entitlement, they feel entitled to, I don’t know, rip out a hundred-year-old tree because they want to build a house there. I think that’s disgusting.* (Tanya)

Tanya clearly feels strongly that, as a species, humans should not abuse their power. Unlike Dennis, Tanya distances herself from this behaviour and discusses

the “people” doing this and how “they” feel “entitled” to behave this way and her strong feelings against this sense of “entitlement”.

As well as discussing her current moral standpoint like Dennis, Tanya also discusses some of the development of these morals, particularly in relation to her vegetarianism:

> *…I saw something on the news with a massive truck of turkeys that were off to, obviously being slaughtered... And it just had such an impact on me…Just seeing these, this truck, just crammed full of birds, all for us to eat them… It just had a massive impact on me. And then, from then I said no red meat*
> (Tanya)

Although Tanya had some questions and curiosity about vegetarianism in her early childhood when she became aware that people did have diets that didn’t include meat, it wasn’t until she witnessed the realities behind meat farming on television that she made this moral decision to stop eating meat. She explains how witnessing these birds going to slaughter was the turning point where she made the conscious decision to remove herself from being part of that chain, part of the reason the birds she was so upset to see in this way were being slaughtered.

As Ansa approached me as a researcher, she was the one who established that she had a relationship with nature and when asked about this relationship she explained how it is mainly through her religion that she feels she holds a connection with

nature. The development of Ansa's relationship with nature has been strongly influenced by the moral guidelines set out by her religion:

> *…so, in my religion, erm, so when we're cooking at home and we're eating it has to be, erm, something that's not excessive or too much. So, you only take what you need. So, in terms of water, you only drink what you need. You don't waste water, you don't waste food, so you eat, only eat what you're going to eat but not waste anything else. You don't throw away left overs, we'll eat them again. So, it's about accepting of what nature provides for us but also a kind of integrating it into our kind of lifestyles as well*. (Ansa)

Her religion promotes a relationship with nature where one is morally conscious of one's impact on the natural world around them, as well as promoting a sense of equality between humans and nature:

> *As Muslims we're not allowed to keep pets and that's because they should be free and they shouldn't be held captive or caged. Birds is a big thing, we, I know a few people that do own birds but we're not allowed to cage birds especially because they have the freedom* (Ansa)

> *…nature and plants, erm plants and flowers, they're all living organisms, they all have a life, they all have a purpose, so what makes my life more important to them? So, it's kind of valuing that as well* (Ansa)

In this sense, it is being highlighted that life in nature is as important as our own lives. In being aware of nature's ability to sustain life and promoting morally conscious behaviour around food consumption, there is a respect and appreciation for the things taken from nature to survive. This respect and appreciation is a way in which Ansa creates the narrative of a spiritual relationships with nature through her values and morals.

### 5.3.3. Learning

Learning and the development of knowledge was something which was a key element in many stories. This varied between participants as some participants developed their knowledge through a formal educational setting, others described an increase in knowledge surrounding their experiences with the natural world, and some through educating themselves through their own research. In all of these cases participants spoke of their relationship with nature and their desire to learn as going hand in hand.

William speaks of learning being tied to his love of nature since he was a small child where he explains that:

> *it all stems from a sort of fascination and a curiosity with how things* work (William)

This is Williams' answer when he is asked to briefly explain his relationship with nature at the beginning of the interview. The quotation above clearly demonstrates that William explicitly explains his relationship with nature as stemming from his desire to learn and understand things. When describing this fascination with understanding things William give an example of his curiosity as a child which he feels "sums up" why his relationship with nature has developed the way it has:

> *Why is that the way it is? Why does that do that? Yeah my mum recounted a story, quite recently, that I had, I had no idea about this, when I was a very very small boy, we were at the beach and I asked her why do crabs have eyes that point forward when they walks sideways?...Which kind of sums up, you know, me and my mentality* (William)

When discussing this memory William laughs. It is evident that his desire to learn and to develop his knowledge is something he values. This "curiosity" was not only part of his life as a child but carried on to his adulthood:

> *…I was out of work for like three years with nothing to do so I just hit the local library, so I was reading like four books a week…pillaging the non-fiction section*. (William)

As well as spending his time unemployed educating himself through visiting the library, William would also read his partner's university notes and help her with her work. His partner was studying marine biology and he explains how at this time although he did not gain the qualification she did, he had learned all the material

alongside her. He also explains how when he was not reading he was out “turning over rocks” and exploring the environment around where they were living in rural Wales. His relationship with nature was developing as his understanding of it grew through this reading and exploring in his own free time and it wasn’t until years later that he began his own formal education to become a qualified surveyor.

Another participant to whom learning is part of their hobbies is Mark. Mark’s main hobby is walking; however, it is not only the walking which interests him when he is out in the countryside:

> *whenever we go walking and we do, probably two or three times a week, erm, you know my wife has an interest in flowers, ‘cause they’re abundant at the moment so I can tell her. So, she listens to what I have to say and if I’m not sure, erm, and then as soon as we get back to the car, there’s a book in the car…Erm, and we check what it was, just to be reasonably certain of what it might have been. So yeah, we, we do that. We do that all the time.* (Mark)

When out walking Mark and his wife will try to name flowers and will check whether they were correct when they return back to the car. This demonstrates an active curiosity and desire to develop knowledge and to understand the things they see on these walks.

Dennis sums up his relationship with nature as being tied to a love of learning:

*..you're never going to know it all. So as a consequence, it doesn't matter how long you live, there's still something that you can learn. And that to me is what it's all about. It's, it's learning. And this is why I don't have a television. Television to me is chewing gum for the mind, it's, you're just watching it and then you think oh right I'll go to bed, and, there's more to life than that. And what I, I want to do it all, in that respect.* (Dennis)

Dennis expresses that his relationship with nature has carried on developing due to the endless opportunities nature holds to learn about. Dennis speaks about school and formal education as his downfall. He discusses how his parents would try to dissuade him from his interest in nature as a child, pleading with him to focus on the school work he was falling behind with. However, this falling behind was not due to a lack ability but lack of interest. Nature grabbed Dennis' imagination and it is because of this that he has been, and is still, constantly learning and expanding his knowledge. His likening of television to "chewing gum for the mind" creates an idea of television, and anything else where he would not be learning, as a waste of time. As will be discussed in the next narrative thread, Dennis feels a sense of fulfilment from learning about nature.

Andrew discusses how his desire to learn about nature began:

*…And the other thing was reading books, I did a lot of reading, erm, sports, I read adult sports books and children's nature books. Erm, romany books, by a chap called [unclear 04.50] and I read all them, I was about, er, an age and that probably, that probably started my, sort of, enquiring. (*Andrew)

Reading books about the natural world as a child began to spark a curiosity in Andrew, where he began to see nature as something to learn about as well as enjoy through playing. He also acknowledges that as well as what he understands about the natural world developing over time, his desire to try and understand the natural world has also “evolved”:

> *But it’s evolved the understand, trying to understand has evolved* (Andrew)

As his relationship with nature has developed, so has his need to learn about it and understand the world around him.

### 5.3.4. Nature through the day keeps the doctor away

A narrative thread around well-being was something which was also evident through a number of participants’ stories. While some participants discussed that they have connected or do still connect with nature to feel a sense of balance in their lives from indoor office jobs, others felt a more innate “need” or “passion” for nature and have tried to fill their lives with it to fulfil their need.

#### *5.3.4.1. A walk, in nature, as a balance to the mundane everyday*

The first aspect of this narrative thread was participants constructing stories which involved nature as having a positive impact on their mental well-being by helping them to gain balance in their lives or restore perspective or energy.

One participant, whose relationship with nature did not begin with, but was maintained by its positive effects on his mental well-being, was Andrew:

> *…I like being outside, as the antidote to the, er, the hard job I was doing as a civil engineer, and er, just a compete contrast.* (Andrew)

Andrew explained how his job was largely office based and being outside surrounded by nature became the “antidote” to this. The word antidote used here may offer an image of his time in nature being a cure, which implies unpleasantness in the thing which it is curing, this being his work. However, when asked if this was like escapism from his work Andrew made it very clear that escaping was not the correct word to describe his feeling as he enjoyed his work. His use of the word antidote rather implies a sense of balance. His free time in nature is a way for him to feel balance against his office-based work life. This ensured he maintained his connection to nature and he still feels this need to be outdoors now he has retired:

> *….I like to get out. As my wife will tell you now, I got out, I have to go out every day. Even if it’s just in the garden, you know, I can’t er, I can’t stand, I am that sort of person*… (Andrew)

Throughout her interview Ansa spoke of her relationship with nature as being in a stage of reconnecting. While visiting Pakistan, where her parents grew up interacting with nature on a daily basis, Ansa witnessed people being much more "actively involved" with the natural world. After returning to her life in the UK Ansa felt that her life was disconnected from nature and felt a desire to "reattach" to the natural world. As she discusses, the Muslim faith, and her parent's cultural heritage, hold nature of high importance and, in becoming disconnected from nature, she felt disconnected from her religion and these beliefs:

> *…I think I'm trying to find something that was very important to my parents and we've kind of lost in our generation…*
>
> *trying to reconnect with something that's part of my heritage, being from an agricultural ancestry …I've been so engrossed in my kind, my little bubble, that I've, as a Muslim I should be coexisting with nature. Like I've kind of, I've lost that.*
> (Ansa)

She speaks about how she has begun to go on walks to local areas of natural beauty with her mother who has suffered with depression:

> *…we go for walks and it's about talking and kind of, and sit and kind of admiring, you know, the environment as such. …And so it's not so much as*

*the physical activity but it's something that's improved on her well-being and my well-being as well* (Ansa)

Here, Ansa directly links her walks, and the environments her and her mother visit, to having an effect on both their physical and mental well-being. She explains how it is the sense of perspective she gains from these walks which help her mental well-being:

*When you're in nature you realise the mortality of who you are and how you're so tiny in the bigger thing. And sometimes we need to just, kind of just stop and just appreciate who we are… It kind of puts things into perspective. So it's admiring God's creation and you know, you know, it's having that time for reflection that I think if I wasn't engaged with nature I don't have time to do.* (Ansa)

Ansa refers to nature as the reason behind the perspective she gains rather than the act of walking itself. Viewing nature on these walks allows her to observe her gods "creations" and while the walking helps her physical well-being as she explains in the previous quote, it is this connection to her religion through nature which helps her to reflect and improves her mental well-being.

In a similar way to Ansa, Tim speaks of his walks in nature as helping his mental well-being directly as demonstrated in the pronoun poem devised below:

*it's giving back to me*

*I get a lot of comfort, satisfaction, recharging of batteries*

*if I've been out...walking...I've seen the countryside, seen the things of interest, I feel,*

*I feel good.*

Tim, Pronoun Poem

When asked if a walk in an urban area would have the same effect as a walk in nature, he explains:

> *It doesn't do the same… whereas, in the countryside what we enjoy, and it sound perverse, is our own silence, you know. And you don't get that you know a lot, you know, here we have to go a long way to get silence, erm but when you reach it, oh yeah look, nothing you know, and that's a good sound…* (Tim)

It is the quietness of walks in nature that allows Tim to feel he has "recharged". Again, in a similar way as Ansa's walks, nature is allowing Tim time without distractions.

5.2.4.2. A Need for Nature

Another aspect of this narrative thread was participants expressing a passion or need for nature in their lives.

In contrast to the participants above, Kieron's relationship with nature has not developed as a way to balance any other aspect of his life. As a gardener he spends his working life outdoors and in constant contact with the natural world and it is this contact which he feels has positive effects on his mental well-being making him "freer" and "happier" as demonstrated in the pronoun poem devised below:

*I probably never shut off from that really*

*I'm an outdoor person*

*I feel most comfortable outside*

*I feel a lot freer*

*I'm a lot happier when I'm outside*

Kieron, Pronoun Poem

Kieron discusses times in his past where he explored different career choices including office and retail jobs, however these did not make him happy:

*I just absolutely hated it, I thought I've got to be outside* (Kieron)

Kieron then decided to set up his own gardening business as this was something he knew he would be happy doing. As the quotation above demonstrates, by using the phrase "I've got to", Kieron constructs a memory of having no other choice but to work outdoors for his own happiness.

Max is another participant who, like Kieron, felt trapped by his work that was not directly involving nature. Max describes a significant moment in the development of

his relationship with nature to be the moment he quit his full-time work and decided to pursue wildlife photography as his main focus. It is during pursuing this dream where he went on a trip to Iceland on his own to take pictures of wildlife. During this trip he ventured out to a remote place and set up his camera:

> *…I think it was the first time I'd ever realised, probably the time in my life…I couldn't hear anything, I couldn't see any civilisation and just sat there, and just realised that actually, I need to do that*. (Max)

The use of the word "need" here constructs the experience as something that brought solitude to Max where this was missing before, a longing for the experience again. When he expresses that he "realised" that he "needs" to get away from civilisation and experience this quietness and stillness, this also constructs a moment of epiphany, where his dependent relationship on these experiences with nature becomes clear to him.

After quitting his full-time work, Max's main focus is wildlife photography, and it was clear from the way he spoke about this that it was his passion. When asked what it is about the experience of wildlife photography that has made him pursue his dream Max explains the feeling of "satisfaction" and "privilege" he gets when out with nature, this is demonstrated through the pronoun poem below:

*I kind of feel like privileged, like it's a privilege to see something really close up.*

*for me there's something quite, that I really like about having that to myself.*

*it is like a moment between you and, and nature.*

*I suppose that's quite special*

*I get quite a lot of satisfaction out of, out of that*

Max, Pronoun Poem

The use of the first person personal pronoun, I, repeatedly in this section reflects how personal these experiences are to him. This is further emphasised when he describes the experiences as "as moment between you and nature" and expresses that he enjoys having these moment to himself. This combined with his clear enjoyment of the solitude that nature brings constructs a relationship between Max and nature which is very personal and it is this that brings him satisfaction and helps his well-being.

Finally, in terms of needing nature, Dennis constructs a picture of a relationship with nature which gives him fulfilment and explains that this relationship:

> *… offers me so much for so little.* (Dennis)

When asked to give a brief explanation of his relationship with nature at the beginning of the interview Dennis constructs a picture of a relationship with nature which is all encompassing, as demonstrated through the pronoun poem below:

*for over fifty years, I've eat, slept and drunk it.*

*I can't get enough. Er, I never could*

*I'm totally one hundred percent absorbed by it*

*I find it thoroughly, and I have done since I was a teenager*

Dennis, Pronoun Poem

Throughout the interview Dennis spoke of his relationship with nature as one which "absorbed" him. He explains how nature is the only things he is really interested in and this has been the same since he was at school. When explaining this absorption by nature, Dennis recalls a conversation with a neighbour who had recently retired. The neighbour spoke to Dennis about being unsure whether retirement was the right decision as he was afraid that he would now have nothing to do. Dennis suggested to his neighbour that he get a hobby but explains:

> *it's got to be something that sparks you on. Now, from my point of view, I've been sparked when I was, well, ten years old* (Dennis)

He also explains:

> *…I think a lot of people are missing out because they've nothing to thoroughly absorb them* (Dennis)

When speaking of this "spark" and people "missing out" without having a hobby, Dennis constructs a picture of his relationship with nature as being something which brings him fulfilment and that without this he would be one of those people "missing out". Although he speaks of his relationship here as his hobby, the absorption he speaks of is reflected in the fact that it is not only his hobby but his career as well. He is "one hundred percent absorbed by it".

### 5.3.5. Contributing

Another narrative thread which was woven through participants' stories was that of contributing to the protection or maintenance of nature. This was expressed by different participants in different ways. A number of participants spoke of passing on their knowledge and care for nature to others through teaching their children and/or others in their local communities. While others spoke in more practical terms of their contributions to "helping" nature by donating money or cleaning out rivers or maintaining areas of natural beauty for others to enjoy safely.

#### *5.3.5.1. Teaching/ Passing on knowledge*

From the discussion above about Max's personal relationship with nature it may be assumed that sharing his knowledge would not be a narrative thread drawn on in his overall story. However, he explains how pursuing his photography full time has meant that he has needed to seek further income from sources other than his wildlife photography. Part of this has been teaching photography part time at a local college and running wildlife photography sessions privately:

> *Essentially teaching people nature photography, but all sorts of nature, even landscape photography…I actually just enjoy that aspect of being able to show people things.* (Max)

When vocalising this enjoyment of sharing his experience the tone of Max's voice sounded somewhat surprised. The use of the word "actually" in the quotation above reflects this surprise to some extent. He goes on to explain:

> *I probably purely saw it as making money, maybe, if I'm being honest, but I now, you know, I genuinely enjoy, erm, ex, helping people…have that experience and sharing it as well… there's something about sharing it that's quite nice actually*. (Max)

The surprise here reflects the personal nature of Max's relationship with nature as we discussed above. He draws on a narrative thread of both having a very personal relationship with nature while at the same time enjoying passing on his knowledge and sharing these experiences with others. He goes on to explain how it is helping somebody else to experience these very personal and private moments with nature rather than the photography itself which he enjoys:

> *…showing them, not the actual taking pictures, erm, well a little bit, to some extent, but more actually, you know, just I suppose, just erm, sometimes I've sat in a hide with somebody and I've created something, I've set something up. And erm, when you get, you know, when you get like a great spotted woodpecker just sort of land, on cue, just comes and lands, like lands on the perch right in front of them and you see how much somebody's enjoying that* (Max)

William is another participant who has drawn upon the narrative thread of contributing to helping nature by passing on his knowledge. He is a volunteer at his local bat rescue group and works hands-on with the bats but also helps with their educational and fundraising days. William explains how it is the changing of other people's opinions through educating others that William enjoys:

> *…one Sunday recently we had a, we had a Bat group stall up there and just being able to tell people about bats and you know, they are no harm to anybody, they do a lot of, you know, valuable ecological service… I think we, we changed a few people's like, perspectives and opinions and that was really good.* (William)

Although William does have a love for nature, it is bats in particular which have grasped his attention and it is clear that he is an advocate for their place in the natural world. As a habitat surveyor William has knowledge of the ecology of different environments in the natural world and his discussion of bats being "valuable" to the ecology of different environments helps him to contribute to helping nature through educating others of this and ultimately helping others to understand and therefore take care of this species and the natural world which needs them. Similarly, Dennis drew upon contributing to nature conservation by teaching others through his publications and reports:

> *And that's where education comes in, isn't it? Because unless you can understand and unless the general public will understand, what these things are all about, it's pointless saying oh isn't it a shame?...Because you can't,*

*they do nothing. They might, they might put money into an organisation that will actually do something, which is good, but they don't understand it and I think unless we understand it you can't, you can't conserve it…. It is yeah, yeah because I like being able to put back.* (Dennis)

In the quotation above Dennis makes a distinct separation between himself and the "general public". He positions himself as the expert and the public as ignorant to the topic of conservation. In this way Dennis is creating a story of his relationship with nature being strongly tied to his knowledge and the importance of him teaching others.

As Dennis describes a relationship with nature which was largely influenced by other people teaching and guiding him, he also expressed the importance of carrying on passing on the knowledge he gained from others so that someone else can enjoy nature in the same way he has done:

*…But then you've got to pass that knowledge on. Er, because without me passing knowledge to other people, they're not going to be able to learn. 'Cause without these people, that I've outlined here, I wouldn't be sat here now.* (Dennis)

#### *5.3.5.2. Giving nature a helping hand*

The other aspect of participants drawing upon narrative threads of contributing to the natural world was with stories of taking action directly in helping nature. While some

participants worked hands-on with nature in an attempt to help, other participants told stories of helping in more vicarious ways. Carl, for example, explains how he spends a lot of money on helping nature:

> *I spend a lot of money on bird watching organisations…I'm contributing if you like, by my, by my money membership fees* (Carl)

In Carl's interview he speaks of a relationship with nature which has been impeded by a number of different things at different times in his life and most recently this has been due to his ill health. When asked why he gives to charities surrounding nature he explains:

> *…I can't do it myself, I'll give them the money and let them do it, that's why I do it, yeah.* (Carl)

In expressing that he "can't do it" himself, Carl is expressing that if he could do it then he would. He wants to do something which contributes to nature, therefore it has to be vicariously.

Andrew also makes his contributions to the natural world very clear in his interview:

> *I was also a committee member there. In the fact that, the reason I have put that on is that I am active, I do you know, I do try to put things back.* (Andrew)

As a committee member of his local bird watching group Andrew is part of helping grow the group and be part of actively protecting and making sites which allow birds to flourish. In explaining his choice to put “committee member” on his river Andrew wanted to make it clear to me that he was not only enjoying nature but putting things back, giving nature a helping hand.

In a similar way to Andrew, Harry is also a committee member and chair of his local fishing club, which means that he becomes involved in the maintenance of places to fish in his local area:

> *we get plodding away and you know, luckily we had some good lads around us, some good members in the club and we did basically what we, what we set out to do. And we've just nicely finished a project that we, that's been dear to our heart for twenty years… so we actually dug it out all last year and refilled it, rebanked it, re gardened it and they've got a lovely little er lake……and that's really where you start fighting for your nature* (Harry)

In using the description “fighting for nature” to explain the role of the fishing committee, Harry is positioning himself, and the others in his fishing group, as heroes, fighting for the defenceless nature they help by maintaining and rejuvenating these areas.

Finally, in terms drawing upon a narrative of contributing through giving nature a helping hand, Grace’s construction of her role as a farmer positions her as a helper:

> *They've had one last lamb that they couldn't have had without the inside help and our good food… But I don't feel cruel; I've given them another year if you want*. (Grace)

The quotation above is taken from a part of the interview where Grace is explaining her job as a farmer and I questioned her about her moral feelings towards the work she does as she had previously spoken about animals in a very fond way throughout the interview. By explicitly expressing that she does not feel "cruel" doing this job she is acknowledging that there are others who may think the work is cruel. Grace is sure of her position and explains how without meat eaters these lives would not exist and it is her job to ensure these lives that are there for that purpose are as good as possible.

She goes on to explain that as a farmer she does not feel she is part of nature but separate from it:

> *I don't see us as with it. But we are working with it. I think I see it as a going round, that's the nature, it's a circle or a cycle and I feel like it's going round there and we're on the outside following it, doing things with it…Yeah, following it round. Cleaning up and doing things, when the opportunity arises.* (Grace)

The use of the word "following" in this quotation constructs a picture of the farmer as a smaller, less powerful part of the process. She is there to help it out, "cleaning up" after it. Grace is contributing by giving nature a helping hand whenever she can.

### 5.3.6. People

Other people being part of the development of participants' relationships with nature was another key narrative thread that participants drew upon to create their overall narrative, with only one participant not discussing any of their relationships as part of the development of their relationship with nature. However, the nature of these discussions of other people is quite different between participants. There are two ways in which other people played a role in participants developing relationships with nature. For some participants, other people in their lives had acted as facilitators for their relationship with nature. They discussed the people around them in terms of how they helped to progress their relationship with nature and allowed for that to happen. This does not mean their interaction with these people was not important, but there was no exchange of values and connection with nature from these people. It was not the character of the person they discuss that facilitated the relationship with nature, but the opportunity they created for the participant.

However, for some participants, interaction with specific people was key to the development of their relationship with nature. It was their personal relationship with that specific person that had influenced the way their relationship with nature had developed. The person was not just a means to knowledge, or experiences with nature. Instead they were influential in the way the participants now see the natural world, encouraging or harnessing their relationship at times and passing on their connection with and values around nature.

#### *5.3.6.1. Interaction as important to relationship with nature*

One participant who expresses that her relationship with nature was largely a result of her interaction with her parents was Britteny, as the pronoun poem below demonstrates:

*I think they're the most significant people*

*made me the person I am*

*why I have a certain relationship with nature*

*That's always been their morals*

*And I think it's just the way they've brought me up*

*like what to introduce me to*

Britteny, Pronoun Poem

In discussing "their morals" and how "they've brought" her up, Britteny is explicitly relating her parents' actions to why she has a "certain relationship with nature" today. It was their interaction with Britteny and the things they chose to introduce her to and teach her that Britteny herself believes has influenced her relationship with nature and the way this has developed.

Another participant who discusses the interaction with a parent as being of particular importance to their relationship with nature developing is Grace. Throughout the interview Grace refers back to memories with her father and her brother. She explains how her father's relationship with nature was maintained as a way to counterbalance his work indoors and he would be outdoors in his leisure time wherever possible:

*He's a, he was a metal worker in a factory… So his play time was outside. So I'm not saying he did it just for us, he wanted to be outside. He only worked Monday to Friday, so weekends, weather permitting or nature permitting, you were outside.* (Grace)

She recalls fond memories of joining him in a variety of different activities:

*And it might only be a little walk and washing the car, but he must have been interested in nature, so we often went poking about… we threw a lot of big sticks at trees to get conkers down, it's not all, you know, it wasn't all kind and picking up leaves and looking at [unclear 10.04] on oak leaves, he always wanted to look at different things like that…It's his leisure… Yeah, he didn't like being in a factory. And he loved it, he's a gardener, he actually grows prize winning flowers. He's a flower grower.* (Grace)

When asked whether she believes these were attempts by her father to share his interest in nature, Grace explains how she doesn't believe it was a conscious decision on his part to share these experiences; they enjoyed joining him in what he was enjoying:

*Nope, it's just he was doing it… I mean, he weren't forcing you. He wasn't doing it for us. It's what he wanted to do, but... But we wanted to. Yeah. And they were always quite adventures really,* (Grace)

The use of the word “adventures” here holds connotations of excitement, intrigue and exploring as she explains these were activities they chose to join him in, constructing a positive picture of her childhood with her father. The continuation of these adventures with her own children demonstrates her fondness of these memories:

> *It was something you did with dad. Conkers, and going for tadpoles, she might have come on the Easter egg hunt but she didn’t, you know. And now it’s, I suppose I did it with my children and still do it with my children.* (Grace)

Although this was not her father consciously passing on his interest in nature, the interactions Grace had with her father in joining him on these “adventures” have shaped her intrigue and want to learn about the natural world.

Another participant who directly relates the development of their relationship with nature to their interaction with a member of their family is Max. When beginning the discussion of his river Max talks about early childhood memories with his grandparents:

> *just memories of being a young, walking you know, walking in the countryside with my grandparents to me honest. And then er sort of similar but visiting nature reserves, specifically with my grandparents.* (Max)

When asked about these walks with his grandparents, Max explains how he believes they passed on their interest in the natural world through these walks but it was in

them recognising and harnessing this sparking interest that he developed the relationship he holds with nature today:

> *I'm not too sure on that to be honest. Yeah, I think, I think they wanted to, yeah try and pass that on but then I think they recognised, erm, how much I seemed to enjoy that and appreciate that and so erm, did it more*. (Max)

As well as this section early on in his river about his trips with his grandparents and this harnessing of an interest, Max also included a section on his river about the death of his grandfather. When the discussion came to this part on his river Max became very upset and the interview had to be paused for a few minutes until he felt he could speak about this. When he did then begin to speak of his granddad passing, Max explained how losing such an important person in his life has emphasised how much of an influence he was:

> *So, I guess this really is just kind of just maybe kind of brought home like maybe how important he was in fostering and encouraging that interest. Erm, and, yeah and maybe, yeah, maybe maybe makes me appreciate it even more.* (Max)

Interactions with family, however, were not the only relationship which participants expressed had influenced their relationships with nature. Tanya discussed a variety of other people within her river and another person who Tanya described as having an influence on her relationship with nature because of their interactions was her partner Lisa:

> *…in the first year of high school, I met my now partner, but she was just my friend then... And Lisa was a vegetarian as well. And she was the first other, proper, vegetarian that I had met…she didn't know about things like gelatine and those sorts of things. Erm, so I told her all about that and we sort of bonded I suppose, I don't like that word, but over that sort of thing. And she'd get a lot of stick at school and I'd get a lot of stick at school and we still, became friends based on this*. (Tanya)

They developed a friendship based on their similar values and this shared value system meant that Tanya had someone to strengthen and develop these values alongside. As she explains above, they taught each other things about being vegetarian and helped each other to commit to their values. Their shared experiences of being segregated at school meant that their relationship developed together into a friendship along with their values.

Another example of an influential relationship, which was not family based, is with Shirley's discussion of one of her university lecturers. She explains how while at university she had a lecturer who would take them all on field trips and how she admired his knowledge of his subject area. She also explicitly explains how it was not just simply that he was teaching her these things but it was the passion he held for the subject that made him influential to her developing relationship with nature:

> *…he was a brilliant lecturer and I think he just interested me so much in the natural world…He was really passionate about it, which then, and actually*

*compared to other lecturers at university, who just didn't kind of, have the same passion* (Shirley)

Although her relationship with nature was already developing into a professional one through her choice to study biology, it was this lecturer in particular who sparked her passion for ecology. In explaining how his brilliant teaching and passion for nature "interested me so much in the natural world", a picture is constructed of the lecturer's enthusiasm for his topic being almost contagious, shaping and influencing her as a student.

Finally, Dennis explicitly emphasises the importance of the people he has met in shaping his relationship with nature:

*…all along my life people have come along just as I wanted them to. Because without them, I'd be lost.*

*…I know every moment, of every person that came along and when they did come along.*

(Dennis)

Dennis explained this when he was first asked to think about the most significant people, places, films, books etc which had influenced this relationship. He very quickly focused on making a list of significant people and the dates that he met them. He then further explained how his relationship with nature progressed throughout his

life as he met people with more and more knowledge about the areas he was learning about:

> *So it's a step up that ladder. And, and so it goes on. I did, like we were saying earlier, it's only through knowing these people that you can do these type of things.* (Dennis)

He uses the metaphor of climbing a ladder to describe how other people have influenced his relationship with nature. When had learnt all he could from one person, he was introduced to or found someone else with more knowledge or more specialised knowledge and then learned all he could from them. In this process he is climbing this laddering, developing his understanding. The importance of these people is, once again, emphasised when he explains that it is "only through" these people that he has had the opportunities he has and developed into the person he is today.

#### *5.3.6.2. Facilitators to a relationship with nature*

As mentioned above, another way in which participants discuss the significance of other people in terms of the development of their relationship with nature, is through discussing others as facilitators to their connection with nature. I have made a distinction between this and interactions, as I interpreted that facilitation of a relationship with nature could have come from anybody, it could have been anyone who told them to go outside and play for example. By this I mean that it is not interaction with a specific individual and their personality or likes or dislikes which has guided the participants relationship with nature, but someone who as inadvertently

allowed for the relationships to develop. An example of this can be seen in Kieron's discussion of his parents, in particular in his mother:

> *my parents started me off, erm, sort of taking us out, taking us out and exploring various things when we were children*.
> *she didn't believe in children being stuck in a house all the time when there's, when there's so much to explore. She's very erm, sort of you know, mindset of you should be outside getting fresh air and not being cooped up. And you should be exploring as much as you can, and seeing, you know, the whole cycle of life really.*
> (Kieron)

In the above quotations it is not Kieron's mother's relationship with nature that is being communicated but her values and preferences about how her children play. He does not speak of any occasions where she joined them or of sharing any experiences with her, however, her values about children playing out and "getting fresh air" rather than being inside meant that he was persuaded to develop his relationship with the natural world.

Another participant whose discussion of other people, in terms of their influence on him, focuses largely on their role as facilitators is Tim:

> *my godmother bought me RSPB membership so she er, so there was a magazine coming in, that kept the fire going*. (Tim)

This is an important influence on his relationship with nature as he chose to include it on his RoE. He makes the choice to discuss that it was his godmother who paid for this for him, however, he does not discuss her relationship with nature. It was the magazine membership that he describes as keeping the “fire going” and maintaining his interest in the natural world and she was the person who facilitated that.

Another person who Tim briefly discusses is his father:

> *when I was young, dad used to always take us on walks on a Sunday afternoon*
>
> *my father particularly was keen to tell us and explain things and of course, in those days…I think partly diversion, I mean, what else do you do with kids on a Sunday afternoon when there’s no, no television, you know*. (Tim)

Tim’s father, like Kieron’s mother, encouraged his children to play outdoors. Tim does mention his father explaining things to them, however, he expressed that he thinks this may have been a “diversion”. A picture is constructed of a father who embraced the nature around him to entertain his children. It was not a relationship where there was a communication of values for nature but where intrigue may have been given the opportunity to spark.

As well as friends and family that the participants actually know, a number of participants chose to discuss the influence of people they did not know personally. One such person who came up multiple times in the discussion of participant's childhood was David Attenborough. He was discussed by a variety of different participants in different ways:

> *then when I was a teenager, really important to me was the first David Attenborough programmes, which was 'Life on Earth'…I must have been about thirteen I suppose, twelve or thirteen and I think that was when we watched the whole series as a family and I think that was when I decided I wanted to work in, with nature… 'Cause I just absolutely loved that programme…it was just amazing, and really informative and everything.* (Shirley)

Shirley explicitly states that these documentaries in particular were important to her and the way her relationship developed with nature developed into a professional one. Similarly, Samantha explains how it was also David Attenborough's documentaries that sparked her interest in learning more about the natural world:

> *then, as I was growing up, I was watching David Attenborough with my grandma [laughs]. Pretty much all my growing up… And so like I learnt a bit more of the complex systems, and how nature interacts with itself. And like forests and stuff, where humans aren't as popular. I think David Attenborough made me aware that there was a problem but never to that particular scale. Yeah, pretty much [laughs]. I owe my life [laughs]* (Samantha)

As Samantha explains, it was his documentaries that made her aware that the natural world is facing problems and it is these that she has ultimately gone on to learn more about and try to tackle in her work.

Britteny is another participant who has gone on to work within the area of tackling human effects on the natural world, who also mentioned David Attenborough. She explains how she began watching David Attenborough documentaries with her father and has continued to watch them to this day:

> *…So I think I've just got into that type of mindset where if I see something on, it's like animal rescue or like David Attenborough shows. It's just so interesting to see, like what you were saying, like more animals, like not the ones that you can just keep in your back garden…marine animals and animals in Africa, Lions…and it's just amazing to be able to watch these shows where they can get so close to them and you're actually getting a feel for how they live…*
> (Britteny)

For Britteny these documentaries introduced her to areas of the natural world which intrigued her and allowed her to feel a connection with these, until then, abstract beings.

In all of the descriptions of David Attenborough and other documentary presenters, it is not the presenter's personality or communication of the topic which is discussed. Participants mentioned these presenters as influential, however, this was as

facilitators, as they were introducing the participant to a world which may have been otherwise inaccessible by a child living in the UK who was interested in nature.

## 5.4. Narrative Structure and Narrative Tone

Where the above analysis answers the question about what participants chose to discuss in their narratives, this section aims to explore how participants constructed these narratives. As well as developing narrative threads from the narratives created by participants, the structure and tone of these narratives was also explored through analysis with the listening matrix, as described in Chapter 4. During the second reading of each transcript I read for narrative tone and narrative structure. This meant I was reading the interview with these two aspects of the narrative in mind, which I decided to explore after reading existing materials in narrative analysis such as Sarbin (1986) and McAdams (1993). The following section will focus firstly on the different structures observed within participants' narratives and then will discuss the different tones observed from the interviews.

### 5.4.1. Structure

Three different narrative structures were interpreted by me, as a way to encapsulate the different ways which participants chose to tell their stories. These were stories of "Gradual growth", "One key event" and "Coming back to nature". Narratives which I have categorised as *gradual growth* are stories where participants' relationships with nature have grown in importance in their lives, either through this becoming more

intense or occupying more time in their day to day life. Narratives which took the structure of *one key event* are stories where there was an epiphany type moment in the participant's relationship with nature which saw a change in their connection with the natural world. Finally, narratives which took the structure of *coming back to nature* are stories where participants had some disruptions in developing their relationship at different points in their life, which for various reasons took them away from nature, before reconnecting with nature despite these. In presenting these as narrative structures I am not claiming their existence but offering them as just one way of interpreting the data and revealing something of interest.

#### *5.4.1.1. Gradual Growth*

Participants whose narratives fit in this structure told stories of their relationship with nature developing *gradually* in the sense that many had an accumulation of knowledge or experiences over time. Throughout their life span they had *gradually* built up a relationship with nature through more and more experiences. The term *growth* implies that something has developed into something bigger. Due to an accumulation of knowledge and experience, many participants constructed narratives of their relationship with nature either; expanding in terms of what they were interested in, occupying more time in their day to day lives or growing in importance to them. All participants whose narrative I categorised within this narrative structure have a relationship with nature which is still gradually growing, up until where they were at the time of the interview. No participants spoke of this development as something solely in the past but spoke about recent developments and their current activities.

An example of this narrative structure can be seen in Grace's interview, where a narrative was created through the discussion of many different memories. She began by discussing her childhood, where she discusses year upon year of different experiences she had with the natural world with her brother and father. The accumulation of these childhood memories constructs a picture of her relationship with nature growing *gradually* year after year. She then moves on to speak of her teenage years where you can see the progression of her interest in her choice of joining the young farmers' club and she finally discusses her experiences as a farmer up until the present day. As a farmer Grace discusses how her life is dictated by nature. The work she does day to day and throughout the year is all tied closely to the nature around her; what the weather is like and how the animals are coping. The way Grace discusses memories from each part of her life as having effects on her relationship with nature, constructs a story of a relationship which has *gradually* developed throughout her lifespan with no focus on any particular time in her life. It has *grown* into something which occupies the large majority of her time, as she expresses that as a farmer her life is dictated by the nature around her.

Another participant who constructs a narrative of a gradually growing relationship is Dennis. Dennis speaks of meeting different people throughout his life who have had an effect on how his relationship with nature has developed. As discussed above in the narrative thread *People*, he describes meeting these people and developing his knowledge of nature as climbing a "ladder"; with each person, one after the other, being another step on the ladder to where he is today. This metaphor itself creates an image of Dennis *gradually* climbing this "ladder", with one person at a time, throughout his life, helping him develop his knowledge and understanding the natural

world. His relationship with nature has *grown* into something which he expresses completely “absorbs” him today. His knowledge has *grown* has he has learnt more and more about different species and his passion for nature has *grown* as he has spent more and more time in nature until it is his hobby and profession, encompassing his whole life.

#### *5.4.1.2. One Key Event*

The structure of two of the participants’ narratives was of having one key event in their lives which dominated the discussion of the development of their relationship with nature. It is interesting to note that these two participants both discussed the key event to be during a similar time in their lives, their late teens/early adulthood. Both participants discussed these events as moments of epiphany in their lives. Ansa described her event as an “eye opener” and Samantha discussed how her event gave direction and focus to the way her relationship with nature was to develop from there.

An example of this narrative structure in more detail can be seen when looking at Ansa’s narrative. Ansa chose to only include one event on her RoE. The interview around her RoE did include discussion of some other influences and memories, however it was largely dominated by the effects that a trip to Pakistan in her late teens had had on her.  Ansa’s parents own land in Pakistan and her trip to visit this land meant that she got an insight into the culture in which her parents grew up. Ansa explains how different life is in Pakistan, where people work alongside nature in their day to day lives and how she came to witness this on her trip and see the

natural world in a way she felt she had not seen in western life. As addressed above, Ansa describes this trip as an “eye opener”, showing her the importance of the natural world and sparking a desire in her to reconnect with the natural world.

Samantha’s narrative is also one which I categorised into this narrative structure. She speaks of her relationship with nature as being sparked in childhood, where nature was a source of fun and entertainment to her. However, it isn’t until her trip to Africa during her degree that the current relationship she holds with nature is shaped. On her RoE, Samantha drew a curve much larger than the rest to signify the influence that this trip had on her view of nature. The discussion of her river, therefore, did largely reflect this, as she spoke of this trip and the inspiration she felt after it to pursue a career in helping defend nature. Although Samantha had studied Zoology at university before this trip, she explains how she did so because of being encouraged to go to university and therefore having to find something she would enjoy studying. At the beginning of her studies she had no career goal in mind but was studying the subject due to her enjoyment of nature. She explains how the trip gave her focus and direction and meant her professional relationship with nature was developed.

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#### *5.4.1.3. Coming Back to Nature*

The final form which another two participants’ narratives took was of coming back to nature. These participants told a story where their relationships with nature have developed despite times in their lives where they were distant from nature. Both participants’ narratives follow the structure of having something which has prevented their relationship with nature from developing but then pursuing and connected with

nature despite this. While William's story does not focus upon his distance from nature for very long, he briefly speaks of a time in his teenage years where he had problems with substance abuse which meant that he became disinterested in any of his hobbies and interests. It wasn't until he was past these problems that he began to then rekindle the interest that was sparked in the natural world in his early teens. He creates a narrative which follows the structure of returning to his interest in the natural world and *coming back to nature.*

Carl's story of coming back to nature is somewhat different but follows the same structure in that there are times when he felt distanced from nature and did not have the time to pursue his hobbies. Carl's narrative begins with stories of his childhood experiences where his interest and hobbies were sparked. However, when it got to his working years Carl discusses how he had no time to enjoy his hobbies which included bird watching and walking. He describes his work as "interfering" with his relationship with nature and it wasn't until his late fifties where he had time to join the bird watching clubs again, *coming back* to his interest in nature. At the time of the interview Carl also explains that his health has also been keeping him from pursuing his bird watching at the moment, but he is still trying to pursue his hobbies as best he can.

### 5.4.2. Tone

Finally, in terms of analysis of the interviews around the RoE, the tone of the narratives was also worth some note. As explained in the methods of analysis chapter, the listening which looked at the structure of participants narratives, also considered the tone in which participants were describing their story. In a similar way

to exploring the structure of participant narratives, the tone allows us to explore how participants constructed their narrative.

After listening to all of the interviews for tone I categorised participants' narratives into two types of tone: positive and negative. While McAdams (1993) distinguishes between pessimistic and optimistic narratives, as discussed in Chapter 4, I chose to categorise these as positive and negative.

#### *5.4.2.1. Positive narratives*

Fifteen out of the sixteen participants created positive narratives. There are three different ways that different participants created narratives that leave the listener with a positive image of how their relationship with nature has developed. These are; narratives created by only focusing on positive memories, narratives which give the negative memories in their life a positive light and narratives which give a positive account of how their relationship with nature has developed, while discussing their negative feelings towards the human-nature relationship in wider society.

##### *5.4.2.1.1. Focus on the positive*

Tony's narrative is one which left me with a clearly positive feeling through focusing solely on the positive in the development of his relationship with nature. His story is constructed by fond description of trips, holidays, enjoying his hobbies, learning about different areas the natural world etc. He chose to only speak of positive experiences which have shaped the way his relationship with nature has developed.

There are no times discussed where this relationship is put on hold or damped in any way. This leads to a positive tone being created around his relationship with nature.

Mark is another participant who constructed a narrative with a positive tone by only discussing happy and positive memories. He largely focuses on the development of his knowledge and the success he has achieved in his career as part of his relationship with the natural world. In this way a positive tone is set for his narrative. According to the narrative created, there have been no negative times in the development of his relationship with nature. The positive tone of Mark's narrative was further strengthened with his use of imagery. He discusses how his relationship with nature has "evolved" and how this process has been "organic". These nature related metaphors help to create a picture of a relationship with nature which has faced no problems and developed naturally, without interference.

*5.4.2.1.2. Positive light*

Participants also created positive narratives by casting negative memories or moments in their lives in a positive light, so as to not dampen the tone of the story. One participant who did this was Tanya. As previously discussed, Tanya had been through stages in her relationship with nature that had caused her inner conflict and at times made her feel overwhelmed. However, when she discusses these times, Tanya also discusses active ways she has combated them. For example, after seeing the news story about turkey farming, she quickly became a vegetarian. Also, after feeling overwhelmed by PETA, she became actively involved in campaigning. A positive narrative is created through Tanya's resilience and active approach to her

relationship with nature. Where these experiences may have made some feel helpless and ignored the situation, Tanya chose to tackle the inner conflicts she was facing.

Another way Tanya sets the positive tone of the story is with her use of imagery such as her relationship with nature growing “organically” and her grandfather being an influence by “planting seeds”. The use of these nature related metaphors aid the construction of a narrative of a relationship with nature which has developed in a way she feels is natural to her. It is constructed as a part of her life which has developed in an effortless way.

Ansa is another participant whose narrative does not only include positives but some discussion of times in her life where she has felt disconnected from nature. Where for some people these times could have meant a negative tone was set for the narrative, Ansa’s discussion of how these moments have helped her to reconnect and have been the cause of moments of “enlightenment”, helped to set a positive tone for her story. The use of the word enlightenment helps to create a positive tone as, by definition, it means to gain more understanding or knowledge about a subject. The use of this word to describe this feeling, however, helps to create the positive tone as it connotations of peacefulness, spirituality and fulfilment. Similarly, Shirley discusses memories of negative events as strengthening her relationship with nature. She speaks of fond memories of walking with her father, trips at university and holidays with her husband. However, she does briefly mention her experiences of witnessing the destruction during her travelling as a student. As discussed in the witnessing nature narrative thread, these experiences brought home to Shirley the

realities of the dangers facing the nature world. Shirley's discussion of these experiences as pivotal moments for the development of her relationship with nature, create a positive narrative.

*5.4.2.1.3. Negative discussion separate to story of development*

Two participants constructed narratives which had an overall positive tone, but without omitting negativity from their stories all together. Both Dennis and Samantha created positive narratives, where the story of their relationships with nature developing being one of positivity. However, they both separately discuss their view of wider society's relationship with nature in a very negative light.

While referring to his own relationship with nature Dennis focuses on the fulfilment it brings him, discussing how he is "absorbed" by nature and it is all he is interested in. As previously discussed, Dennis speaks of how he feels people who don't have this level of interest in anything are "missing out". Alongside this narrative of others being unfortunate to not be absorbed, the word "absorbed" creates an image of his life being fulfilled by this interest in nature. He speaks of his "luck" to meet the people he has met who have helped him in developing the knowledge and the relationship he now has and how it is his "purpose" to pass on that knowledge. A positive tone is created where you are left with a feeling that his relationship with nature is valued very highly by him. However, a negative tone is created when he speaks of society's view of and treatment of nature. He acknowledges his place as a human but then distances himself from this detachment from nature by using the third person plural pronoun "they" when he discusses people who don't have a relationship with nature.

This is demonstrated with the pronoun poem below which was created from a section of Dennis' discussion of other people not having the same understanding as he of the natural world;

*it'll be the death of us*

*they don't appreciate what it's all about.*

*But they don't see, all the other things*

*they are living in big concrete jungles*

Dennis, Pronoun Poem

Although Dennis makes clear his distaste for others treatment of nature, Dennis counts himself as part of that society and explains repeatedly how "we", including himself, need to help conserve the natural world. Similarly, Samantha also discusses how others do not appreciate nature, but includes herself in the need to work on this. In discussing these issues in this way, both Dennis and Samantha do not take away from the positive tone of the story of their relationship with nature. They acknowledge it but keep it separate from the development of their relationship.

#### *5.4.2.2. Negative narratives*

Only 1 of the 16 participant's narratives conveyed a negative tone to me as the researcher. Carl constructed a narrative that, although it had discussion of his reconnection with the natural world, I as a researcher was left with the feeling that Carl's relationship with nature was not how we wanted it to be. Nature was something he had an obvious connection with and feeling towards, however, he had

disconnected from nature at different times in his life due to other responsibilities, priorities and at current through no choice of his own due to ill health. In a section of the interview with Carl, he gives a summary of his relationship with nature over his life and in this he focuses on his regrets of spending as much time as he did working. At this stage in the interview Carl has been discussing his river chronologically and has just discussed his time at university. He then explains how since that time in his life “it’s been work interfering” with his relationship with nature. He explains how during his working life “nothing significant happened”.

Despite this tone being created, through his discussion of a stunted relationship with nature, the discussion of his relationship with nature as being something which is still developing means it has not been stunted completely. Carl was one of the only participants who used the imagery of the river not only in the practical sense of making a timeline, but in the way he constructed the story of his relationship with nature developing. Carl’s use of the metaphor to describe his relationship with nature is only present when he spoke of his current relationship with nature. He explains how “that is where I am now, just floating along really”. The use of this metaphor creates an image of Carl’s relationship with nature as being something which is still moving and therefore still developing. He goes on to explain that at the moment although his ill health has been affecting his contact with nature “the river runs on”. This creates a suggestion that, as he has done in the past, he will reconnect with nature and is relationship with nature will still be a part of his life.

## 5.5. Summary

A wide range of issues emerged from this Rivers of Experience task, providing an insight into how participants construct their relationships with nature and the narrative of how these relationships have developed. As discussed above, six different narrative threads were interpreted which participants drew upon and wove together to form overall narratives of developing relationships with nature.

Firstly, in terms of the narrative threads, participants put nature discussed spiritual relationships with nature, where a picture of nature as something which influenced their morals and values and was of bigger than themselves, was created. Within participants' narratives, they also drew upon the narrative thread of contributing towards nature. In this, participants discussed the way their relationships with nature were two-way, giving back to nature as well as gaining things from it for their hobbies. Other people were also a key part of participants' stories, with the discussion of these people allowing for an insight into the different roles people play in aiding relationships with nature.

Alongside this, for the majority of participants, the desire to learn was a key part of driving the development of their relationship with nature with participants discussing their increasing knowledge and the possibilities of learning that nature provides. In relation to experiencing nature, participants drew upon a variety of different ways by which they directly experienced nature, including witnessing as well as hands-on experiences. Finally, the health and well-being benefits linked to nature were drawn upon by a number of participants as an element of why they have developed the relationship with nature they have today.

Although I saw the narratives as belonging to one of three different narrative structures, the majority of participants' narratives followed a structure of gradual growth. Also interesting to note, in terms of structure, the "coming back to nature" structure which was interpreted as being the structure for two of the participant's stories, highlights the possibilities for reconnection with nature.

# Chapter Six

# How participants construe their current relationship with nature

## 6.1. Introduction

As outlined in Chapter 2, the second aim of the research is: to explore how participants construe their current relationship with nature in different forms and settings. This chapter aims to explore the findings related to this second research question. Firstly, qualitative thematic content analysis of participants' constructs was carried out followed by a content analysis of participants' ladders. The analysis of ladders was carried out to further explore whether these ladders had led to superordinate constructs, as outlined in Chapter 4.

This chapter begins by examining themes in participants' current construal of nature and then moves on to look at how constructs are related to each other and to important issues for individual participants, therefore providing a cross both a cross-sectional and an idiographic perspective of the data,

## 6.2. Initial reaction to images of different environments

As described in Chapter 3, before using the seventeen images of different environments to elicit constructs, participants were asked to place the images into piles of the pictures they liked, disliked and felt indifferent towards. This was asked of

participants primarily as a way to make sure the triads could be made up of a variety of images which they felt differently about.

The reactions to each image from all sixteen participants are displayed below in table 4. This table is presented as a concise summary of the spread of reactions to each picture. This also allowed for simple calculations to be made for discussion, including the number of likes expressed overall. A number of these are discussed below and allow for an overview of reactions to the task.

Below this, table 5 displays the images in order of their weighted scores, from the image which was the most favoured to the image least favoured. To produce this, likes were allocated a score of 2, neutral a score of 1 and dislike a score of 0. This process was carried out to provide a visual representation of the most favoured environments to the least and to make the balance of these clear. After these tables, some of the interesting aspects of participants' reactions are discussed.

Table 4. Participants' initial reactions to 17 images shown in the construct elicitation task

| | Likes | Neutral | Dislikes | Unsure |
|---|---|---|---|---|
| Picture 1- Beach: | 12 | 3 | 1 | 0 |
| Picture 2- Antarctic | 13 | 2 | 1 | 0 |
| Picture 3- Wildlife bridge over road | 3 | 6 | 6 | 1 |
| Picture 4- Autumn river and trees | 13 | 3 | 0 | 0 |
| Picture 5- Field of flowers | 11 | 5 | 0 | 0 |
| Picture 6- Corn field | 6 | 6 | 4 | 0 |
| Picture 7- Rainforest with river | 12 | 3 | 1 | 0 |
| Picture 8- Africa | 11 | 4 | 1 | 0 |
| Picture 9- Muddy field | 4 | 6 | 6 | 0 |
| Picture 10- Pavement through park | 7 | 6 | 3 | 0 |
| Picture 11- Playground | 1 | 2 | 13 | 0 |
| Picture 12- Flower garden | 9 | 1 | 6 | 0 |
| Picture 13- Mountains | 11 | 4 | 1 | 0 |
| Picture 14- Desert | 12 | 2 | 2 | 0 |
| Picture 15- Cable car over forest | 8 | 6 | 2 | 0 |
| Picture 16- Rainforest | 13 | 2 | 1 | 0 |
| Picture 17- Open sea | 8 | 2 | 5 | 1 |

Table 5. The participants' reactions to the 17 images, shown in order of their weighted scores.

| Picture | Weighted Score |
|---|---|
| Picture 4- Autumn river and trees | 29 |
| Picture 2- Antarctic | 28 |
| Picture 16- Rainforest | 28 |
| Picture 1- Beach: | 27 |
| Picture 5- Field of flowers | 27 |
| Picture 7- Rainforest with river | 27 |
| Picture 8- Africa | 26 |
| Picture 13- Mountains | 26 |
| Picture 14- Desert | 26 |
| Picture 15- Cable car over forest | 22 |
| Picture 10- Pavement through park | 20 |
| Picture 12- Flower garden | 19 |
| Picture 6- Corn field | 18 |
| Picture 17- Open sea | 18 |
| Picture 9- Muddy field | 14 |
| Picture 3- Wildlife bridge over road | 12 |
| Picture 11- Playground | 4 |

The first thing to note of this task is that one of the sixteen participants, Andrew, felt unable to complete this task at first and instead ordered them from his favourite to the one he liked the least. When confronted with this process Andrew, first of all, looked through the images one by one, adding these all back to the same pile. He then ordered these in terms of his preferences and expressed that he found this task

difficult. As will be discussed later in this chapter, Andrew was one of the participants who engaged with the environments in the pictures in relation to his own personal memories drawing memories from each of the different environments. Andrew explains that as a result of this personal engagement with the environments, even the images he ultimately placed at the bottom of his preference pile, were images he could not express a dislike for. With this in mind, all Andrew's reactions to images were tallied on Table 4 as "likes".

Secondly, the majority of the reactions to the images were positive, with the number of likes overall, 138, equating to more than the neutral and negative responses to the images combined, 116. This is to be expected because participants were faced with a variety of images of, to some extent, "natural" environments. No images which were solely urban or built environments were included in the task. As explained in Chapter 3, this was in order to gain insight into construing of environments with differing degrees of 'nature' in them. For this reason, urban environments with some level of nature were used rather than none at all. As participants were taking part in this research due to their identification of holding relationships with the natural world, it is to be expected that they will hold favourable opinions of nature and therefore largely positive reactions to images of nature are not surprising.

Although, as explained above, no images were solely urban or built environments, seven of the seventeen images were of environments where human impact was evident. The degree of human impact which was evident in the images varied from places where there was an obvious mark left from human impact with manmade materials (for example; the pictures of the playground, the animal bridge over a road,

the cable cars over the rainforest, the pavement through a park and the flower garden which was fenced in) to images of environments where the human impact on the environment was less concrete in the photograph (for example, both the corn field and the muddy field). Although it is clear that these fields are managed and farmed, the lack of any human built structures or manmade materials evident in them makes the human impact a little less overt.

When we look at the reactions to these seven images individually it becomes clear that only one of these seven images, displaying human impact, had more likes than it did dislikes and neutral reactions, and this was the flower garden. Although this image displays a manmade pathway and metal fencing around the garden, it may be that the bright colours and flourishing plant life in the image made it more favourable than the others. This would be supported by the constructs which were elicited from the task, which are discussed in the *Health of Nature* theme. As will be further explored below, the health of the nature in the photographs appears to be a way by which participants construed the images. Similarly, the image of the cable car over a rainforest gained positive reactions, with half of the participants expressing that they liked the picture, as opposed to six participants feeling neutral towards it and only two dislikes. This image again has very clear manmade objects, however thriving plant life below these cable cars, perhaps gives the impression of a healthy environment. This healthy environment again may account for the positive reactions expressed.

Also notable were participants' reaction to the playground image. Only one participant expressed that they liked this photograph, two felt neutral towards it and

the other thirteen disliked it. The one participant who liked this image, however, did place it at the bottom of the pile for his preference within the “like” group. He did not dislike it or feel neutral towards it, but it was his least preferred environment. The two participants who felt neutral towards this image discussed how it was the personal memories of environments like the playground which meant that they didn’t dislike it. Andrew, who was the participant who ordered the images in terms of preference rather than stating whether he liked or disliked them, discussed how he has fond memories of taking his children to environments like this. Therefore, although it is the environment he finds least appealing, it is not somewhere he could say he dislikes.

In terms of the images which did not show evidence of human interaction, these were largely liked by participants. The only one of these images which split opinion in a similar way to the more man influenced environments was that of the open sea. One explanation for this could be found when we look at the constructs elicited. Again, as will be discussed below, the safety and familiarity of the environments were themes in the constructs elicited from the pictures and were important ways in which they constructed they understood and constructed the environments in front of them. None of the participants discussed the open ocean or sea during their rivers or as part of their relationship with nature. It is likely then that their relationship with the ocean is an occasional one and therefore, in relation to this image, the open ocean could be described as an unfamiliar place.

## 6.3. Themes interpreted in participants’ construal of nature

As discussed in Chapter 4, constructs were grouped into eight different themes. As well as these different themes, a number of idiosyncratic themes are briefly discussed. These were themes which came up in only one participant's constructs but were a significant way by which these individuals constructed the environments they were confronted with. There was also a miscellaneous group, where constructs were grouped if they could not be grouped with any others.

This section of the chapter will firstly outline the main eight themes and then go on to explore these each individually, drawing on constructs with were categorised in these themes to support them. However, not all constructs will be discussed in each theme. A full list of each construct in each theme can be found in the Appendix 15. After the main themes are discussed, the idiosyncratic themes will be considered briefly.

The eight themes were labelled as follows;

1. Physical features of environment
2. Level of human touch
3. Health of nature
4. Engagement with environment
5. Familiarity
6. Safety
7. Function
8. Scope

### 6.3.1. Physical features of environment

Firstly, and briefly, thirty-six of the different constructs produced by participants were about the physical aspects or features of the environments shown rather than psychological aspects or reactions to them. At least one construct about the physical features of the environment was elicited from thirteen of the sixteen participants. Interestingly, these were largely the constructs given at the beginning of the task or when first viewing a fresh triad. These distinctions between the physical aspects of the environments shown included;

- The temperature, for example with constructs such as “Cold” versus “Warm”, which was given by four different participants and “Temperate” versus “Polar”, which was given by two participants.
- The colours in the photographs, with constructs such as “Wide range of colour” versus “grey”, “Bland” versus “Colourful” and “Colourful versus “Green”.
- The altitude of the environments, with constructs such as “Flat” versus “Not flat” and “Altitude” versus “Sea Level”.
- And, finally, the type of habitat the environment provides, using constructs such as “Jungle” versus “prairie”, “Oceanic” versus “Coastal” and “Marine” versus “terrestrial”.

Participants often apologised or were hesitant to express these more concrete constructs. However, it would appear that to many participants, looking first at the concrete, physical aspects of the environments in front of them allowed them to consider the environments and what these physical features meant to them,

therefore giving themselves time to think and frame the more psychological constructs in ways which they understood.

### 6.3.2. Level of Human Touch

The “Level of human touch” was the theme which encompassed the most constructs, with seventy-eight different bipolar constructs categorised as being to do with the level of human touch on the environments displayed in the photographs. At least one construct from every participant was categorised into this theme. Multiple constructs in this theme were also repeated by different participants and at different times by the same participant. The constructs categorised into this theme range from constructs which make a clear and concrete distinction between the manmade and natural, to constructs which acknowledge the different quantities and quality of human management of environments, which is why the theme was named *Levels of Human Touch*.

The most widely repeated construct was “Manmade” versus “Natural”, with over half of the participants using this construct. This construct, as well as being used by most participants, was also often used to describe different triads of photographs by the same participant and was in this sense a recurring construct for multiple participants. This suggests that the separation between “manmade” and “natural” is an important distinction to these participants and is a key way by which they perceive the environments around them.

Some of the images which elicited the description “Natural” can be seen below in figure 12;

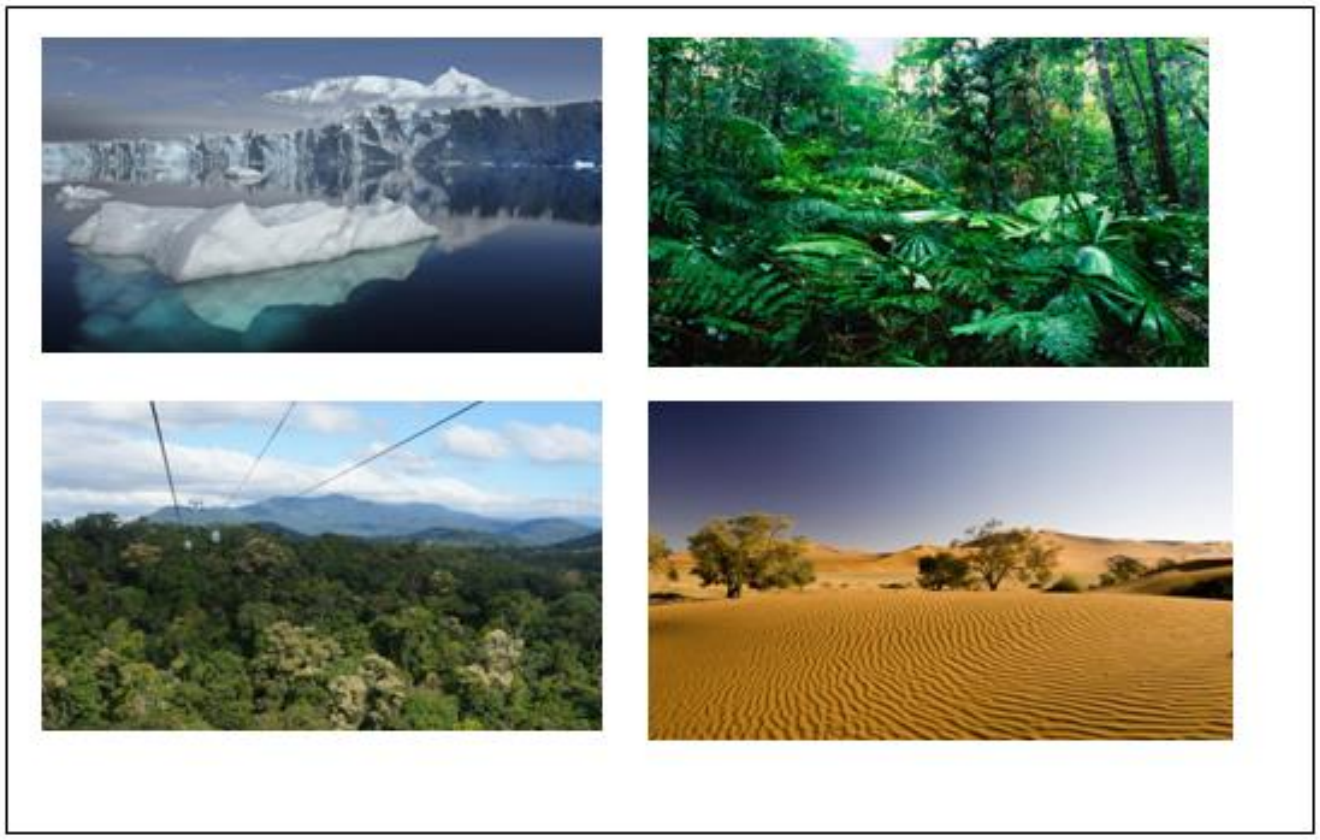


Figure 12. An example of some of the environments described by participants as “Natural”.

The concept “Natural” was something which came up as the emergent pole of many constructs and was given many different opposites. For example, Harry used “Manufactured”, Samantha used “Human”, Andrew used “Created” and Carl and Dennis used “Unnatural”. Where “Manufactured”, “Created” and “Unnatural” are all words which infer human activity, Samantha’s use of “Human” as the contrast to “Natural” reflects the disdain for human activity towards nature she shows developing throughout her river. As discussed in the ‘Witnessing Nature’ and A spiritual relationship with nature’ narrative threads, Samantha’s relationship with

nature involves holding it in high respect, as something different and separate from humans. Samantha built a positive relationship with the natural world and then through the experiences she has had of human neglect and disregard of the natural world around them, she has made a distinction and now perceives the world around her through this distinction. The human world and nature are things which Samantha sees as separate, and in turn she sees herself as something separate to the nature she holds in such high regard.

While the constructs listed above may have some negativity around them when the interview data is listened to, the constructs themselves convey a neutral feeling towards the level of human impact on the environments. The words chosen for the construct imply nothing about the participant's feelings towards this distinction. The words used as contrasts to "Natural" above, hold both connotations and denotations of some level of human activity, however, are not directly negative words. However, other participants used words portraying definite negative feelings towards the pictures they perceive to have higher levels of human impact and on the manmade end of the construct. An example of some of the images which were described using words with negative connotations due to the impact of man can be seen in Figure 13;

Figure 13. Images which were described by participants using words with definitive negative meaning.

Kieron, for example, gave the construct “Spoilt” versus “Unadulterated” when asked to explore the images he liked, disliked and was indifferent to. He explained how he had categorised both the picture of the wildlife bridge over the road and the picture of the playground as images he didn’t like and the reason he didn’t like them is because he thinks they have been “Spoilt”. When he is explaining his reaction to the wildlife bridge over the road in particular, Kieron explains;

> *You can see the nice green landscape and then it’s just got a road through the middle of it. Which I suppose, that spoils it in a way* (Kieron, Gardener)

When demonstrating the contrast to a “Spoilt” environment, Kieron refers to an image of a green landscape which he believes has not been spoiled, the rainforest. He explains how this image is “Unadulterated” and has not been “interfered with”. He goes on to say how “it’s been left to be natural and do its own thing”. Here Kieron’s construct by which he perceives the natural environments casts high human impact, such as a road and a playground, as spoiling the environments.

Similarly, Tanya used the construct “Spoilt” versus “Unspoilt” and Tony used the construct “Spoilt by man” versus “Unspoilt”, where they were describing the corn field photograph and the image of the wildlife bridge over a road respectively, using the “Spoilt” pole of the construct. It could be argued that these images both display definite human impact. Although the image of the corn field has no clear evidence of manmade materials like the image of the road, when viewed in a triad with a picture of a field filled with wild flowers and a picture of a rainforest, the use of the land for farming corn is made clear to Tanya. This suggests that the environment does not have to include explicit human materials for the human impact on the environment to be noticed in a negative way. When Tony viewed the picture of the mountain and the picture of the muddy field alongside the picture of the road, the heavy human impact of a road was emphasised and the negative feelings towards this impact were emphasised. When this construct was further explored through laddering the direct link between the term “Spoiled” and human impact is made. When Tony was asked why he holds a preference for “Unspoiled” environments he explained that this is because they are “Natural” as opposed to “Spoilt” environments which are “Impaired” because they are “not in their natural form”.

Another participant who expressed his distaste for the human touch on some images directly through his construct was Harry. Harry used the construct “Aftermath of human interaction” versus “As it should be or has been”. The emergent pole of this construct was the “aftermath of human interaction” and described the muddy field and playground images. The use of the word “aftermath” here creates a negative view of the human impact in these photographs as the word is usually used to describe the results left behind by natural disasters or war. The use of the phrase “As it should be” to then describe the image he believes is different from these, the image of the African plains, again reinforces this negativity towards the human impact in the photographs. “As it should be” is not just a value judgement of the environment in the picture but a statement of morality. It creates a construct pole where the opposite end is not just an opposite but is morally wrong. By suggesting that the images defined by him as not having clear human interaction are “as it should be”, he is implying that humans interacting with and leaving an impact on the natural environment is as it should not be.

In a similar way Britteny’s construct “Real nature” versus “Over farmed”, leaves an impression that the nature people interact with through farming is not “real nature”. Britteny describes the picture of the cable cars over the rainforest and the river running through a rainforest as “real nature” as opposed to the picture of the muddy field, where she explains the over-farming has meant that there are no “natural places for animals” left. The high impact that humans have had on nature in this case means she now perceives this muddy field to be somewhere where nature no longer is surviving and therefore is not “real” nature in her mind.

This issue, whether nature was considered “real” or not because of the human impact on it, was something which was also evident for Andrew. When Andrew’s construct “Natural” versus “Created” was explored further through laddering, he explained that he held a preference for the “Natural” environments as they are “Real”, in contrast to “Created” environments which are “Artificial”. In this bipolar construct Andrew is expressing his view that places like the corn field and the playground area which were described by him originally as created, are not “real” nature”. This suggests that Andrew believes that when humans decided where nature is or use it for human consumption then it is somehow not classed as nature anymore.  This process also allowed for Andrew to explain that “Natural” and “Real” environments allowed him to “keep in touch with roots”.

As well as a clear distinction between an environment resulting from human impact or being natural in the above constructs, many participants also gave constructs which acknowledged the concept of management of natural areas. An example can be seen with Tony’s construct “Managed sensitively” versus “Badly managed” which addresses the quality of the management of nature. This construct was elicited through the images of a muddy field, the road with a wildlife bridge and the mountains. The first construct elicited by this triad was “Spoilt by man” versus “Unspoilt”, and the distinction between the road as “Spoilt” and the mountains as “Unspoilt” were made very clear by him. However, it was when he began to consider the muddy field picture where Tony began to make a distinction between the levels of management in nature. He expressed how, although all three of the images he had been confronted with have some level of human impact, some have been

“bastardised” where others have been “managed sympathetically”. In using the word “sensitively” to describe the opposite of “badly” in the construct, Tony is not supporting the management of the environment in these pictures but is acknowledging management’s place in the environment and appreciating the care with which it was conducted.

Finally, in terms of constructs addressing the level of human impact on an environment, Shirley’s use of the construct “Manicured wilderness” versus “Truly wild wilderness” reflects her love of the wild. This love of the “Wild” is something which she discusses in some depth in her RoE, explaining how her and her partner enjoy going to wild places recreationally, and the growth of this love for the wild throughout her life is made clear. Her love of the wild is also reflected in the way she uses neutral words to describe the different types of wilderness she construes in these pictures. She is simply stating that, to her, there are different levels of wilderness. This construct further addresses the *levels of human impact* we have on different environments, including wild areas. Where some people may look at areas on mountains, for example, and see wilderness, Shirley sees human impact in the smallest details, for example, the signposting or paving to help others climb, which others may overlook in such environments as it provides them with their own contact with the wilderness. As part of her travels and her job, Shirley has visited hard-to-reach places which, other than for research studies, have been left largely untouched. These are experiences which have shaped the constructs by which she views other environments, including this one.

### 6.3.3. Health of Nature

The health of the nature in the photographs was the second most popular theme, with thirty-seven different constructs categorised as addressing this. Eleven out of the sixteen participants addressed the health of nature with at least one of their constructs. Constructs were categorised into this theme if they addressed how healthy the environments were, whether that be directly through referring to "Healthy" or through discussion of state of the plant/animal life, or lack thereof. Another way by which participants addressed the health of the nature in the photographs was through discussion of the environments in the picture in terms of their use as habitats, even though images were specifically chosen to have no human or wildlife present.

A construct elicited from Tanya which is a very clear example of this theme is the construct "Injured" versus "Healthy". Where "Injured" was used to describe the muddy field picture, "Healthy" was used to describe the river running through a rainforest and the cable car over the rainforest. Interestingly, both the cable car in the forest and muddy field pictures show some element of human contact but were categorised differently. She explains how the muddy field looks to her to be "churned up", whereas the rainforest pictures show an environment where "everything is green and everything's living". The "healthy" environments are places therefore where the nature is thriving and the environment is full of life, in contrast to the "injured" places which lack that life. The use of the phrase "churned up" constructs an image of an environment where life is not thriving due to the act humans have had on it, churning it up. Life has not just stopped thriving there but has been damaged.

One participant whose constructs around the health of nature in the photograph also seemed to be focused on the plant-life in the pictures was Kieron. Kieron's constructs "lush, green and fertile" versus "barren", "thriving greenery" versus "struggling" and "flourishing" versus "barren" all relate to the plant life in the images. Although Kieron did acknowledge the possibility of life in photographs like the Antarctic and the mountains, emerging constructs surrounding the life in the picture were largely sparked by the images including greenery and flowers. The images which he relates to the "barren" and "struggling" sides of the constructs are usually the pictures without these. When viewing the image of the Antarctic, Kieron gives the construct "lush, green and fertile" versus "barren" and explains the barren end of the construct by pointing out "there is no plant-life there is there… there is no greenery is there, there is just ice and water". Constructing natural environments in this way could be seen as a reflection of his professional role as a gardener. This is further demonstrated when these constructs are explored through laddering. When the construct "Flourishing" versus "Barren" was laddered, Kieron explained that he holds a preference for "Flourishing" environments. When asked why this is he gives the reasoning that these environments are or have "perfect/ideal conditions" for growth and life.  As someone who works with and understands the conditions for plants to grow this is reflected in the way he is constructing these environments. His day to day experiences with the natural world largely consist of working hands-on with plant life and he discusses throughout both his RoE task and construct elicitation task, that this involves observing the cycles of life. His definition of nature at the very beginning of his interview outlines this view;

> *Nature to me is the, sort of the changing of the seasons really, predominantly, and erm sort of the growth of plants and the different lifecycles of plants and insects and predators and things like that really. That's the whole thing with gardening* (Kieron, Gardener)

This quotation taken from the task shows how Kieron himself makes this connection quite clearly. He explicitly explains that his relationship with the natural world, and the way he sees the natural world, are influenced by the job he does.

As outlined at the beginning of this theme, some participants address the usefulness of the environments as habitats for wildlife as one aspect of the health of nature. William is one participant whose constructs address this. William's discussion of the environments in the photographs as "Wildlife friendly and species rich" versus "Species poor", "Wildlife friendly" versus "Barren", an "Ecological desert" versus "Interesting wildlife" and "Ecological diversity" versus "Monoculture", reflects his professional role as a habitat surveyor in a similar way to how Kieron's constructs reflect his own profession. He speaks of the "habitat connectivity" in the images and explains how these are what he "thinks about first" when he sees natural settings. Similarly, Dennis and Shirley, as ecologists, also see the different environments in relation to the potential life or lack of in the images giving constructs such as "Habitat destruction" versus "Natures maintained" and "Biodiversity hotspot" versus "Monoculture". Shirley gave a number of different constructs which addressed the usefulness of the environments in terms of providing a habitat for wildlife and this was something she also noticed as she laughed and explained;

*I'm looking at it completely as an ecologist aren't I?...For me those are the differences I would see.* (Shirley, Ecologist)

It is clear that Shirley, like Kieron, was aware that her profession meant that she viewed the environments she was confronted with in relation to this before other aspects. As may be predicted from someone working as an ecologist to make habitats liveable and ensure their survival, the health of the nature in the photographs was something which came up further through laddering of other constructs. When the construct "Natural Ecosystem" versus "Constructed Habitat" was further explored Shirley expressed that she holds a preference for "Natural ecosystems" because they "provide balance" in nature and are "rich in species". In contrast to "Constructed Habitats" which are "poor environments" which have "fewer species". It could be suggested that in this laddering process Shirley is showing that the health of the nature is important to her core values. It is guiding the other constructs she uses to construe an environment. Whether these can be said to be superordinate is something which is later discussed in Chapter 6.

The different constructs quoted above all address the health of nature by considering whether the environments are able to sustain life. The use of the word "barren" in particular as the opposite to wildlife friendly, offers denotations of a lifeless place, where things cannot and do not survive. The phrases "species poor" and "ecological desert" further construct unhealthy opposites to the places where life and species thrive.

Interestingly, it was not only participants working professionally hands on with nature whose constructs addressed the health of nature and showed concern for this in looking at different environments. Tanya and Ansa, who both do not pursue a professional relationship with the natural world gave the constructs “Less fertile” versus “Rich” and “Fertile” versus “Less fertile” respectively. This may suggest that they see the natural environments around them as offering a lifeline to them. Both Tanya and Ansa spoke of being thankful to nature for the food it offers during their RoE task. Ansa spoke at length about how, as a Muslim, she holds strong values about being grateful for the food she is provided with and how wasting food is something she is strongly against. In a similar way, Tanya is very mindful of the food she eats and its effects on the nature around her and speaks about this and internal struggles about veganism. When Ansa’s construct “Fertile” versus “Less Fertile” was laddered, her beliefs about nature as a source of life and food source are further explored. She outlined her preference for “fertile” environments and expressed that this was due to the ability they provide to grow food and provide “sustenance”. This demonstrates how Ansa is using these beliefs to construe the environments she is faced with.

Tony also gave a variety of different constructs to do with the health of nature when given the first triad of images to compare. When looking at the pictures of the field of flowers, the flower garden and the open sea, the constructs “Flourishing” versus “Withering” “Variety in nature” versus “Mundaneness”, “Life-cycles” versus “Barren”, “Hope and recreation” versus “Despair” and “Future” versus “Hopelessness” were elicited. Although Tony gave the emerging poles of these constructs quite quickly for the pictures of the flower garden and the field of flowers, there was some struggle

over the contrasting poles. He mentioned, but was reluctant to use, words such as “dying” as he explained that the picture of the open sea was not necessarily the opposite of the poles provoked by the other pictures. He explained that he understood that under the surface of the sea in the picture there would be masses of life, however, the format of that picture was not “inspiring” to him. However, opposing poles were given and it was clear that both the pictures including the flowers portrayed life and positivity to him and these constructs about the health and life in the pictures was a large part of the way he constructs the environments around him.

### 6.3.4. Engagement with the environment

Participants engaged with the environments in the photographs on a variety of different levels, including observing how aesthetically pleasing the environments are, how stimulating they are for the mind and also how they can personally engage with memories they have of similar environments. These are explained and discussed below.

#### *6.3.4.1 Aesthetic Appeal*

Twenty different constructs were elicited from participants which were about participants’ reactions to the aesthetics of the environments in the photographs. Constructs which addressed this were elicited from nine of the sixteen participants. One aspect of this was with participants’ constructs which addressed the beauty or lack thereof in the pictures. Some examples of this can be seen in the following constructs which, while using different words, address the contrast between beautiful

environments and sameness. Dennis used the construct “Beautiful” versus “Bland”, Andrew the construct “Postcard Beauty” versus “Everyday” and Harry the construct “Rural Beauty” versus “Can see every day”. Here the terms “Bland”, “Everyday” and “can see every day” are used as opposites to different types of beauty. Interestingly, participants did not use the words’ antonyms to describe the contrast to beauty, for example ugly, but used words instead which did not take away from the beauty of these opposites. In using words which addressed the availability of these environments in their everyday lives, participants constructed a view of the natural world where less familiar environments are aesthetically more attractive than familiar ones. Following this, it may be that part of the beauty of the natural world, to these participants, is its novelty. There is some overlap here with the familiarity theme, however, where the constructs listed above clearly make a statement about the beauty of the environments as the emerging poles and the familiarity of them as a contrast, they were categorised into this theme.

Another contrast which was made around the beauty of the environments was the manmade or natural qualities of the environments. Tanya used the construct “Constructed beauty” versus “Untouched” and Andrew used the construct “Manmade beauty” versus “Natural Beauty”. This is something also considered by Harry when his construct “Natural” versus “Manmade” was laddered.

Finally, the aesthetic appeal of the environments was also addressed by a number of participants with constructs relating to their engagement with their perception of that environment: for example, Kieron’s construct “Not appealing” versus “Appealing” and Tony’s construct “Inviting” versus “Off putting”. These constructs address

participants' feelings about the aesthetic appeal of the environments. They go further then labelling a place as beautiful or not by expressing whether these environments are places they would visit themselves. To illustrate this, I can find a place beautiful and still not be personally drawn to that environment or want to visit it. These constructs show a personal engagement with the appeal of the environment judged by the way they look.

#### *6.3.4.2. Mentally Stimulating*

Nineteen different constructs addressed participants' mental engagement with the environment in the picture; did they find it mentally stimulating and engaging or not? Constructs which addressed this were elicited from fourteen of the sixteen participants. One way by which participants discussed this is with reference to whether the environments were "Interesting" or not. When the constructs using the words "Interesting" for one end of the pole are viewed together it is intriguing to see the variety of words used as the contrasting pole. For example, William uses the word "Bland", and Tim the phrases "Boring" and "No interest". In these examples, both William and Tim create similar constructs addressing whether the environments are mentally stimulating versus the not stimulating. Similarly, Harry gives the word "Everyday" as his opposite to the "Interesting" environments. Although this addresses the mentally stimulating nature of the environments, the use of the word "Everyday" links this to familiarity for him. It implies that it is the familiar which is not of interest to Harry.

Britteny's construct using the concept of interesting was notably different from the other participants. Where others gave definitional opposites, which were around the environments being not stimulating, Britteny used the word "Dangerous", creating the bipolar construct "Dangerous" versus "Interesting". This construct was elicited by the triad including images of the rainforest from the ground, the open sea and the mountains. The emerging pole of the construct was the description of the rainforest image as an "Interesting" environment. This construct was elicited after some discussion of the images as places she would like to go and see. When asked to further explain this she explained that it was due to the rainforest looking "interesting", as opposed to the mountains and open sea which looked "dangerous". She explained how the rainforest could also be dangerous to some degree, however, her initial feelings towards this image was intrigue and interest rather than her initial reactions to the others being of danger. This construct also emerged after the laddering task, when the construct "Inhabited" versus "Uninhabited" was further explored. Britteny chose her preferred pole of the construct to be inhabited. She explained that inhabited areas meant human life and also animal life which to her is interesting, as opposed to uninhabited environments which are "real nature" and "Dangerous". This is a surprising outcome as Britteny discussed "Real Nature" throughout her RoE and expressed that human interference is a bad thing, which would suggest she would prefer environments where this is evident. Although her preference was given to the "natural" over the "manmade" in other constructs, it would appear that to Britteny, some level of human life and interaction is needed to make places feel safe.

As well as “Interesting” being an idea used by a number of participants to express the mentally stimulating nature of the photographs, so was “Exciting”. Participants addressed the different environments’ abilities to hold and absorb our attention with their discussion of interest, however, the excitement-inducing nature of the environment was also a way by which participant distinguished between photographs, for example, Carl’s construct “Dull” versus “Exciting”, Tanya’s construct “Exciting” versus “Mundane” and Kieron’s construct “Boring” versus “Exciting”. The contrasting poles “Dull”, “Mundane” and “Boring” all refer to the lack of mental or emotional stimulation that the environment elicits. Tanya’s construct addressing excitement was elicited through the triad of images including a cable car over a rainforest, a river running through a rainforest and the muddy field. When explaining the separation of these photographs in this way Tanya links the images that she finds “exciting” to being places which are “exotic” and explains that the muddy field is an image “I had my whole childhood”. The word “Mundane” as the opposite to “Exciting” reinforces this as it has denotations of familiarity. Like Harry’s interest being tied to his familiarity with an environment, as discussed above, this construct and her explanation of the construct suggests the same of Tanya.

Some of the other constructs which addressed whether the environment was mentally engaging to participants involved exploration and inspiration. An example of some of these constructs include Max’s “Exploring” versus “Restricted”, Shirley’s “Exploration” versus “Sterile”, Grace’s “Things to explore” versus “Nothing to do” and Dennis’ “Find things to” versus “Nothing to inspire self” (Dennis is referring here to finding wildlife and different species). Each of the participants who gave constructs referring to exploring were people who held a very active relationship with nature

throughout their lives, as they describe in their RoE. This is an example of where it is clear how participants' experiences throughout their lives have influenced the way they currently construct nature, both in the pictures and in the world around them. Those who spoke of being hands-on with the natural world, throughout their RoE, look for and construct the environments around them in terms of whether it provides that opportunity for more hands-on experiences and exploration.

The construct "Rewarding" versus "Crap" is another construct categorised within this theme and in this particular sub theme. Although it does not, on the face of it, fit within this category, the construct was elicited after the construct "No diversity of species" versus "Biodiverse", where Dennis began to speak of his preference for environments which are biodiverse. He then went on to describe the picture of the cable car over the rainforest as;

> *rewarding from my point of view, from a natural historian's point of view it'll be rewarding… to visit, whereas the field [muddy field image] wouldn't* (Dennis, Natural Historian and Ecologist)

Here, Dennis is not expressing that the image itself is rewarding to look at, but that the environment in the image would be rewarding to "visit". As he explains, it is the natural historian within him that would find that environment mentally stimulating and "Rewarding" as it is a biodiverse environment. Although it portrays similar mental engagement with the environments as the constructs above do, it also develops on these by exploring what feelings the interesting environments evoke in him. If an environment is described as "rewarding", it is more than just a pleasant feeling from

experiencing that environment. The word “rewarding” holds connotations of fulfilment. Furthermore, the use of the word “Crap” as the contrasting pole not only dismisses the interest of the environment but condemns it. This construct suggests that Dennis constructs the environments around him in terms of what they can offer him in terms of his interest and therefore ultimately his fulfilment.

#### *6.3.4.3. Personal Attachment to the environment*

Finally, in terms of engagement with the environments, two participants gave constructs which showed their engagement with the environments on a biographical level, discussing the memories which the picture invoked and expressing how this is one way by which they could distinguish between the environments shown. These constructs were clearly to do with some level of engagement with the environments and did not sit within mental engagement or engagement with the aesthetic appeal of the environment, so were grouped together separately.

One participant who engaged with the environments with their personal memories was Andrew. When Andrew was given the triad of images; playground, cable car over rainforest and corn field, the construct “Personal memories and enjoyment” versus “don’t do anything for memories” was elicited. The emergent pole of the construct was “Personal memories and enjoyment”, which was used to describe the playground, as opposed to the images of the corn field and cable car over the forest which offered no memories and “don’t do anything for memories” for Andrew. Here Andrew is clearly expressing how his personal experiences within similar environments to those shown in the pictures affect his current construction of similar

environments. He is engaging with these environments in relation to his own personal connection and memories, recalling these as he views the images. Andrew was the participant who struggled to put the photographs into piles of 'like', 'dislike' and 'neutral' and instead put them into an order according to how appealing he found them. He struggled to make a clear distinction between images he liked and disliked. His personal memories, of environments similar to those in the photographs, brought with them emotional responses to the photographs. He therefore expressed that he could not say he disliked any of them and instead ordered them all in a pile of how much he liked them. After looking through the photographs he explained "firstly, there is none I don't like" and continued to order them and then explained "that is a rough order, in terms of preference". In this order, the playground image was placed at the bottom of the pile. He explains this decision as follows;

> *I may not like it as such, but every one triggers a memory, or a meaning. Every one of those…Something like that one* [holding the playground image up]*, might not be nature, but that one says grandchildren to me. And you can't even be, you can't even be indifferent to it, can you? Well I can't.* (Andrew, Bird watcher)

When this construct was then elicited from the images including the playground, Andrew explained that the playground was the obviously different image. He said this was because of the "personal feelings" of "the enjoyment with children and grandchildren" that this image evoked straight away.

Another participant who engaged with some of the environments through their personal memories of similar places was Britteny. When Britteny was faced with the triad of images including the field of flowers, the pavement through a park and the flower garden, the construct “Memories” versus “No attachment” was elicited, with the pavement through a park being the image which evoked memories. Britteny explained that her initial reaction to the image of the park was that she liked it “because it reminded me of Vienna”. The other images may have been of similar environments to what she has seen before as well, but the park image evokes a “stronger memory” for her of a “big part of my life when I was away”. Like Andrew, Britteny is expressing how she is directly constructing these environments in terms of the personal memories and experiences she holds. Not only is there the memory which this environment evokes, but this environment has been constructed as a place which evokes memories.

Where personal construct psychology would argue that previous personal experiences are how we perceive all new experiences and environments we face, this is usually in a much more implicit and subtle way. For example, my lack of experiences in arctic environments shapes the way I perceive the image of the arctic. My lack of experience leads me to describe the image as dangerous. For these participants however, this is a way by which they construct the environments, as places they have sentimental memories in or not. They are choosing to foreground their experiences.

### 6.3.5. Familiarity

Twenty-three different constructs addressed the familiarity of the environments in the pictures. At least one construct addressing this was elicited from twelve of the sixteen participants. Within this theme, participants used constructs which directly address the familiarity of an environment to them personally, whilst others used more concrete constructs about the places in the photographs. Finally, there is some discussion of other interesting contrasting poles to the idea of familiar.

The majority of the constructs around familiarity address this on a Familiar versus Unfamiliar dichotomy, only using different variations in the wording they use. For example, Ansa's constructs "Not familiar" versus "Familiar" and "Normal" versus "Not encounter", Tanya's "Alien" versus "Familiar" and Tim's "Different" versus "Common Place". These constructs directly address whether the environments are familiar to the participant personally or not. Ansa's construct "Normal" versus "Not encounter" was elicited from a triad of images including the field of flowers, the playground and the desert. The word "Normal" was the emergent pole and Ansa used this to describe the playground and field of flowers. She explained how these environments were places which were "more typical to what I'm used to", whereas the desert image is somewhere "not normal…not somewhere I would encounter". Similarly, both Tim and Tanya also described the images of environments not in this country as unfamiliar in different ways. Tim's "Different" was used to describe the rainforest and Tanya's "Alien" was used to describe the desert and African plains. People's familiarity with a type of place, or lack thereof, is a way by which some participants construct the world around them. Environments, whether people have been to them

exact places or not, are constructed according to whether they are familiar or unfamiliar.

The pictures which were labelled as “Familiar”, “Common Place” and “Normal” include;

Figure 14. Images which were described by participants as familiar.

Another more concrete way by which this was addressed was in giving constructs which referred to places or regions. Some examples of these include Ansa’s “Western” versus “Exotic”, Andrew’s “English” versus “Foreign”, Britteny’s “England” versus “Not England” and William’s “Local” versus “Foreign”. As all participants discussed their lives growing up in England, England to them is familiar. The pictures which were labelled as “Local”, “England” and “Western” are as follows;

Figure 15. Images which were described by participants as “Local” or “England”

As can be seen in the figures, many of the environments which were described by participants as “familiar” are also the environments which are described as “local” or “England”. As participants were recruited somewhat locally and discussed their upbringing in different places around the UK, it is not a surprise that the images which they described as familiar are ones which are perceived to be in the UK.

Two participants who gave similar terms as their contrasts to familiar were Max and Tony. While Tony gave the construct “Familiarity” versus “Awe-inspiring”, Max gave the construct “Intriguing” versus “Familiar”. Where the other constructs, discussed above, include the antonyms of familiar and more concrete opposites, these participants give contrasts to familiar which are much more personal to them. They create a construct between the known and the interest created by the unknown.

When Tony was asked to give a contrast to the emerging pole of “Familiar” he laughed and then expressed that “familiarity breeds contempt, as they say”. In expressing this Tony implies that a familiar environment may be somewhere which he primarily finds uninspiring, in contrast to the “Awe-inspiring” environments. The word contempt holds connotations of worthlessness and constructs a position here where Tony is not interested in the familiar. His use of this phrase would suggest some level of identification with it. However, by using this phrase and then quickly explaining “as they say”, Tony is not making a personal statement but is instead using a common phrase to distance himself from condemning the familiar. This would be in line with Tony’s RoE, where he discusses how he has travelled to different places since he was a teenager and still enjoys doing so. The distancing from the personal “contempt” of familiar places is also something to be expected from his RoE, he discusses local areas and his home as places he is very fond of, therefore he would not dismiss these as places he does not enjoy entirely.

Max’s construct, “Intriguing” versus “Familiar” also creates a similar dichotomy. In using the word “Intriguing” to describe the contrast to “Familiar” a contrast is made between the two and the environment being viewed is constructed as either “Familiar” or “Intriguing” and cannot be both. Like Tony’s construct discussed above, this constructs an image of the “Familiar” as uninteresting and not intriguing.

### 6.3.6. Safety

Nine different constructs were about the safety of the environments in the pictures. At least one construct addressing this was elicited from seven of the sixteen participants. Within this theme, participants both directly and indirectly addressed safety in the wording of their constructs.

Two participants who directly mentioned safety in their constructs were Tim and Dennis. Tim gave the construct “Hostile” versus “Safe” and Dennis the construct “Challenging” versus “Safe”. Tim gave the description of “Hostile” to the picture of the wildlife bridge over a road and Dennis gave the description of “Challenging” to the picture of the arctic. Where the opposite to “Safe”, on a purely definitional basis, is for somewhere to be unsafe or dangerous, both these participants perceived the opposite to not be places of danger but places which could be described as difficult in different ways. Although Tim does not specifically address the term hostile in reference to the road, he does explain that safety is to do with the other environments being controlled, therefore suggesting it is a lack of control which makes the picture of the road “Hostile”. When Dennis described the desert picture as “challenging”, he explicitly states that the opposite for him would not be dangerous, but rather places where “you need to take precautions against the elements”.

Another construct elicited by the same triad for Dennis, which also addresses the safety of the environment in the pictures is “Relaxing” versus “Somewhere you need to protect yourself”. “Relaxing” was used to describe the desert image, while the arctic is “somewhere you need to protect yourself”. This construct reflects Dennis’s respect for the natural world which he discusses throughout his RoE. The use of the

word “protect” here creates an image of the potential unpleasantness from the nature in these environments which one would need to “protect” oneself from. Here Dennis is speaking specifically about the arctic image, where he explains he would feel he needed to “protect” himself from “the elements”, as opposed to the image of the desert, where he explains this protection is not needed as he would find an environment like this relaxing and explains “you are safe” here. He then recalls a memory of visiting desert environments to ring birds when he was younger. It could be suggested that his familiarity which prompts this memory shapes the way he perceives this as a safe place.

A similar construct which addresses the safety of the environments in the images came from Tanya with “Peaceful” versus “Foreboding”. Interestingly, the triad of images which elicited “Peaceful” versus “Foreboding” for Tanya was the mountains, desert and the open sea. As discussed above, the desert and mountain images were ones which had described by others as “challenging”, “hostile” and “somewhere you need to protect yourself”, however, Tanya chose the word “Peaceful” to describe these. She suggests that in comparison to the image of the open sea, these environments look “serene”. Whereas the open sea image;

> *looks like there might be a storm, and everything might change, you know, quite quickly…it doesn’t look angry or anything like that, but it just looks as though, looks a bit foreboding, like something’s going to happen* (Tanya, Animal rights activist)

This quote from the interview, where Tanya is explaining this construct, supports the idea that it is the uncertainty of the environment in the image which has led to this construct. It is the idea that the environment in the picture is somewhere where anything could happen which leads Tanya to use the word “foreboding”. The word “Foreboding” holds connotations of a sense of fear or anxiety around uncertainty, in the same way that surprising or exciting holds connotations of happiness and excitement around uncertainty. It could be suggested therefore that the environment which is described as “foreboding”, the open sea, invokes these feelings of fear in Tanya and therefore reflects some level of concern for the safety of the environment.

Another interesting construct which was categorised into this theme was “Inviting” versus “To be respected” which was elicited from Tony from the images of the beach, the river running through autumnal forest and the open sea. When the emerging pole of this construct “Inviting” was elicited, for the beach and the river, Tony originally gave the opposite pole “Off-putting” for the image of the open sea. He explained how this is “odd” as he “loves the sea” but would not want to swim in the sea in this image. When he then considers this alongside the image of the beach he discusses how the sea in the beach image is “tempting you in”, whereas the open sea “is saying danger” to him. Here the topic is changing from the aesthetic appeal of the environment in the picture, to a concern for safety. Throughout his RoE, Tony spoke of nature as something powerful and bigger than himself and this is developed through his reminiscing upon childhood memories where he was reminded of nature’s power. One particular memory which demonstrates this is of rock pooling on holiday with his father. He explains how when out on the rocks it is important to understand and be aware of the tides and the danger they pose. His

acknowledgment of this danger and his respect for the power of the nature demonstrates his regard for his own safety.

### 6.3.7. Function

Participants gave 14 different constructs which addressed the functionality of the environments, separating the triads of pictures according to what they would be used for by humans. At least one construct addressing this was elicited from ten of the sixteen participants. Within this theme are constructs which directly address the issue of the environments as functional places versus not, and also constructs which address the specific functions which certain environments may fulfil. Finally, there are a number of constructs which address the perceived function of the environment for them personally.

While some constructs referred directly to the function of the environment, others referred more broadly to the concept of functionality with constructs such as Mark's "Attractive" versus "Functional" and Ansa's "Wild" versus "Practical". Mark's construct creates a dichotomy between "Attractive" and "Functional", suggesting an environment cannot be both. Throughout his RoE, Mark shows a preference for "pristine" environments which are environments not touched by man. This construct supports this distinction as Mark suggests that it is the environments which show evidence of performing a function to humans which are not attractive, and the pristine environments, which appear to perform no function for humans which are attractive.

Alternatively, Ansa creates a dichotomy between a “Practical” environment and a “Wild” environment, again suggesting that an environment cannot be both. The description “Practical” was given to the image of the muddy field, whereas “Wild” was used to describe the picture of the African plain and the open sea. This, like Mark’s construct about function above, could be linked to the evidence of human impact on the environments in question. The muddy field, which is the image in this triad which most clearly shows human interference, is the image which Ansa deems as “Practical”.

A more specific reference to the actual function of the environments in the photographs was acknowledged by Harry. The separation between using nature for food and for pleasure is something which was clearly explored throughout Harry’s RoE. Harry discusses his visits to Ireland to see family in his RoE and explains how these experiences taught him about utilising nature in sustainable ways as his family did. As discussed earlier during the analysis of the RoE, Harry reminisces about a time when he went fishing with his family in Ireland and was going to return the fish to the water, as he usually would, when he was stopped and told to bring it home. He talked about how this fish then fed the family a number of meals for a few weeks and they used every bit. It is his memories such as this which gave Harry a clear understanding of using nature as a life source. The construct “Food” versus “Pleasure” reflects this distinction. This construct was elicited from the triad of images corn field, cable car over rainforest and wildlife bridge over a road. His experiences of using nature to provide food for him and his family meant that when

confronted with this triad, he viewed the environments in terms of their usefulness as a life source and instantly saw the corn field in terms of the food it had to offer.

Harry then quickly went on to debate with himself our rights to use nature. The construct “Gain” versus “Leisure” was elicited by the same images. The word “Gain” was used to describe the corn field, while “Leisure” was used for cable car over the rainforest and the wildlife bridge over a road. The corn field was the image which elicited the emerging pole of “Gain” and Harry explains how as it is being farmed there to provide is with food, it is an environment which is being used for human “gain”, to make money. He did debate whether the image of the cable car should also be described as “Gain” as well, explaining that it could be used to get money from people, or as a way for people to access places which are otherwise inaccessible without ruining the rainforest this is built over.

Samantha is another participant whose constructs around the functionality of the environments reflect her experiences discussed in her RoE. These constructs are “Enjoy” versus “Work” and “Calming” versus “Functional”. Samantha’s relationship with nature is both professional and personal and therefore she spends most of her time, both in and out of work, communing with nature. This is reflected in these constructs. She views the environments in terms of the situations in which she would be interacting with them and what they therefore portray to her. Similarly, Grace also spends both her working life and personal life surrounded by or exploring nature and this is also a distinction she uses in constructing the environments in the photographs. Her construct “Leisure” versus “Work”, like Samantha’s, reflects this relationship.

Finally in terms of function, when confronted with a triad of the beach, mountains and the flower garden, Shirley expressed how they were all places she would like to visit but expressed that she would visit them for different reasons. She explained how they all serve different purposes for her and would be different experiences because of the function they have. The construct “Playground” versus “Have to do” was elicited when she described the beach image. Shirley explained that she would go to a beach to enjoy herself, however the other images did not necessarily portray the opposite of this to her. When I asked her to explain the opposite of playground to me, Shirley described a scene such as a city and then picked up the picture of the road. She explained that this image was something she would “have to do” and that that was the opposite of a playground to her. This distinction between the functions of environments was a distinction evoked by images alone as well the triads of images for Shirley.

### 6.3.8. Scope

Eleven constructs elicited from participants address the sense of scale which the environments in the pictures invoke. At least one construct addressing this was elicited from six of the sixteen participants.

Notably, multiple participants spoke of environments in the photographs being “Open”, but a variety of contrasting poles were given; Max used the opposite’s “Dense” and “Condensed” as he gave the emerging pole “Open” twice, Samantha

used “closed” and Shirley used “Enclosed”. The word open was used to describe a variety of different images including those in Figure.16;

Figure 16. An example of some of the images described by participants as “Open”

It is clear from looking at the figure above that “Open” meant different things to different participants. Participants spoke of “open air” and “open space” after this construct was elicited to give some explanation as to what they were referring to when they described the image as “Open”.  When this construct was elicited for Shirley, she was speaking of going on walks on a Sunday with the family through the images of the park and flower garden. She explains how these environments are not ones where you can do much exploration as she likes to do, but they are places where you can “get out into the open air”. When looking at this triad of images Shirley discusses how she “would rather be in a park than indoors, even though I would rather be there [points at rainforest image], than there [points at park image].” To Shirley, the “Open air” that natural environments provide her with is important.

Although she would prefer to be in what she would see as wilder places, the “Open air” from any of the environments in the pictures are preferable to being indoors. Her construct of “Open” versus “Enclosed” is about being outdoors versus indoors.

However, for some participants the opposite to “Open” encompassed environments which were still outdoors. An environment didn’t need to be indoors to not be “Open”. A variety of the images which were categorised as the opposite to “Open” and described by participants as “Enclosed”, “Closed”, “Dense” and “Condensed” can be seen below in Figure. 17;

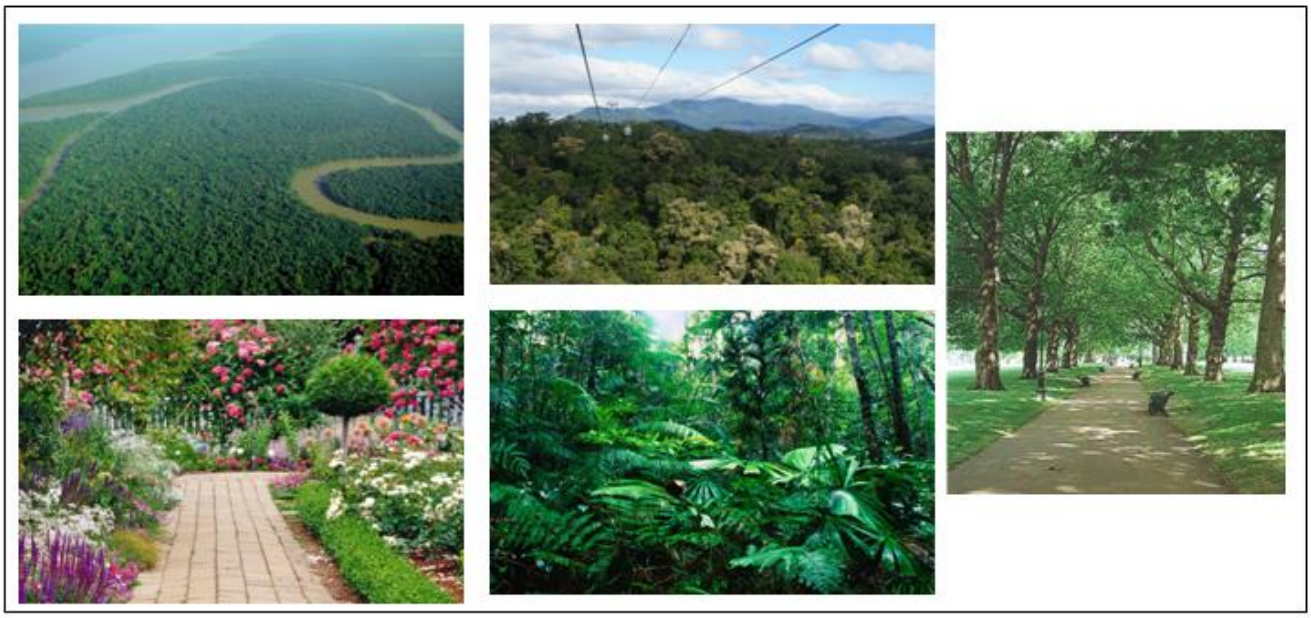


Figure 17. An example of the images which were placed on the opposite end of the bipolar construct to “Open”.

Unlike Shirley’s opposite to “Open”, Max’s include environments which are outdoors, but are “Condensed” or “Dense”. To Max, the opposite of “Open” is not being closed

away or indoors but is to do with the amount of space around him being. When he was explaining his choice of these bipolar constructs, Max used the word "closeness" to further describe the meaning of "Condensed". His use of the words "Condensed" and "Dense" denote an image of environments which are full and have no more room to move in them.

This distinction can be seen when viewing Figure 17, where the images could all be described as full. They are all images with very little space in the photograph itself which is not filled with greenery and plant life.

An interesting note, however, is categorisation of the picture of the flower garden, which is present in both groups. It has been considered by Samantha as an "Open" environment and to Max a "Condensed" environment. This illustrates as well as the ability for people's constructs by which they see the world to be very different, they can also use the same but apply the poles of the construct in very different ways. Here, a very similar construct is applied very differently by each participant. The image of the flower garden lies at the opposite end of the spectrum for Samantha, as it does for Max. This demonstrates that how people construe the world is personal and the same places can have different meanings to different people.

Ansa is another participant who also constructed the environments in the photographs according to their scale. The sense of scale in the environments was addressed in three of Ansa's twenty-three constructs. Unlike the other participants addressing this, Ansa did not mention openness but described the scale of the environments with the constructs "Vast" versus "Narrow", "Vast" versus "Tampered

with" and "Expanse" versus "Narrow Focus". Ansa explained that her use of the term vast was referring to the environments which were "huge spaces", which is similar to the construction made by Max. However, when exploring what the opposite of this vastness was to her, Ansa began to speak of human interference. She explained how the "vast" environment "hasn't been tampered with, you'd imagine it to be huge and vast" compared to the "narrow", "tampered with" environment.

One participant, as well as addressing the scale that could be seen in the picture, also expressed some emotional response to that scale in their construct. Dennis's construct "Free, not hemmed in" versus "Claustrophobic, can't get away" was a response to the triad of images including the wildlife bridge over a road, the river through a forest and the desert. The use of the word "Claustrophobic" to describe the image which portrays some level of human interference, with the road, constructs an intense fear for Dennis of these environments. This is a reflection of the discussion of other people throughout Dennis' RoE. Dennis repeatedly expresses his dislike for people and bus places throughout his interview and at one point, during the RoE task, expresses that;

> *I don't like people….I don't like crowds unless I'm in control. And I hate going to town. Because it's not my environment, my environment is the fields and the woods, being out there.* (Dennis, Natural Historian and Ecologist)

Here Dennis makes explicitly clear his preference for being in nature as opposed to manmade environments. As he was confronted with this in this triad of images, he explores the reasons for this further in explain that it is the sense of freedom he gets

from nature as opposed to the lack of control he feels which ultimately makes him feel “claustrophobic”.

### 6.3.9. Idiosyncratic Constructs Themes

As discussed in the methods of analysis chapter, four of the participants had constructs which addressed themes which were uniquely important to them as individuals. These were themes which did not overlap between participants but were an important part of how that individual constructed the natural world around them. These participants were Max, who spoke about photography, Samantha, who spoke about escapism, Tanya who spoke about the place for nature in the world and Ansa, who spoke about perspective.

#### *6.3.9.1. Photography*

One of these examples is with Max’s reference to the pictures in terms of their composition. He gave the constructs “No depth” versus “Depth”, “Halves in composition” versus “Depth” and “Layers” versus “No layers”. These constructs are a reflection of Max’s role as a professional photographer. He explains how some of his constructs are comparisons in the images “photography wise…because I just see it”. He goes on to explain that it is not just in these photographs that he perceives environments in this way, he explains that “I would look at it outside, probably in the same way, it’s the way my eye sees it”. As well as looking at the environments in the photographs, Max perceived the images on their own merits in terms of the skill and techniques of the photographer.

#### *6.3.9.2. Escapism*

Samantha is another participant who gave multiple constructs which were addressing the same theme, however no other participant addressed this with their constructs. This theme which was evident only in Samantha's constructs was Escapism. The constructs "Forget busy life" versus "Reminder of busy life" and "Calming" versus "Busy life and problems" were originally categorised under their own theme escapism, however, other participants did not address this. Although this was touched upon by other participants in their RoE, Samantha is the only participant from whom constructs about escaping from their day to day life were elicited.

#### *6.3.9.3. The Place for Nature*

Tanya gave the constructs "Primary nature in forefront" versus "Nature incidentally" and "Put there no other thought" versus "A way to get closer to nature". These constructs, to some degree, address the level of human contact in the images, by addressing the nature which is "put there" or "incidental". However, they also address the function of the environments by touching upon environments which have been created or adapted as "a way to get closer to nature". They both address the place for nature in the environments.

The environments which Tanya described as being "a way to get closer to nature" were the pavement through a park and the playground. While the image which was

deemed by Tanya as being “put there with no other thought” was the wildlife bridge over the road. It was obvious from this reaction that it was not clear to Tanya what the purpose of the bridge was and she just saw the image as a road which had been laid through a green area. She explains how although the park and playground have also been put there by humans, they have a “nicer intent” behind them and the nature in these has been considered.

The construct “Primary nature in forefront” versus “Nature incidentally” was elicited when Tanya was asked to consider the piles of pictures she liked, disliked and felt indifferent towards. She expressed how, when viewing these three piles as a triad, it appeared to her that the images she likes were all environments where nature is the main aspect of the image, as opposed to the images she disliked and felt indifferent towards, which appeared to her to be environments where nature was “incidental” in the image.

#### *6.3.9.4. Perspective*

Finally, Ansa addressed the perspective-giving qualities of the environment in her constructs. Although this had been addressed in some of the participants’ RoEs, as can be seen in Chapter 5, constructs addressing this were only elicited from Ansa. The first of these constructs to be elicited “Bigger perspective” versus “Narrow Perspective” was the first construct to be elicited from the first triad. Although Ansa does not refer to the effect of the perspective while explaining this construct, she explains how the first thing she noticed is how the pictures of the cable car over the

rainforest and the Antarctic have a “bigger perspective of nature” and give you a “vast overview of nature”.

The construct further on in the task, “Perspective” versus “Everyday, desensitised” overlaps with both the familiarity and sense of scale themes and therefore was not categorised to fit into either theme. Ansa’s explanation of this construct makes this overlap clear;

> *are exposed to this, which is what I generally am [points at the park picture], you don’t kind of see the big picture. It’s just like a park isn’t it… Because I’m exposed to this I don’t see the bigger picture, it’s when I’m outside my element, my comfort zone, where I’m exposed to kind of, bigger, vast spaces that I appreciate the tininess of me.* (Ansa, Muslim)

The sense of scale of an environment, to Ansa, is closely linked to her familiarity with that environment. If she is familiar with an environment then, as she explains, she is “desensitised” to it. By further expanding the “Everyday” pole of the construct to include the word “desensitised”, familiarity with these environments is tied their lack of ability to impact upon her and allow her to appreciate her own space in the world. Here the effect of the perspective of the environments on her perspective of her place in the world is also explained.

## 6.4. How constructs are related to each other and to important issues for individual participants

This section of the chapter explores the individuality of participants constructs and construct systems. The process of laddering some of the participants constructs helped to give an insight into the individual meanings behind participants constructs and also into how participants construct systems are organised.

As discussed previously in Chapter 3, when Hinkle (1965) developed laddering as an interviewing technique, he did so as a way to access people's superordinate constructs. However, as I have noted, the laddering technique's ability to do this has been questioned (Bell, 2014 and Butt 2007). Before we move on to the insights that laddering allowed into participants construct systems, I first looked at the ladders in relation to their use as a research tool and I think it is important to consider this, as to contextualise what it is that the ladders allow us to explore. I will then follow this brief discussion of superordinacy with discussion of some of the insights into construct systems that the laddering allowed us, including a look at individuality and the organisation of participants construct systems.

## 6.4. Did this research find superordinate constructs surrounding nature?

As previously discussed, PCP is rooted in therapy, therefore so are some of the methodologies which it sparked. As a result, Laddering has been largely researched and discussed in relation to its usefulness in this context and there has been limited research using it to elicit constructs for the purposes of social research. With this in mind, this part of the research became an experimentation of the use of laddering in this context, as much as it was to create data for analysis.

### 6.4.1. Did the ladders produce superordinate constructs?

The first question I asked myself when reviewing the ladders as a research tool was whether these constructs which had been elicited at the top of the ladders were superordinate. Had the technique done what Hinkle intended? To explore this, as previously outlined, two people acted as research assistants and looked at pairs of constructs created from taking the top and bottom constructs from each ladder. These research assistants were chosen due to their expertise in PCP and both have knowledge of using laddering and of Kelly's concept of superordinacy. These assistants judged which constructs they thought were superordinate in each pair. As can be seen in Chapter 4, the assistants were given the choice to mark one construct in each pair as the superordinate, therefore deeming the other subordinate, or mark them both which meant they felt they could not judge which was the more superordinate.

Assistant B and C's judgements of which construct was the more superordinate of the pair can be seen in the table below;

Table 6. The number of constructs from the bottom and top of the ladders which were deemed to be superordinate by Assistants B and C

| | Number of top of ladder constructs which were judged to be superordinate | Number of bottom of ladder constructs which were judged to be superordinate | Number of pairs where unsure of which is superordinate construct |
|---|---|---|---|
| **Assistant B** | 35 | 28 | 8 |
| **Assistant C** | 52 | 19 | 0 |

Firstly, for assistant B, there were 35 constructs which they said were superordinate and came from the top of the ladder, 28 which they said were superordinate and came from the bottom of the ladder and 8 of which they were unsure. For assistant C, there were 52 constructs which they judged to be superordinate and were from the top of the ladders, 19 which they said were superordinate but came from the bottom of the ladder and 0 of which they were unsure. Assistant B and C's judgments were then compared and there are 30 cases where Assistant B and C agree that the top of ladder construct is superordinate. This would suggest that laddering has led to, what could cautiously be considered superordinate constructs, in just under half of the ladders, 30 out of the 71.

There were then 11 bottom of ladder constructs that the assistants agreed were superordinate. This would suggest that at least in some cases, laddering has led down to what is considered by these two people as more concrete constructs. That is 11 out of the 71 ladders they believed led to subordinate constructs. An example of this can be seen in the construct "Flourishing" versus "Barren" which was judged to be subordinate to the construct "Relaxed" versus "Not want to spend time there".

Finally, there were 30 constructs where they disagree on which was the superordinate, 8 of which are Assistant A's "unsure" pairs. The 30 out of the 71 constructs which they disagreed on highlight the personal nature of construing what is superordinate. Both assistants were people who were chosen due to their subject knowledge of PCP and therefore had some prior knowledge of what superordinacy was and what they were looking for. However they disagreed in 30 instances,

suggesting that superordinacy may not be objectively definable. There is discussion of both the use of laddering as a research tool in this way and discussion of the usefulness of checking for superordinacy in this way in the next chapter.

#### *6.4.1.1. Was there a relationship between the theme of the bottom of ladder construct and whether the ladder was judged to lead to a superordinate construct?*

Table 7 shows that there is no obvious pattern to the judgment of superordinacy from the ladders in terms of the themes their bottom of ladder construct had been categorised in. This is clear when we compare the total numbers of bottom of ladder constructs and top of ladder constructs which were judged to be superordinate for each theme. This comparison shows that these are largely very close together;

Table 7. Comparison of the number of bottom and top ladder constructs deemed to be superordinate from each theme in the construct elicitation task, for Assistants B and C

| Theme the bottom of ladder construct was categorised into | Number of top of ladder constructs judged to be superordinate | | | Number of bottom of ladder constructs judged to be superordinate | | | Not sure which is superordinate | | |
|---|---|---|---|---|---|---|---|---|---|
| | Assistant B | Assistant C | **Total** | Assistant B | Assistant C | **Total** | Assistant B | Assistant C | **Total** |
| **Engagement- mental** | 2 | 4 | **6** | 3 | 1 | **4** | 0 | 0 | **0** |
| **Engagement- aesthetic** | 1 | 1 | **2** | 1 | 1 | **2** | 0 | 0 | **0** |
| **Level of Human Contact** | 16 | 21 | **37** | 12 | 9 | **21** | 2 | 0 | **2** |
| **Openness** | 1 | 2 | **3** | 2 | 1 | **3** | 0 | 0 | **0** |
| **Familiarity** | 1 | 5 | **6** | 4 | 1 | **5** | 1 | 0 | **1** |
| **Safety** | 2 | 3 | **5** | 3 | 3 | **6** | 1 | 0 | **1** |
| **Function** | 3 | 4 | **7** | 2 | 1 | **3** | 0 | 0 | **0** |
| **Health of Nature** | 5 | 7 | **12** | 2 | 2 | **4** | 2 | 0 | **2** |
| **Physical Features** | 2 | 2 | **4** | 0 | 0 | **0** | 0 | 0 | **0** |
| **Miscellaneous** | 1 | 3 | **4** | 1 | 0 | **1** | 1 | 0 | **1** |

As discussed above, the themes into which the bottom of ladder constructs were categorised were seen to have no effect on which construct was deemed superordinate, the top of ladder or bottom of ladder. However, the two bottom of ladder constructs which had been grouped into the theme “Physical Features of the Environment” were both judged to ladder up to a superordinate construct. This may be because they were referring to physical features of an environment which are arguably constructs which could be more easily seen as concrete. An example of a laddered construct, which the two assistants agreed was superordinate, is the construct “Energising” versus “Drained”. The definition for superordinate given, as can be seen in Figure 19, explains that a superordinate construct is “overarching and has many subordinate constructs to which it can be applied”. This is a clear example of a construct which arguably could be applied to many different situations and subsume many subordinate constructs.

Notwithstanding the issues highlighted with superordinacy, the data produced by the laddering process nevertheless offers interesting insights into the way participants make meaning out of the natural environments they are faced with. This next section will focus on the ways in which laddering was fruitful.

## 6.5. An insight into the organisation of participants’ construct systems

As outlined previously, the laddering task allowed for the connections between constructs to be explored by showing the journey from the bottom to the top of the ladder. In laddering one construct, one becomes aware of what this construct means to the person and what other topics it is related to. An example of a ladder which demonstrates this can be seen in the Figure 18;

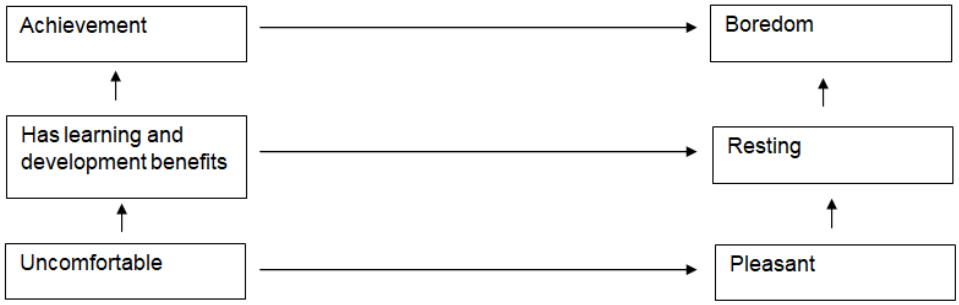



Figure 18. Andrew's ladder of the construct "Uncomfortable" versus "Pleasant"

As highlighted in the previous section, the process of laddering allowed me to see what meaning constructs held for people, by allowing me to see the issue it stems from. For example, we can see from this ladder that the comfort of an environment stems from a desire to achieve for Andrew. However, it is not only the top of ladder construct and bottom which are important in this exploration. From the ladder above we become aware that for Andrew, "uncomfortable" places are his preference because they afford him the ability to gain this sense of "achievement". But we also learnt what makes Andrew feel a sense of achievement. Where for some people "uncomfortable" places may have been their preference because of the physical endurance they demand, for Andrew it is the opportunity to learn which these

environments provide. This reflects the amount Andrew drew upon the narrative thread of “Learning” throughout his RoE. A large part of Andrew’s overall narrative was about instances in his life where he has had a desire to learn and has therefore pursued his relationship with nature through this. Again, it could be suggested that this has therefore become one of the ways by which he constructs new environments, as places which allow for this or not. Without the process of laddering we would not know that these constructs are linked for Andrew. The step in the ladder gives us a further insight into his current construal of the natural world.

Another case which demonstrates the importance of the process of laddering is Ansa’s ladder in Figure 19:

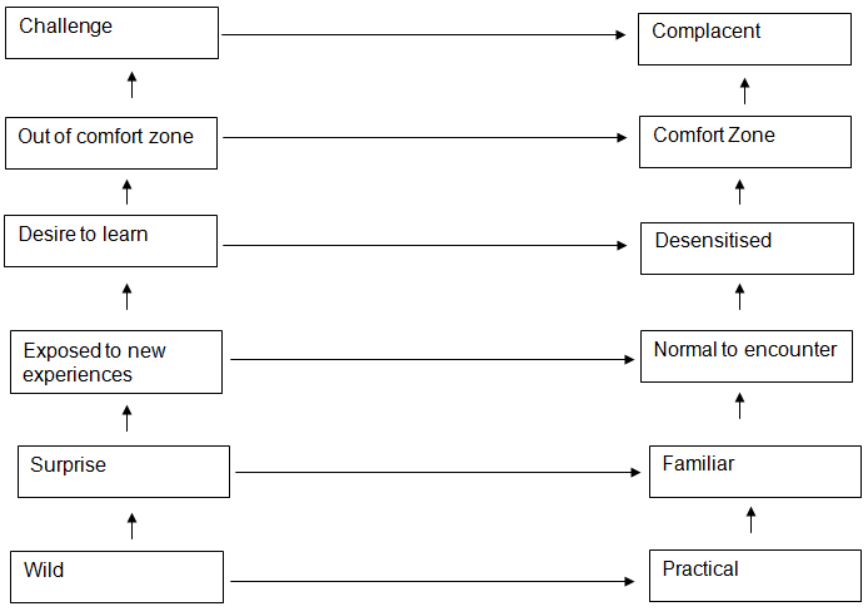



Figure 19. Ansa’s ladder of the construct “Wild” versus “Practical”

As with Andrew's ladder above in Figure 18, the process of moving up the ladder allows for an exploration of what "Wild" and "Practical" environments mean to Ansa. If we take the stance that we may not be moving necessarily towards superordinate constructs, we are still made aware that these constructs have some connection to each other. We see that "new experiences" are perceived by Ansa as opportunities to satisfy her "desire to learn" and those environments which are "familiar" do not allow this because she feels she becomes "desensitised" to them. On the other side of the pole we also find out that "Practical" environments are not disliked by Ansa but are not her preferred pole because of the mundanity she links to them as she sees them every day. Ansa is construing the environments she is confronted with using the construct "Wild" versus "Practical" and this ladder allows us to see that the personal meaning behind this surrounds the familiarity of "Practical" and the novelty of "Wild".

## 6.6. Individuality in the meaning of nature

A key example of the usefulness of this technique can be demonstrated when we take a look at how different issues emerge from ladders which originate from a similar starting point. The laddering of these constructs allowed for demonstration of the personal nature of constructs, which Kelly emphasised. This section provides examples of how this can be seen with ladders which demonstrate interesting differences in people's construing of nature.

### 6.6.1. Individuality

As previously discussed in Chapter 3, PCP argues that people who hold what appears to be similar constructs can often attach quite different meanings to these constructs. This is what is described by Kelly (1955) as the Individuality Principle. This section compares ladders from constructs which were grouped together into similar themes.

The first two constructs to be compared are from two different participants and address the human influence on the environment at their starting point. For Kieron the level of human impact in the photograph, once laddered was explained to be to do with his personal feelings of connection and comfort in that environment. The explanations which lead to this can be seen below in Figure 20.

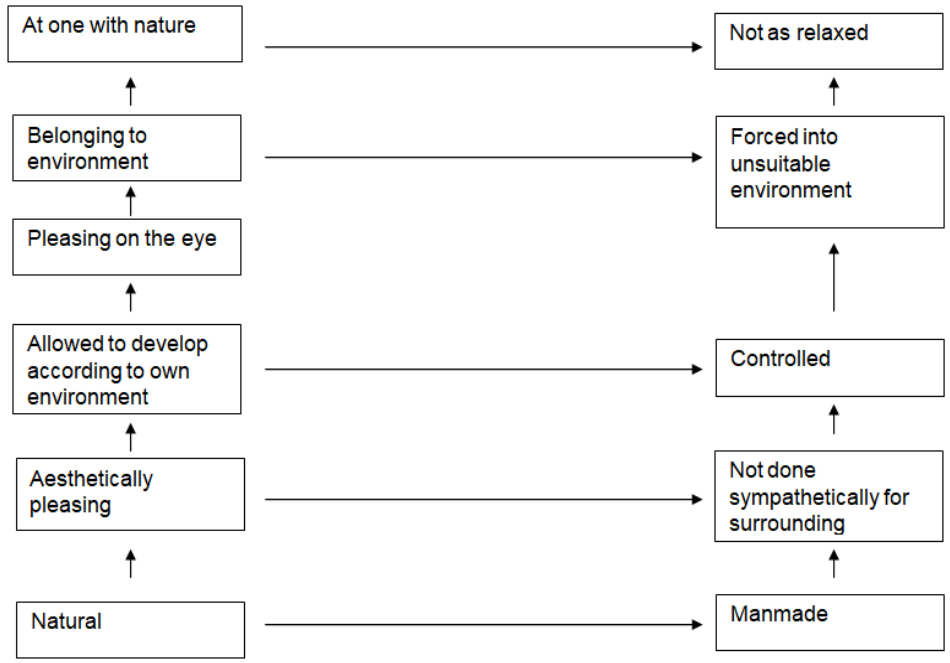



Figure 20. Kieron's ladder of the construct "Natural" versus "Manmade"

As Figure 20 demonstrates, Kieron expressed his preference for the “Natural” environments over the “Manmade” and explained that this was due to the ones which had been left to grow naturally being more “aesthetically pleasing” to him. He then explains how he prefers these because of the nature being “allowed” to develop by itself. The contrasting poles of “controlled” and “forced” here which describe what humans do to environments highlight the power which Kieron believes humans have over nature. He expresses that he feels he is most connected with the nature around him in places where this “control” is not evident. Although this explanation makes logical sense, it could be said to be surprising coming from this participant. As previously outlined, Kieron is a gardener, so spends his professional life controlling nature. He has chosen to work day to day at controlling the nature in people’s gardens. It may be as he spends so much time doing this professionally that it is being within wilder and more nature places which allow him to fully connect with nature in a more pleasurable and leisurely way.

Another ladder which originated from a similar starting point was Mark’s “Wild” versus “Parkland”, see Figure 21. Although “Wild” versus “Parkland” may not seem to directly reflect the level of human impact on the environment, it was grouped as such because Mark explained *“it is parkland, so it is created by man”* and goes on to make the distinction between the parkland and places which have been left to their own devices and are “wild”. When Mark’s construct about the level of human impact in the environments was explored further it was explained to be to do with Mark’s love of learning.

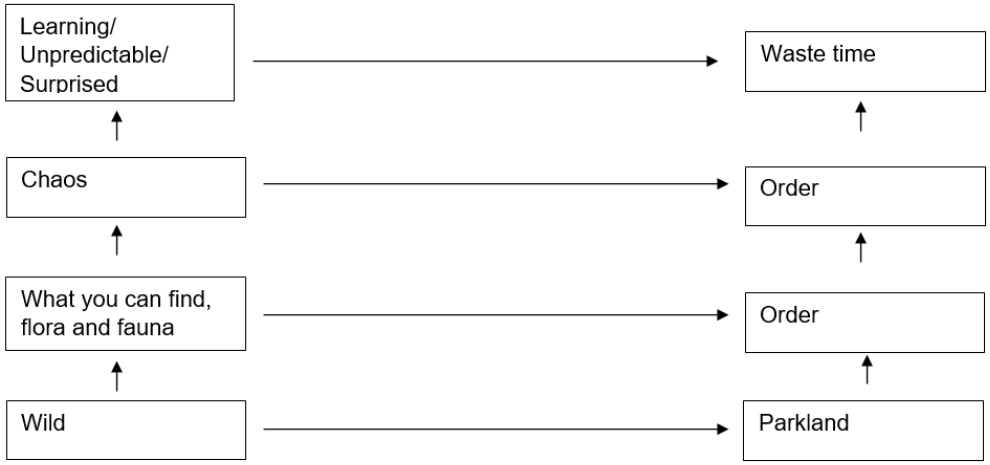



Figure 21. Mark's ladder of the construct "Wild" versus "Parkland"

Like Kieron, Mark expressed a preference for the side of the construct with no human impact. However, rather than his reasons for this referring to the aesthetics of the environments, like Kieron, Mark explains that it is the opportunity in "Wild" places to find and explore nature which is why he prefers these environments. This exploration ultimately means to him there are opportunities to "learn" and have new experiences as nature is "unpredictable". This reflects Mark's love of learning which he discusses throughout his RoE. A part of why his relationship with nature developed was through a desire to expand his knowledge and pass this on with his writing as he discussed in his river and this would suggest that this shapes the way he constructs the environments around him, as places which provide this opportunity or not. His contrasting pole of "Order" explains why he does not hold a preference for "Parkland". The use of the word "Order" here expresses that it is the organisation of "Parkland" which ultimately does not provide him with an environment which is "unpredictable" which he expresses are the reasons he prefers "Wild". The use of the

contrasting pole to the top construct “Waste of time” explains that places which are not offering him the opportunity to learn are seen negatively by him. For some people the opposite to a place to learn may have been somewhere which offered him an alternative, such as relaxing. However, for Mark if he is not learning and being surprised by the environment then it is not worth his time.

An interesting thing to note when looking at this ladder from a PCP perspective is the sense of superordinacy that the construct “Order” versus “Chaos” seems to have. When this construct is considered alongside the definition of a superordinate construct it would seem to fit this description. It is overarching, abstract and is the contextual element by which other constructs could be grouped. There are a number of comments which could be made about this. The first of which is the suggestion that Mark may have felt the need to defend this construct. Instead of ending the ladder at what could have been a superordinate construct, he may have felt pressured to defend or further explain this and therefore, when he was asked why again, he gave what could be argued as a more subordinate construct to more fully and concretely explain what he meant. In doing this he may have been breaking this superordinate construct down for the interviewer. However, it could also be argued that “Learning” versus “Waste of time” is in fact a superordinate construct to him and not others. Again, it is the personal nature of constructs which means that what is superordinate to one person may not seem so to others, but that does not make it objectively so.

The laddering process here has demonstrated the personal nature of constructs. Through laddering we are able to see how participant construct systems are

individual and personal; both Kieron and Mark constructed the environment in the photographs considering the level of human impact on them. However, through laddering these constructs it is clear that these represent very different things to them both.

In the examples given above there is demonstration of how participants had quite substantially different ideas of what constructs to do with the Level of Human Contact and how participants construct systems around certain topics can be very different. However, this is not always the case. The constructs which originated from a similar topic about mentally engaging with an environment are made sense of in more subtly different ways by participants. This is demonstrated in the examples below.

When Shirley's construct, which addressed this, was laddered it was explained that this was to do with personal fulfilment to her.  This can be seen in the figure below, where is also important to note that Shirley found it difficult to give contrasting poles when we moved further up the ladder and expressed that stressed summed up as far as that side of the pole could go;

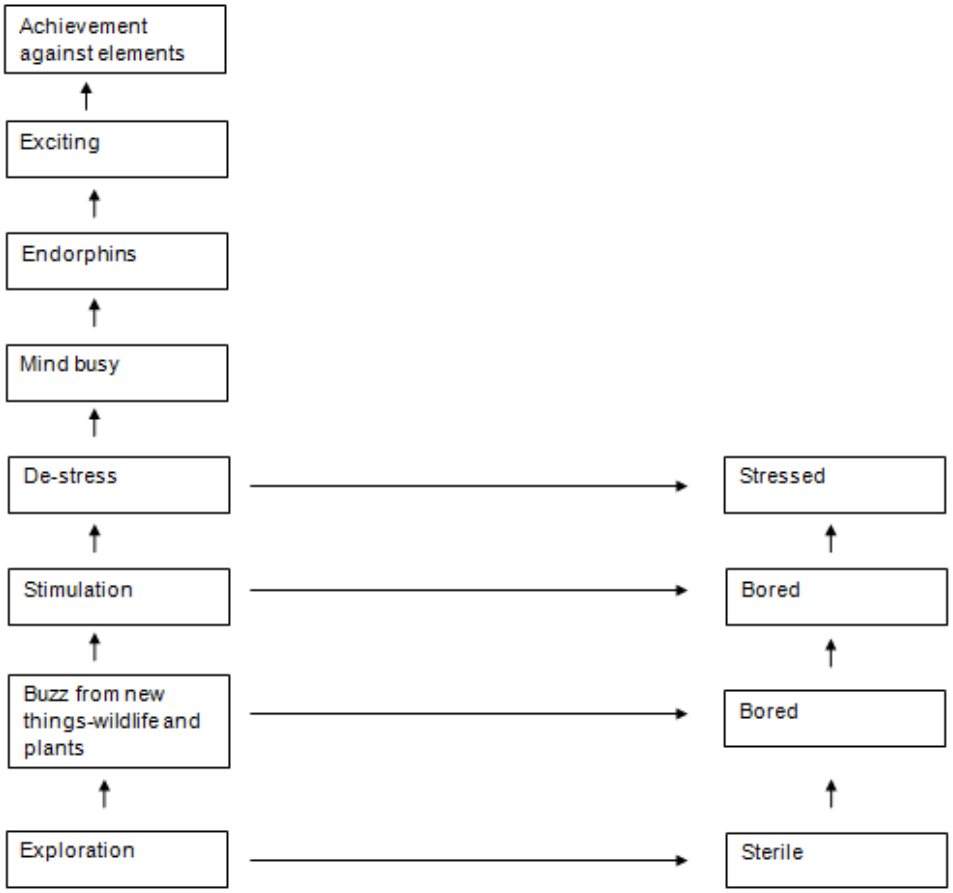



Figure 22. Shirley's ladder of the construct "Exploration" versus "Sterile"

Shirley explained that she holds a preference for environments which allow her to explore, as opposed to environments which she views as "sterile". The ladder shows how complex this construct system is for Shirley as it addresses multiple different things which this 'mental engagement' with an environment affords Shirley. As excitement or a similar feeling is expressed twice in the ladder it may be the case that this is two separate explanations for this construct, however, she did not feel she could express this in two ladders. It may be that with more experience I might have seen this as the researcher and probed more about whether these were two separate reasons for her.

Shirley ends the ladder by expressing that “exploration” is preferred by her as it allows her to feel a sense of “achievement”. It could be inferred that her preference for mentally engaging environments is partly to do with being fulfilled or accomplished.

Grace’s construct “Things to explore” versus “Nothing to do” was a construct which originated from a similar theme to Shirley’s above, addressing their mental engagement with the environment. When this construct was explored through laddering, Grace explained that this was about finding personal peace for her or well-being for her.  This can be seen in Figure 23;

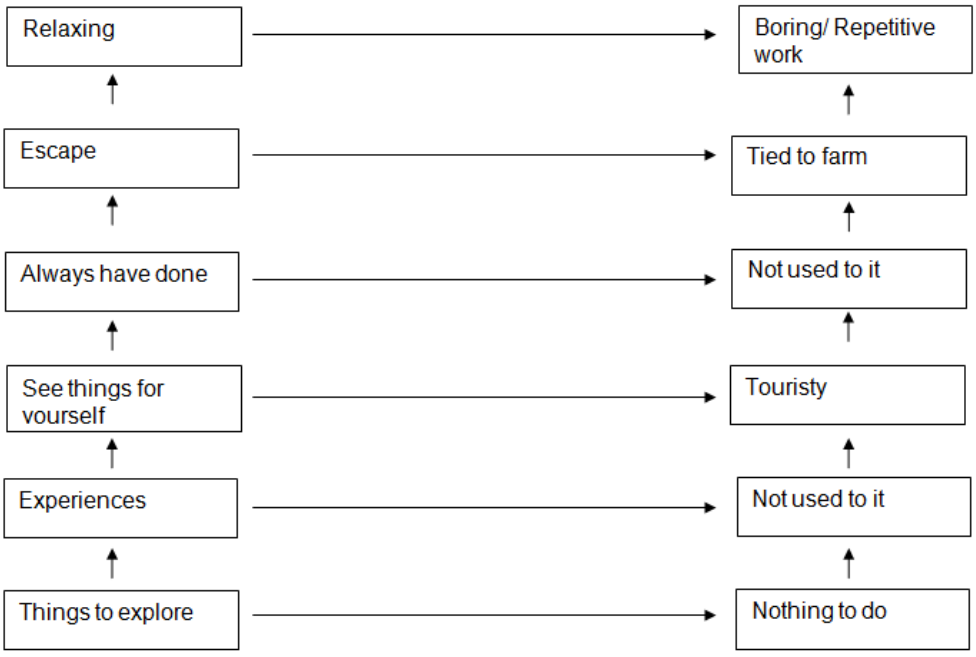



Figure 23. Grace’s ladder of the construct “Things to explore” versus “Nothing to do”

Grace explains her preference for environments which she construes as having "things to explore" and being engaging because of the way they allow her to escape from her day to day life, as opposed to places where there is nothing to do as they keep her "tied to" the farm she works and lives on. This is then further explored and she expresses that she prefers "escaping" because it allows her time to "relax". Here, the meaning Grace places on mentally engaging environments is subtly different to the meaning Shirley places on them. Where environments Grace can mentally engage with offer her a chance to "relax", they offer Shirley a place she can feel she has achieved something. It could be argued that both achievement and relaxation are both aspects of our mental well-being, however, they ensure this in different ways.

### 6.6.2. Individuality and Multiple personal meanings

Another way which laddering allowed me to explore the different personal meanings of similar constructs was within people's construct systems. When I first began to ladder a construct with Tim which addressed the healthiness and prosperity of the wildlife in the environments, he expressed that this had two different meanings to him. After discussing them he expressed that these would best be described in two different ladders as they were separate issues to him. This first exploration led to an explanation that it was to do with his conservation values. This can be seen in the ladder below;

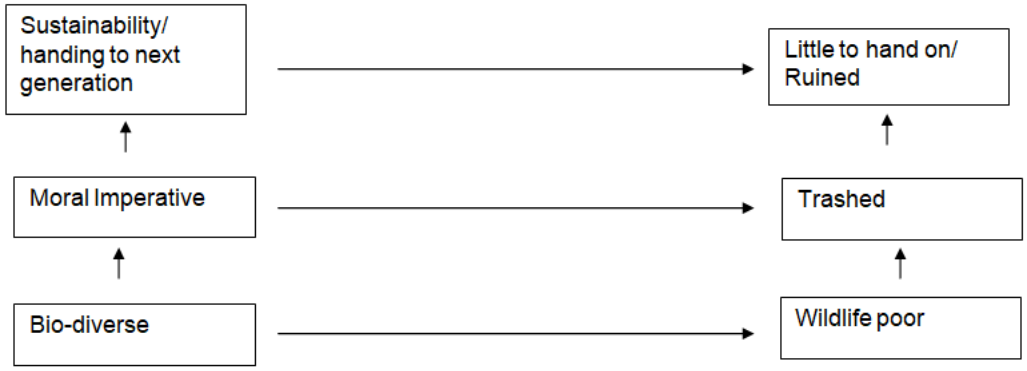



Figure 24. Tim's ladder of the construct "Bio-diverse" versus "Wildlife poor"

Tim explained that he holds a preference for "Bio-diverse" environments because he believes that it is our "moral imperative" that we ensure environments are "Bio-diverse" and are home to different species. The use of the word "trashed" in contrast to this emphasises Tim's disdain for the environments which are "wildlife poor" and do not fulfil this moral need to ensure bio-diversity and help the natural world. He goes on to explain that this "moral imperative" comes from a need to hand these environments on to the next generation. Once again, the wording used to explain the contrast to this emphasises his disdain for the alternative.

The second meaning which Tim explored is demonstrated in the ladder below;

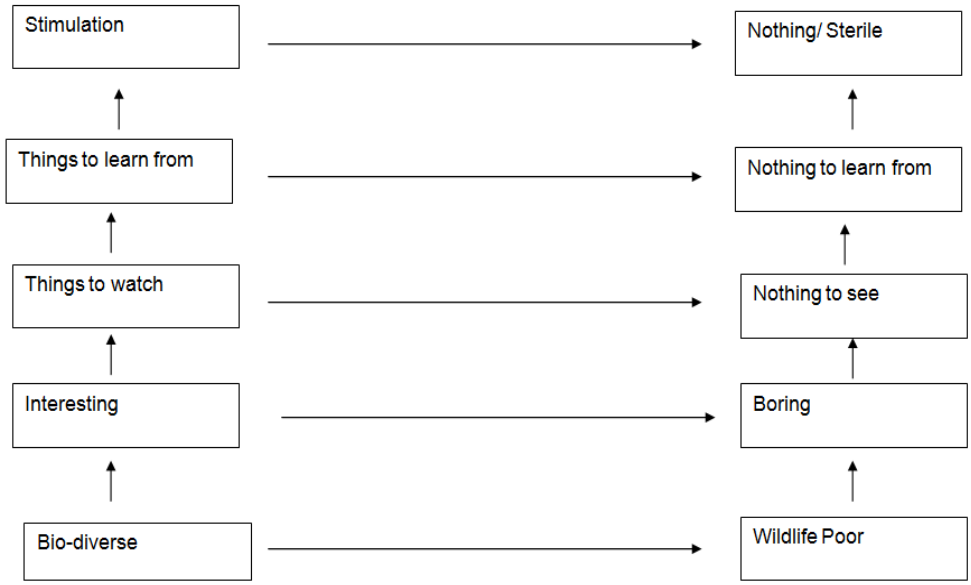



Figure 25. Tim's alternate ladder of the construct "Bio-diverse" versus "Wildlife Poor"

When this ladder was fully explored it became evident that this original construct was also about the intellectual stimulation these environments afforded him. However, in using the process of laddering, we have been able to see how, as well as intellectual stimulation, this is also to do with his values and morals around conservation.

Where construct systems have previously been seen as linear and structured, it may be more useful to use a web or nest like metaphor to understand the connections between constructs (Frances, 2016). Frances introduced the idea of "nests of meaning" as an alternative way to look at construct systems, where our construct systems are not fixed or structured hierarchically but change and adapt to address the situations we are faced with at different times. This example of laddering the same construct twice, from Tim, highlights how constructs and construct systems are

elaborate, but at the same time can be expressed in quite coherent individual nests. Our construing is a living process which we navigate in different ways in different situations (Frances, personal communication, 2/8/17). It may be reasonable to infer, from what we know of Tim's background working within conservation, that Tim has an elaborated understanding of biodiversity and with this, perhaps unsurprisingly, elaborated constructs and construct systems in this area.

## 6.7. Summary

A wide range of issues emerged in this chapter, firstly building an insightful picture into how participants construct the different environments around them. These issues included the function of the environment, familiarity, aesthetic appeal, the perceived safety and the scope of the environment, which were seen across participants' constructions. There were also a number of themes which were interpreted to be idiosyncratic and important to particular individuals in their own construal.

The key issues for participants, however, were the level of human impact on the environment, the health of the nature in the environment, familiarity and mental engagement. The importance of these aspects is outlined below, however, they are discussed in more depth in the discussion chapter.

It is clear that the constructs which address the Level of Human Impact on an environment are central to the way all participants constructed the images. Although some participants readily created a clear contrast between the "Natural" and

“Manmade”, applying this construct seemed harder for them when not all aspects of an environment are natural or manmade. Constructs concerning the Level of Human Impact on the environments were sometimes framed in neutral terms (i.e. Manmade versus Natural) and sometimes negative terms (i.e. Spoilt versus Unspoilt), with the pejorative pole of constructs always applying to environments construed to have a higher level of human impact.

The Health of Nature in the environments was discussed with thirty-seven constructs addressing this. Participants were constructing the environments they were faced with as places which were helping the Health of the Nature in the photographs or stunting this health. Again, this will be discussed in more depth in the discussion chapter.

Finally, in relation to participants current construal of nature, another key issue for participants, with nineteen constructs addressing it, was Mental Engagement with the environment. Thirteen out of the sixteen participants gave constructs addressing their mental engagement with the environments. This will be considered alongside the “Learning” narrative thread which was interpreted from the Rivers of Experience in the discussion chapter.

The second major area of findings in this chapter is the insight gained into participant’s individual and personal construal of environments and also into how some of these constructs sit within participants’ broader construct systems. Laddering allowed for the exploration of constructs which originated from similar topics and demonstrates some of the personal meanings these can hold for people,

highlighting how these are different for each individual. Some of these personal meanings which participants ascribed to constructs surrounded the sense of achievement which nature allows for, the intellectual stimulation it provides, the opportunity for relaxation and the moral imperative they feel towards conserving nature. This analysis also provided an example of how the same constructs can hold different meanings for participants and gives a brief insight into how complex their construct systems can be.

In this chapter I experimented with how to analyse the superordinacy of top of ladder constructs, as understood by Kelly (1955) and Hinkle (1965) and reported on this by comparing the judgements of two research assistants of the superordinacy of top and bottom of ladder constructs. Although there was some overlap in the judgements of the top of ladder constructs deemed to be superordinate, this was only nearly half of the constructs and left room for questioning of whether laddering did lead to more superordinate constructs. In the analysis of this process I found the theme in which the bottom of ladder construct had been categorised had no effect on whether the top of ladder construct was deemed to be superordinate.

A key issue raised by this chapter is that of superordinacy and its usefulness in understanding people's construct systems and values. This chapter shines some light on the problems in both judging superordinacy and the concept of construct systems as being structured hierarchically. Instead it proposes the usefulness of laddering as a research tool to gain insight into much more complex and elaborated construct systems. The usefulness of Frances' (2016) 'Nests of meaning' as a way to

understand participants construct systems is suggested as a potentially fruitful alternative conceptualisation.

# Chapter Seven

# Discussion

## 7.1. Introduction

This chapter will begin by briefly outlining the key findings from each of the previous three chapters. This will then be followed by discussion of the key contributions that these findings present in relation to the existing literature. There will then be a section reflecting on the methods used in the research and the approaches to analysis, highlighting the contributions these have also made. The chapter will then conclude with suggestions for future research.

## 7.2. Key Findings

### 7.2.1. Development

Six narrative threads were derived from the interviews around the RoE, these are:

- Direct Experiences
- Learning
- Nature through the day keeps the doctor away
- A spiritual relationship with nature
- Contributing
- People

Another part of the analysis of these narrative threads focussed on the structure of the narratives. Participants' narratives were categorised into one of three different narrative structures. The majority of participants structured their narratives as a story of "Gradual Growth", discussing moments and memories which bit by bit have led to their relationship with nature today. The second narrative structure was that of "Coming Back to Nature", where periods of low levels of relationships with nature were discussed but overall a narrative was constructed of reconnecting with nature. Finally, other narratives were constructed around one key event in a participant's life which has shaped their relationship with nature.

### 7.2.2. Current construal of nature

The constructs elicited from the photographs of natural images were categorised into eight different themes. However, three of these themes stand out as significant because of the number of constructs within them or the number of participants who have a construct in them. The "Level of Human Impact" on the environments was the theme which encompassed the most constructs, including at least one from every participant. The "Health of Nature" in the environments was also a theme which was significant for the majority of participants and contained the second highest number of constructs. Finally, although there were only nineteen constructs addressing participants' mental engagement with the environments, at least one construct addressed this for thirteen out of the sixteen participants.

The analysis of the ladders posed a question about the usefulness of looking at constructs as hierarchically structured, suggesting a more appropriate way might be to consider them as nests of meaning (Frances, 2016). The ladders allowed for exploration of the journey from one construct to another, giving an insight into how constructs are connected for participants. The laddering process also allowed for the exploration of constructs which originated from similar topics and demonstrated some of the personal meanings these can hold for people, highlighting the individuality in construing.

In this chapter these findings are considered together. Although the research has been split into three separate findings chapters, this discussion is structured by considering some of the issues which emerged from reflecting on the data as a whole.

## 7.3. Discussion of Findings

### 7.3.1. Learning and mental engagement

One key contribution to knowledge that these findings provide can be seen in the importance of learning and intellectually engaging with nature. The narrative thread of learning which was drawn upon by participants is in line with past research by Palmer (1993), who found her participants discussed educational courses of different varieties as significant in the development of their interest in nature and their decision to pursue a career in environmental education. The current research

extends our understanding of the importance of learning, as participants in this research discussed both formal education and informal learning. While some participants discussed formal educational influences and memories which had influenced how their relationship with nature has developed, some participants also discussed their desire to learn outside of educational institutions, with many discussing the importance of reading around different areas of interest in the natural world, watching documentaries and joining clubs as ways in which they developed their understanding of nature and gained knowledge of their area of interest. Past research has considered their participants mentioning of books and documentaries as different from the education they mention (Chawla, 1999; Palmer, 1993). However, through exploring the meanings participants ascribed to the books and TV programmes they mentioned as part of the development of their relationship with nature, this research found that participants saw these too as methods of educating themselves and gaining knowledge about nature. The research methods used and the approach taken to this research allowed for participants to explain the significance these books and documentaries held for them and it was in these explanations that it became clear that participants held a keen interest in learning itself. This adds an insight into the importance of the process of learning in developing a relationship with nature.

Participants drew on a narrative of learning, whether this is via formal means or through educating themselves, as meaningful ways in which their relationships with nature developed and is still developing. As can be seen in Chapter 5, participants described the books they read and the documentaries they watched with emphasis on how these expanded their knowledge or quenched a thirst for knowledge, in much

the same way others described their memories of formal education. It could be suggested that it is the passion for learning and the opportunities nature provides for this which may be why this relationship has formed. When exploring why childhood experiences are so frequently referred to in research of this kind, Chawla (2007) proposes that “it is possible that individual differences leas some children with a special affinity with nature to seek it out” (p. 148). Here Chawla is referring to a pre-existing affinity with nature being the reason, alongside other individual differences, why children seek nature out. However, my findings may suggest that it is a passion for learning, rather than an affinity, that is important in understanding why people seek nature out and maintain a relationship with it, taking the focus away from an “affinity”.

Further into Chawla’s (2007) essay, she makes an observation about the infinite number of experiences with “responsive affordances”, which a child can have with the natural world and suggests that these motivate children to continue “exploring” the natural environment and ultimately then expand their knowledge (p. 155). Considering this alongside my findings, a child or adult who plays in the natural world has new experiences every day, as no two encounters with the natural world are exactly the same; therefore, they have the opportunity to learn something new or grow more competent with each encounter. This may, in turn, means that they move on to different challenges and carry on pursuing this relationship with nature. If a child has a passion for learning and expanding their knowledge, then the natural world offers them an infinite amount of knowledge to absorb so they develop an interest in it.

The structure of participants' narratives also links to the importance of learning in some participants' stories. Where participants discussed stories of "Gradual Growth" this, in part, referred to a growth in their knowledge of the natural world. Two examples of this can be seen in Harry and Dennis's Rivers. When asked to view his river and explain what he thought was the difference between himself now and at the beginning of his river, Harry explained that the main difference was a growth in his knowledge about the natural world. Similarly, Dennis explained his relationship with nature as developing as if he was climbing a ladder, learning at each step and then moving on to the next step.

This intellectual interest in the natural world and desire to learn was not only discussed as part of participants' childhoods but was often a part of their adult life too and current relationship with and constructions of nature. This is further emphasised by the theme *Mental Engagement* which emerged from the construct elicitation task. The majority of participants construed the natural world in relation to the intellectual stimulation with which it provided them. Learning and developing their knowledge was not just a part of how many participants had developed their relationship with nature in the past but was how they continued to develop their relationship with nature.

Overall, learning from nature and intellectually engaging with nature were seen as key aspects of both developing a relationship with nature and participants' current constructions of nature.

### 7.3.2. A spiritual relationship with nature and the need to contribute towards helping it

Liu and Lin (2014) discuss the different environmental worldviews which have been proposed by past writers and philosophers and outline two major view worldviews. However, these have not been fully supported by research. The first is the view that nature is something less than humans and separate from us. They suggest that we are now shifting from this paradigm of thought, into a more contemporary view that nature is now out equal and are we are part of nature. They outline how this new way of thinking also encompasses the view that "*Humankind is thus believed to have responsibility to care for nature rather than having an inherent right to control or manipulate it."* (p. 414). This paradigm shift is evidenced through the movements into environmentalism which are discussed in Chapter 2.

However, the lack of research in this area means we do not have a full understanding of these environmental views. As discussed in Chapter 2, there has been a wide variety of literature on how people think about nature and the human nature relationship, however, there appears to be a lack of research literature which directly explores how people view themselves personally in relation to the natural world. There has, however, been research which has tried to explore people's views of what nature is and therefore has touched upon our place within it (Cobern, 1993; Liu and Lin, 2014; Vining et al, 2008). Liu and Lin (2014) refer to how people see nature as people's environmental worldview. In their research they use Dunlap, Van Liere, Mertig and Jones (2000) New Ecological Paradigm (NEP) scale, alongside interviews, to explore undergraduate students' views of what nature is to them. Dunlap (2008) explains how his NEP scale is a Likert-like scale, measuring the extent to which people "view the world ecologically" (p.10). In relation to their

participants' views on where they position themselves, as human, in nature, the findings were inconsistent. In a similar way to Vining et al (2008) the views that nature is all powerful, humans hold more control over nature and humans were part of nature, were all evident in Liu and Lin's data, therefore they could not say which was more prevalent. They also go on to critique their use of scales in not allowing for further exploration of these views.

The present research contributes to our knowledge by adding to the small body of research which has considered participants' views of nature and how they position themselves in relation to nature. In allowing participants to construct their own narratives, their positioning of themselves in relation to nature was expressed and then able to be explored. It provides an alternative exploration than the few studies already done by considering the positioning of the self in relation to the natural world as a part of the narrative rather than asking participants directly. In doing so, participants did not have to become confused, which could have been a problem when asking them about views they hold which are inconsistent. This may have made participants try to resolve this within the interview and discuss a view which they did not fully agree with. Instead, participants discussed honestly their position in relation to nature as part of their wider story and an insight could be gained into how they construe this relationship. In creating narratives which positioned relationships with nature as spiritual, we gain an understanding of how participants largely held nature of high importance and saw it as something of higher value than themselves.

When this research is considered alongside the worldviews discussed above, by Liu and Lin, the narrative threads drawn upon by participants could be viewed as

findings that pull into question these ideas. Where the narrative thread of ‘A spiritual relationship with nature’ would put into question the idea of us seeing nature as something equal to us, the narrative thread of ‘contributing’ being drawn upon by participants would support Liu and Lin’s observations of a growing view that we hold the view that we have a responsibility to protect and look after nature. These findings may be a reflection of the sample of participants in this research, with all participants agreeing to participate in the research because of the relationship they hold with nature and perhaps in the hope that with their participation this research might help to understand how these relationships develop and foster relationships in others. If this was the case, then a sample of participants who contribute to helping nature and see it as of high value is inevitable.

### 7.3.3. The Importance of the Level of Human Impact

Another key finding is how important the level of human impact on an environment is in the way participants construe that environment. When participants were shown pictures of environments that were, to different extents, natural, in the construct elicitation task, all participants expressed at least one construct which addressed the level of human impact on those environments. It could be suggested that for these participants, the level of human impact on an environment is a significant feature of the meaning an environment holds for them.

This separation between the human, or human influenced environments and nature is something which was touched upon in Vining et al (2008) and Liu and Lin (2014). As discussed in Chapter 2, Vining et al’s study found that participants expressed that

a key defining aspect of nature was that it is “untouched”. Liu and Lin (2014) also found that human impact was a key part of their participants’ definition and understanding of nature. Their participants held the belief that “nature excludes everything man-made” (p. 420). While both Vining et al and Liu and Lin’s research gives some indication that participants hold the lack of an impact by humans as important in their definition of what nature is, this research adds to our understanding by reinforcing the importance of this distinction and highlighting the dimensions these construals involve in participants’ construction of the natural environments they are confronted with. We now know that as well as this being something which participants include in their beliefs when asked, it is also something they employ when constructing an environment. This research suggests that this distinction is an active part of participants’ construal of environments in practice. In seeing the range of constructs which addressed this for participants we also begin to understand the subtler distinctions which are made between the levels of human impact.

This research expands on previous findings by suggesting that participants not only look at whether an environment has been touched by humans, but to what extent this has been the case. Participants did not just hold a touched or untouched distinction. For participants human impact could range from an environment which had a road running through it, a park with metal playground items in it, to a flower garden which had been planted with a small stone path through it and a muddy field which had been farmed. This also threw up some interesting anomalies such as the picture which had a cable car above a forest, being described as “natural”.

The use of the RoE task in this research meant that I was able to explore how these constructs develop throughout people's lives. The findings from the RoE and using narrative analysis as a way to explore these helped to shed light on the meaning that human impact on nature holds for this group of participants. It is proposed that the narrative thread "A spiritual relationship with nature" may potentially be one influence behind this meaning making process. The narrative thread of discussing "A spiritual relationship with nature", as discussed above, was about nature as something of higher importance than themselves and strongly tying their moral beliefs and values to nature. In exploration of this narrative thread, participants spoke of nature as similar to a religion, a god-like and powerful force to be respected. This would suggest that our appreciation for nature with less of a human impact is related to placing nature and humans within a moral universe, where nature is respected unlike in some previous historical times, for example, during industrialisation as discussed in Chapter 2. If we consider this in relation to the previously discussed, *A spiritual relationship with nature,* perhaps participants construct a separation between humans and nature, and the impact of humans as part of their construction of nature as something superior.

Another narrative thread which can be considered when looking at the importance of human impact on nature for participants is that of "Contributing". When participants drew upon the narrative thread of "Contributing", they constructed nature as something which needed their help. It could be argued that if participants understand their relationship with nature as developing partly through aiding nature in some way, their construction of nature as something which they impact upon is inevitable. A further extension of this desire to contribute and aid nature, it could be argued, can

be seen in the constructs which addressed the health of the nature in the photographs. This theme contained the second largest number of constructs. It could be suggested that this reflects the concern participants hold for nature and in turn their need to contribute to helping it. If the concern for the health of nature, along with the importance of *contributing* and the narrative thread of *spiritual relationship with nature* are considered together, then a desire to care for this respected and god-like nature is something which makes sense.

The use of laddering in this research also allowed for exploration of the meaning that constructs which addressed the level of human impact on an environment held for different people. The example discussed in Chapter 6, discusses how two people's constructs addressing human impact held very different meanings. While one explained that their use of the construct was to do with their feelings of comfort and connection with nature in the environments, the other described how this was to do with his love of learning. This would suggest that we exercise caution in interpreting what the meaning of participants' reference to *Level of Human Impact is* as it can have very meanings for different individuals.

### 7.3.4. The variations in the structure of developing a relationship with nature

The narrative structures which were interpreted from discussion around the RoE are an original contribution of knowledge to this area of research, as there has been, to my knowledge, no past research which has considered the narratives structures of stories about relationships with nature developing.

Cagle (2017) is one researcher who, although she did not look at narrative structures of participants' life histories, has considered the way their relationships with nature change throughout their lives. As with the majority of past life history research, her research focused on environmental professionals in university faculty. Her research used open ended interviews to explore the way participants felt their relationship and experiences with nature had changed throughout their lives. She approached the analysis of the data from a phenomenological perspective, looking for commonalities in her participants' descriptions of these changes. Her key findings were that people's quality of time spent in nature differed throughout their lives and a decreased amount of time spent in nature caused sadness for participants. The approach to this current research builds on this understanding by giving a more detailed insight into the variation present in the development of relationships with nature. In analysing the data in this way, we see variation which might be fruitfully conceptualised as following recognisable patterns.

This research helps to build on Cagle's research to fill the gap in the literature around the process of change in relationships with nature. An example of this can be seen in Carl's narrative which is discussed in section 5.4.1.3., as a narrative of *coming back to nature.* In looking at the narrative structure of Carl's interview we see the changes which have been evident in Carl's relationship with nature. He discusses how his relationship with nature changed when he began full time work after university and how it changed again when he retired and joined a local bird watching group.

The structure of a relationship with nature gradually growing over time is what has been portrayed in previous life history research such as Tanner (1980), Palmer (1993) and Chawla (1999). Although these studies did not explore the structure of how participants discussed their key influences, the researchers did portray their participants' relationships with nature as being a result of a gradual culmination of these factors. In these studies, by highlighting only the key influences and not the times when their relationship may have been stunted or prevented, the shape of the paths these participants may have travelled is not reflected in the research findings. They tell us what has aided the relationship with nature developing, however, not what may prevent this. The design of this current research, however, allowed for times in participants' lives where they felt a disconnection from nature to be discussed as part of the development. In looking at the structures which were interpreted from participants' narratives, the importance of these disconnections and reconnections with nature are highlighted. This is an important part of displaying the findings as, for some participants; this was a large part of their journey to where they are and why they have a relationship with nature today.

In research done for the RSPB Hughes (2017) shows that connecting with nature in the teenage years and early adulthood is a particular challenge. Where Cagle's sample of young participants allowed for an insight into the changes in participants relationships with nature up until this disconnection was being experienced, this research allowed for some insight into changes beyond this time in people's lives. The structure of some participants' stories in the current research, of coming back to nature, in this case is a reassuring insight. The findings in relation to where participants' relationships with nature were disrupted, which were mainly in early

adulthood, in line with Hughes' and Cagle's findings, and for what reasons these happened, also help to build an understanding of how it might be prevented or how best to re-engage people when they do happen.

### 7.3.5. Nature and Well Being

As outlined in the review of the literature at the beginning of this research, there is considerable research which suggests nature is good for our physical and mental well-being (Beyer et al, 2014; Scott, Masser and Pachana, 2015; Tyrväinen et al, 2014; Van den Berg and Custers, 2011; Van Lier et al 2017). One of the narrative threads which some participants drew upon was that of "nature a day keeps the doctor away". This narrative thread was drawn upon by participants when they were outlining how nature was important to them because of its effect on their well-being and how in developing a relationship with nature they had come to feel a need for nature. Participants' inclusion of this in their discussion of the development of their relationship with nature may suggest its importance in this development. They have continued communing with nature because of the effects it has on their well-being.

The importance of the effects of nature on participants' well-being was also further explored in their current construal of nature in the laddering task. Although none of the constructs which were elicited directly from the images referred to its ability to aid participants' well-being, when some constructs were laddered, well-being was mentioned by a number of participants. For example, in Chapter 6, Shirley explains how in the construct "Exploration" versus "Sterile", exploration affords her the

opportunity to “De-stress”. It could be inferred that participants are aware of the connections between nature and well-being and this is part of both developing a relationship with nature and their current understanding.

### 7.3.6. People

As previously outlined in the literature review, past research has suggested the importance of the influence of other people in developing a relationship with nature (Chawla, 1999; Palmer et al, 1998; Tanner, 1980). These studies outline how many participants mentioned other people and gives some indication of the types of people this tends to be, for example, family members, teachers or friends. However, it does not give any insight into how these people exerted their influence on the participant. While the present research provides further support for the importance of these figures it also adds detail about their role in this influence. The importance of the interactions, for example, between participants and people who already hold a relationship with nature was emphasised. As can be seen in the Chapter 5, for the rivers of experience, it was interpreted that participants discussed others in relation to their narrative as either people who provided an influential relationship and interaction or people who acted as facilitators to nature. This adds to the current understanding by defining in what ways other people can influence a relationship with nature. If we take the example of parents, for some people their parents only acted as facilitators, telling them to go and play out or buying them a pet. However, for others, it was their parents who took them out and showed them different things in nature, explained what type of bird they were seeing or picked berries with them. While some teachers saw an interest in their pupil and harnessed that, it was the

infectiousness of the enthusiasm of the teacher for their chosen topic that was important to the participant in developing their own interest.

Where previous research has outlined that people were an important part of their participants' developing a relationship with nature, they have failed to explore in what ways these other people have influenced them. These findings add to our understanding by providing an insight into how these participants construct their relationships with these people and therefore how they were influential.

## 7.4. Reflecting on Methodological Choices

### 7.4.1. Personal Construct Psychology Methods

The combination of the methods used allowed for interviews which gave some structure to participants while still allowing them flexibility to discuss what they felt were important issues. In this way, participants are given the lead on where the interview will go and what it will encompass. The tasks allow for a focal point of the interviews to ensure the interviews largely remained focused on the topic at hand. Denicolo et al (2016) highlights how although people's constructions of the world can be explored through conversation, until confidence is built in doing so after familiarity with the approach, techniques like this offer useful structure for the interviewer as well as the participant. The average interview took around one hour and thirty minutes and, as can be seen in the findings chapters, created a vast amount of rich and insightful data with which focused on the topic.

Furthermore, as discussed in Chapter 3, PCP methods have been cited by Burr et al (2012) as helping participants to articulate their experiences and abstract ideas. During the interviews this often appeared to be the case as many participants expressed the view that until this interview they had not previously given any thought to how their relationship with nature had developed and struggled to explain what it was. This could be seen when participants were asked at the beginning of the interview how they would describe their relationship with nature today and what was nature to them. However, once given the tasks, the majority of participants were able to engage with the idea and began quickly to explore their own memories and constructs. The implications of this may be that for a topic as complex as people's relationships with nature, there is a need for methods which aid or prompt the participant into thinking about this during or before interviewing. The usefulness of PCP methods for this is demonstrated in the depth and amount of data collected in this research.

Another benefit of using the PCP methods I chose was the ease of presenting them in findings. During my time carrying out this research I had the opportunity to present my research findings at a number of conferences. The fact that the data produced includes visual representations has allowed me to display these in both poster and verbal presentations quite easily while maintain the participants voice. In presenting the rivers of experience and ladders in particular I have been able to ensure that the participants' voices have been heard by my audiences and facilitated their understanding of the data.

#### *7.4.1.1. Reflections on the use of Rivers of Experience*

##### *7.4.1.1.1. Using RoE to Explore Life History*

As outlined in the literature review, both Tanner (1980) and Palmer (1993) asked participants to write autobiographical statements about their experiences, while Chawla (1999) used structured interviews. These methods both come with their advantages. While Tanner and Palmer's methods allowed participants' freedom in choosing what to include in their statements, Chawla's structured interview meant participants were not given the same freedom. However, Chawla's interviewing methods allowed for probing and follow up questions which Tanner and Palmer's research did not allow. The RoE technique used in this research, however, offers both of these advantages, by allowing participants to construct their own life history narrative and choosing what to discuss, but allowing for probing and further questions as the RoE is further explored through the interview.

The task to draw the river was a metaphor which participants used to begin to spark their thoughts about the natural world. It provided a focal point for the interview while leaving the structure of the interview open to participants. As Kolar, Ahmad, Chan and Erickson (2015) suggest, in their review of the use of timeline mapping techniques in qualitative research, the use of such a timeline-like technique made participants the navigators of the interview. It allowed participants to shape and reshape their story as they constructed it. The interview around the RoE allowed participants to expand and explain further the personal meaning ascribed to the events and times highlighted on their river.

Many of the participants expressed how this method of exploring their life history had allowed them to think of their relationship with nature in a way they had previously not considered. They were aware that they had a relationship with nature, hence coming forward for the research. However, they had previously not given thought to how this had developed.

*7.4.1.1.2. Analysis of the RoE*

In terms of the contributions of this research to existing methodological literature, the analysis of the data produced by these rivers of experience has been approached from a variety of different angles, covering different aspects of the data to ensure a thorough analysis. The original purpose of the snake method or RoE was to explore how constructs surrounding the topic of study have developed through significant incidents in participants' lives (Cabaroglu and Denicolo, 2008). There is little literature to be found on how to approach the analysis of the data produced by this method, with only Cabaroglu and Denicolo providing a published example, where they use a form of content analysis. In focusing on the narrative analysis in particular, its use for the analysis of data produced by methods such as the RoE has been outlined by writers such as Denicolo et al (2016), who suggest the methods produce narrative accounts of peoples' lives. However, there appears to be no previous literature which cites the use of narrative analysis for RoE data. This research provides an example of how analysis for this type of data can be approached; with not only content analysis of the drawn river, but also analysis of how the technique was used by participant and a narrative analysis of the interview data. Therefore, it could be argued that this research expands on the literature used to analyse such data, by providing an example of research with three different

perspectives on the data and therefore providing possible pathways of analysis for use by future researchers using this technique.

The use of The Listening Guide within this research also allowed for flexibility in what it was about participants' narratives I wanted to explore. In promoting flexibility in the listenings, Doucet and Mauthner (2008) provide a guideline for how to engage with the data, without prescribing a particular way to carry out this process. In the current research I was grateful for the guidelines but also embraced the freedom it allowed. I followed Doucet and Mauthner's guidelines, going through transcripts with different coloured pens to highlight the different aspects I was interested in. This research contributes to the research in this area by providing a structure for how to manage and analyse the data after this stage using listening summaries and the listening matrix.

#### *7.4.1.2. Reflections on the use of Construct Elicitation*

##### *7.4.1.2.1 Using images of nature as elements to elicit constructs*

The variety of images chosen as the elements in this task did elicit a large number of constructs from each participant, with the fewest constructs being thirteen and the most twenty-six. It could be proposed that the use of photographs to elicit constructs was particularly useful in this area of research as nature is something which we engage with using our senses, in particular the visual sense.

The way we construct the world around us is not something we consciously think about and therefore these can be quite abstract ideas to convey (Kelly, 1955).

Another observation which could be made about why it was so effective in eliciting issues for participants is because of the focus it provides with concrete examples. As discussed in Chapter 3, Pain (2012) suggested that visual methods allow for abstract ideas to be considered by participants and this is what I feel the images allowed. The use of photographs, rather than asking general questions about people's feelings towards nature, appeared to help participants to quickly assess their own feelings towards different sorts of natural environments. In asking participants for the contrasting poles, the issues of importance around the topic are focused on in a quick and efficient way.

On reflection it may have been useful to choose these pictures with the input of some of the people who were interviewed for the pilot studies. As I chose the images which I construed as 'nature' to varying degrees, the input of other people's construals of these may have meant that a wider variety may have been chosen. The focus on different types of environments as nature for this research part of the research may have limited the range of constructs found, however, I feel the choice to focus on this one aspect of nature was a good decision to make considering the task at hand. A wider range of images, as discussed in Chapter 3, may have made the task of comparing them more difficult for participants. To allow for comparisons as well as consideration of the differences, there needed to be some level of similarity between the images, therefore the focus on environments as nature was chosen. However, on reflection, I may have used some images of purely urban environments to explore what constructs were elicited as a result of these for comparison and to explore whether participants still perceived nature in things like the weather or the sky in the images. Overall, I feel that the decision I made allowed

for the data produced to be rich and diverse, as can be seen in the variety of themes interpreted from the constructs elicited.

*7.4.1.2.2. Analysing the constructs produced*

As outlined in Chapter 4, in review of the literature, I found little previous published research which has analysed constructs in a qualitative way. This research contributes to knowledge in the PCP arena by providing an example of how qualitative thematic content analysis can be applied to constructs elicited from participants. To fill this gap in the literature, I attempted to make the explanation of the analysis process of the constructs clear and thorough so as to provide a potential guideline for future researchers.

This process allowed for common themes in participants' construing to be explored. While Kelly (1955) contends that people's construing of experiences is personal, he also acknowledges that there are and will be similarities in the constructs people hold, especially those sharing common cultures or subcultures, as we may have had similar experiences to them, as well as sharing in conceptual and linguistic communities. This idea is what Kelly called Commonality.

Kelly explains how commonality in our construct systems and constructs can be seen in people who have had different experiences;

> *One of the advantages of this position is that it does not require us to assume that it would take identical events in the lives of two people to make them act alike. Two people can act alike even if they have each been exposed to quite*

> *different phenomenal stimuli. It is in the similarity in the construction of events that we find the basis for similar action, and not in the identity of the events themselves* (91)

Although participants all interacted with nature in different ways, it is clear from the RoE that, in many cases, they shared similar constructions of experiences as they drew on similar narrative threads such as learning, witnessing the power of nature or playing hands- on in nature as a child. In using this method of analysis, the commonalities, as well as the individuality in people's construction of natural environments could be explored. The commonality in construing is likely to be linked to wider discourses about the natural world circulating in society. For example, debates around climate change are surely linked to the themes of 'health of nature' or 'human impact'.

#### *7.4.1.3. Reflections on the use of Laddering*

##### *7.4.1.3.1. Experimenting with laddering as a research tool*

As explained in Chapter 4, laddering was originally and is still largely used as an interview technique in therapy. However, there are a small number of researchers, within the social sciences, who have used laddering outside of therapy (Berlin and Klenosky, 2014; Burr, Blythe, Sutcliffe and King, 2016 and Lee et al, 2012). Burr et al, for example, looked at the use of laddering as a reflexive thinking tool for social workers. Further research outside of the social sciences comes from areas such as marketing and tourism where researchers have used laddering to gain an insight into customers' core values (Glavas, Pike and Mathews, 2014 and Pike, 2012). Pike

(2012) also used laddering as a method to further explore his participants' values around travelling.

As a result of this small amount of research, the implications and practicalities of using laddering within a research rather than a therapy context are still being explored. This current research allowed for further exploration of the use of laddering in the context of social research. The analysis provided in Chapter 6 allows us to see the ways in which laddering was a fruitful task, for example, in allowing me to explore participants' construct systems through observing their journey up their ladders. It also allowed me to explore what constructs from similar themes mean to different people. In this, we gain some insight into the individuality and personal nature of participants' construing.

Another strength of the use of laddering in this research comes from the contribution this has made to PCP literature around superordinacy. Previous researchers have questioned the idea that laddering leads to more superordinate constructs, however, they have done so only theoretically (Bell, 2014; Butt, 2007). This research contributes to the field by examining the concept of superordinacy through the analysis of research data. The exploration of the superordinacy of the constructs at the top of the ladders raised questions about the structure of construct systems and paved way for perhaps a more fruitful alternative way of seeing them as "nests of meaning (Frances, 2016). As suggested by Frances (Personal communication 2/8/17), the research data also raises the question of whether superordinacy can, in principle, be judged objectively.

As the research was experimenting with laddering as a research tool, there are a number of observations which can be made about the limitations of both the process, including my skills as a researcher, and of the approach to analysis.

*7.4.1.3.2. Limitations of the process of Laddering in the context of this research*

On reflection, a limitation of my use of laddering in this process was my somewhat inflexible use of the process. In carrying out the laddering process I repeated the question "why" when asking participants to explain their reasoning behind their preference. The inflexibility in the way this was asked may have meant that participants did not always feel they could explore this any further. When using laddering as a practitioner with a client, it is often the case that the exploration and language used to prompt this exploration needs to be shifted or subtly reworded to allow for the client to feel able to explore their reasoning more (Personal communication, Frances 2/8/17). This highlights the importance of being flexible in the way the laddering questions are phrased in the context of research as much as in therapy or coaching.

*7.4.1.3.3. Limitations of checking the superordinacy of constructs*

There are a number of limitations which can be levelled against checking the superordinacy of participants' constructs in the way I did in this research. I attempted to do this by asking assistants to judge which construct was superordinate when they were faced with a pair of constructs, one taken from the top of the ladder and one

from the bottom. Assistants were not told which construct came from which end of the ladder. The first limitation which could be proposed is the lack of context. Assistants were not given the context of the ladder as they were not provided with the ladder itself, or the conversation around the ladder. After completing the judgments asked of them, Assistant B explained that the construct pairs they were unsure of, were those where they felt they would have needed more context in order to make a judgement about superordinacy. They felt that knowing what had elicited the constructs would have helped them in their judgement of what the constructs were referring to and therefore what was superordinate. When they sent the results of the superordinacy check back to me they stated that:

> *It was interesting to do, I admit I found it quite tough as not knowing the context and the source(s) made it quite hard to be sure I was picking up the 'correct' meaning from some of the constructs…my construal of what is meant by some of the phrases will undoubtedly have influenced things* –Assistant B

This is an interesting finding as it highlights the conversational nature of laddering, making the data it provides somewhat dependent on the context of the conversation. This also highlights the importance of accounting for and embracing this in a research situation during the analysis process. As a result of this it might be proposed that research using laddering to explore the core values around particular topics would need to further analyse the conversation around the ladders as well as the ladders themselves.

Another limitation is the inevitable influence of the personal constructions of the person judging the superordinacy of the constructs. Assistant C expressed their difficulty in completing the task because of the personal nature of the constructs and their own personal construal of these;

> *Very difficult often to do. I guess that goes with constructs being personal!* - Assistant C

With this in mind, as both Assistants B and C were coming to this task with no previous knowledge of the research, their interpretations of what was being conveyed in the constructs was from an outside perspective. This means that their own interpretations and constructions of the words and phrases given will have affected their judgements of the superordinacy, which could go part way to explaining the extent of the disagreement between them.

A further observation when we consider the two assistants' judgments together and their struggle to separate their own construal, from those of the research participants, could be that from a PCP perspective it is not possible to have any construct which is objectively superordinate. The interpretation of every construct will be dependent upon that individual and their own construct system. Therefore, it is perhaps surprising that the assistants agreed upon any of the constructs. It could be suggested that this level of agreement is due to accessing some sort of commonality. Perhaps when people judging superordinacy are from a common culture they will have a level of agreement, to some extent, on what is superordinate.

Although the assumption that laddering led to accessing higher order constructs could not be fully endorsed through my findings, I think it is important to draw attention to the thirty cases where the research assistants agreed that the laddering had led to the top of ladder construct. In these cases, there is good reason to suggest that the laddering was successful for the purpose Hinkle (1965) initially intended. However, it is clear from this discussion that superordinacy is a complex issue and judging the superordinacy of constructs elicited through laddering is a complex task. Nevertheless, the process of laddering in this research always led to additional insights into participants' constructs, beyond those revealed in the construct elicitation task. For example, it allowed for the journey of construing these environments to be explored, with each step of the ladder giving insight into these constructions. It also allowed for personal meaning behind the constructs from the construct elicitation task to be explored. This meant that constructs which addressed similar themes at face value could be explored finding very different personal meanings behind them for different participants.

## 7.5. Reflections on the Sample

I feel that the sample of participants recruited for this research is diverse in relation to gender, with 10 males and 6 females and in relation to age, with participants varying from their early twenties to seventy years old. In terms of ethnicity, however, I would have liked to have gained a more diverse sample, with 15 out of 16 participants being white British. Research from Natural England (2016), which monitored people engagement with the natural world, specifically children, found that people from Black, Asian and Minority Ethnicities were much less likely to engage

with nature (p.2). The same has also been suggested in research looking at adults' engagement with nature (Natural England, 2013). I feel that a more diverse sample of ethnicities would have allowed for more variety in the experiences discussed. As I explicitly sampled for people who do feel they hold a relationship with nature, given that people from ethnic minorities tend to be less engaged in nature activities, it is not surprising that I had recruitment difficulties in this sense. Perhaps in retrospect I may have focused more time on trying to address this.

It is also important to consider how my own personal construing of nature will have had an effect on my approach to sampling. Taking a constructivist approach to research, as this research does, it is acknowledged that my own construing of nature will have had an effect on sampling and therefore may have influenced the constructs produced. In my considerations of what constituted relationships with nature for sampling of participants, it is inevitable that my choices of participants will have been affected by both my knowledge of different ways of interacting with nature and also how I construe nature in general. In an attempt to address this, while generating ideas for sampling, I was in contact with my supervisors to ensure that my sampling was not limited to only my construing of nature but had others' insights. This helped to widen my sampling, as on two occasions supervisors mentioned relationships with nature which I had previously not considered: Tim, who had a relationship with nature through working for the Nature Conservancy and Ansa, who had a relationship with nature through her religion.

A final important reflection to be made on sampling participants would be the possible bias caused by interviewing only participants who have actively chosen to

take part in the clubs or groups I approached. In a similar way to past research, this to some degree makes them participants who engage with nature in formal ways such as groups and organisations. Their engagement with their relationship with nature is reflected in the fact they were the ones to get back to me, after considering themselves to have relationships with nature. There are many different interactions with nature which people choose to do alone, or in more private ways, which would have been harder to recruit but may have provided a wider insight into both development of relationships with nature and their current constructs. To attract other people who were not engaging with nature in these formal ways, it may have been useful to recruit participants through immersion in activities myself where I could have come across possible participants.

## 7.6. Reflexive Account of the Research Process

As someone who feels passionate about the natural world I was aware from the beginning of the research that my own views on issues within conservation and wildlife in particular would be part of my interpretation. Taking a constructivist approach to the research I acknowledged that this would inevitably be the case, as my interpretations are the way I construct and make sense of the data. The findings are and should be considered in this light. However, there were a number of ways by which I tried to avoid these becoming judgements.

In relation to the analysis of the data, although I take the view that my research is my interpretation of the data, I did take precautions to avoid this being influenced by any

judgements I might be making about the participant or their story. As part of the process of analysing the narratives around the RoE I made reflexive notes on the transcripts as I read them through for the first time. These were then noted as part of the listening summaries which were completed for each participant. While considering the overlapping narrative threads between participants' narratives I then had these reflexive notes to consider, to try to avoid my own perspective clouding any interpretations I made.

During the thematic content analysis of the constructs created by the construct elicitation task steps were taken again to check whether I had gone beyond the data with my own judgments. As described earlier in Chapter 4 an assistant was recruited to independently group the constructs into themes as a check on my own analysis. As part of this process, Assistant A did question some of the themes and these were discussed and changed if necessary.

In relation to reflecting on the interviews, the process of recruiting the participants took much less time than anticipated and meant that interviews were carried out quite quickly after the methods had been decided upon. I feel that this may have affected my interviewing as I had less time to continue preparation for the interviews. It may be the case, however, as these were my first individual interviews as a researcher, that I would have reflected in a similar way even if I had had more time to prepare. The process of learning and growing in confidence was an inevitable part of the research process. For the first few interviews there were times during the discussion where the topic was lost. On reflection, as I carried out more interviews my confidence grew and the interviews became more focused. Although my

inexperience in conducting individual interviews could be considered a limitation in the research, I feel that this allowed for participants to feel more comfortable in their conversations with me. My interviewees seemed to relax and talk freely when they saw I was nervous.

Another aspect of the PhD process which, on reflection, has been a huge part of the process for me individually has been in the dissemination of my research. The opportunity to present my research at two conferences central in the PCP community has allowed me to explore and experiment with ideas for the analysis of my data, with the invaluable feedback of experts in the field. In this light the concepts and debates which I had read about, I was able to explore with both academics and clinicians working with PCP, for example in discussion of superordinacy.

On personal reflection I feel that the research process has changed my relationship with nature for the better. The opportunity to speak to people with a variety of different interests in the natural world meant that my eyes were opened to other areas of interest. Since speaking to participants who enjoyed bird watching in particular, for example, I developed a keen interest in our feathered friends. The people whom I met and had the pleasure of talking to, about a topic which we were both rather passionate about, meant that I began to embrace my interest in nature in more hands-on ways. As discussed in the introduction, my interest in nature had until this research been to some extent inhibited by my studies and work without my realisation. Up until I decided to pursue the challenge of writing this thesis my interests in nature and my interest in human psychology had been quite separate

aspects of my life. However, the area where these two interests overlap is something which has captured my imagination.

## 7.7. Future Research

- One question which this research has raised for me is in relation to ethnicity and relationships with nature. When recruiting participants, I found a lack of people from ethnic minorities were involved in the groups and samples I approached. As previously mentioned, in discussing my sampling, it has been found in government research from Natural England (2016) that people from Black, Asian and Minority Ethnicities (BAME) backgrounds are less likely to visit nature and natural spaces. I feel that research similar to mine, which would look at the development of relationships with nature within those who do engage with nature from these backgrounds would be beneficial. During this research process I deliberately only spoke to participants who had active relationship with nature through something they were pursuing or involved in, whether that be their hobby, profession or religion. I feel there is a gap in the literature for looking at those who choose not to actively engage with the natural world. It would be beneficial therefore to do a similar research project on exploring people's relationships with nature, who do not actively pursue contact or interaction with it. I think it could be argued that all people, even those who do not take a particular interest in the natural world, are inevitably connected to it in some way. Whether that connection be through the food they eat, their childhood visits to parks, their trips to the beach as an adult. As discussed in Chapter 3, a trial of the interview was carried out with an

acquaintance who suggested he did not hold a relationship with nature and the interview was still fruitful as he discussed memories of playing in nature as a child.

- Having read around literature which highlights the importance of hands-on experiences with nature and finding the influence of direct experiences in this research, this has sparked further areas of personal interest. A question which has come to mind as a result of this, for me, has been about experiences with wildlife in particular. Does a personal experience with wildlife contribute to a love for nature? In this, research could explore the experiences of those we have encountered or regularly encounter “wild” animals and look at how this affects their sense of self in relation to nature.

- The importance of learning and mentally engaging with nature is another aspect of the research which I feel warrants further exploration as the importance of it was interpreted in all aspects of the data. The importance of learning to participants in this research poses questions about whether a love for learning is tied to interacting with nature. Further research into this would help to gain an insight into this connection between learning and engagement with nature. An idea for how this could be done is with diary accounts of walks, time bird watching etc., and seeing how these are constructed in relation to the mental engagement they provide.

## 7.8. Conclusions

This research addresses a significant gap in the existing literature by providing an insight into how people construct and make meaning out of their life experiences when talking about their relationships with nature. It adds value to the literature which already exists on significant life experiences and relationships with nature, by researching a wider sample of non-conservation specialist participants. This insight, into developing relationships with nature, is provided alongside an exploration of themes prevalent in people's current constructions of nature, which no previous work had done. The use of Personal Construct Psychology as a theoretical framework for the research has successfully allowed for this exploration of personal meaning making in both their current relationships with nature and its development

# References


Alexander, V. (2012). Views of the Neighbourhood: A Photo-Elicitation Study of the Built Environment. *Sociological Research Online.* 18(1), 1-26. Retrieved from http://epubs.surrey.ac.uk/787079/

Asah, S.T., Bengston, D.N., & Westphal, L.M. (2012). The Influence of Childhood: Operational Pathways to Adulthood Participation in Nature-Based Activities. *Environment and Behavior, 44*(4), 545-569. doi:https://doi.org/10.1177/0013916510397757

Barton, J., Bragg, R., Wood, C., & Pretty, J. (2016). *Green Exercise: Linking Nature, Health and Well-being*. London: Routledge.

Beery, T.H., & Wolf-Watz, D. (2014). Nature to place: Rethinking the environmental connectedness perspective. *Journal of Environmental Psychology, 40,* 198-205. doi: https://doi.org/10.1016/j.jenvp.2014.06.006

Bell, R. (2014). Did Hinkle prove laddered constructs are superordinate? A re-examination of his data suggests not. *Personal Construct Theory & Practice*, *11*, 1-4. Retrieved from http://www.pcp-net.org/journal/pctp14/bell14.pdf

Berlin, K.L., & Klenosky, D.B. (2014). Let Me Play, Not Exercise! A Laddering Study of Older Women's Motivations for Continued Engagement in Sports-Based Versus Exercise-Based Leisure Time Physical Activities. *Journal of Leisure Research, 46*(2), 127-152. Retrieved from https://search.proquest.com/openview/89c0eda72fd6e1b9460eb22e7de8e81e/1.pdf?pq-origsite=gscholar&cbl=34631

Berman, M.G. Jonides, J., & Kaplan, S. (2008). The Cognitive Benefits of Interacting With Nature. *Psychological Science, 19*(12), 1207-1212. doi: https://doi.org/10.1111/j.1467-9280.2008.02225.

Beyer, K.M.M., Kaltenbach, A., Szabo,B.S., Nieto, F.J., & Malecki, K.M. (2014). Exposure to Neighborhood Green Space and Mental Health: Evidence from the Survey of the Health of Wisconsin. *International Journal of Environmental Research and Public Health, 11*(3), 3453-3472. doi: https://doi.org/10. 3390/ijerph110303453

Black, R., & Cobbinah, P.B. (2016) Local attitudes towards tourism and conservation in rural Botswana and Rwanda. *Journal of Ecotourism,17*(1), 1-27. doi: https://doi.org/10.1080/14724049.2016.1258074

Blatt, E. (2014). Uncovering Students' Environmental Identity: An Exploration of Activities in an Environmental Science Course. *The Journal of Environmental Education, 45*(3), 194-216, doi: https://doi.org/10.1080/00958964.2014.911139

Brown, D.K., Barton, J.L.,Pretty, J., & Gladwell, V.F. (2014) Walks4Work: Assessing the role of the natural environment in a workplace physical activity intervention. *Scandanavian Journal of Work, Environment and Health, 40*(4), 390-399. doi: https://doi.org/10.5271/sjweh.3421

Burr,V. (2015) *Social constructionism*. London: Routledge.

Burr, V., King, N., & Butt, T. (2012). Personal construct psychology methods for qualitative research. *International Journal of Social Research Methodology*, *17*(4), 4-27. doi: https://doi.org/10.1080/13645579.2012.730702

Burr, V., Blyth, E., Sutcliffe, J., & King, N. (2016). Encouraging self-reflection in social work students: Using Personal Construct methods. *British Journal of Social Work* , *46*(7), 1997-2015. doi: https://doi.org/10.1093/bjsw/bcw014

Butt, T. (2007). Personal Construct Theory and Method: Another look at laddering. *Personal Construct Theory & Practice. 4,* 11-14. Retrieved from http://www.pcp-net.org/journal/pctp07/butt07.pdf

Butt. T. (2008). *George Kelly: The Psychology of Personal Constructs*. Hampshire and New York: Palgrave Macmillan

Cabaroglu, N., & Denicolo, P. M. (2008) Exploring student teacher belief development: an alternative constructivist technique, snake interviews, exemplified and evaluated. *Personal Construct Theory and Practice, 5.* 28-40. Retrieved from http://www.pcp-net.org/journal/pctp08/cabaroglu08.pdf

Cagle, N.L. (2017). Changes in experiences with nature through the lives of environmentally committed university faculty. *Environmental Education Research*, 1-10. doi: https://doi.org/10.1080/13504622.2017.1342116

Calogiuri, G., Evensen, K., Weydahl, A., Andersson, K., Patil, G., Ihlebæk, C., & Raanaas, R.K. (2016). Green exercise as a workplace intervention to reduce job stress. Results from a pilot study. *Work, 53*(1)*,* 99-111. doi: https://doi.org/10.3233/WOR-152219

Caputi, P., Viney, L.L., Walker, B.M., & Crittenden, N. (Eds.). (2012). *Personal Construct Methodology*. Chichester: Wiley-Blackwell.

Cassell, C., & Symon, G. (2011) Assessing ‘good’ qualitative research in the work psychology field: A narrative analysis. *Journal of Occupational and Organizational Psychology, 84,* 633-650. doi: https://doi.org/10.1111/j.2044-8325.2011.02009.x

Clayton, S., & Myers, G. (2009). *Conservation Psychology: Understanding and Promoting Human Care for Nature*. Sussex: John Wiley & Sons Ltd.

Chawla, L. (1998). Significant Life Experiences Revisited: A Review of Research on Sources of Environmental Sensitivity. *The Journal of Environmental Action, 29*(3), 11-21. doi: https://doi.org/10.1080/00958969809599114

Chawla, L. (1999). Life Paths Into Effective Environmental Action. *The Journal of Environmental Education*, *31*(1), 15-26. doi: https://doi.org/10.1080/00958969909598628

Chawla, L. (2007). Childhood Experiences Associated with Care for the Natural World: A Theoretical Framework for Empirical Results. *Children, Youth and Environments*, *17*(4),144-170. doi: https://doi.org/10.7721/chilyoutenvi.17.4.0144

Clayton, S. (2003). Environmental Identity: A Conceptual and an Operational Definition. In S.Clayton & S. Opotow (Eds.) *Identity and the Natural Environment: The Psychological Significance of Nature.* (pp. 45-66). London: The MIT Press.

Clayton, S.D., & Saunders,C.D. (2012). Introduction: Environmental and Conservation Psychology. In S. Clayton (Eds.) *The Oxford Handbook of Environmental and Conservation Psychology.* (pp. 1-7). Oxford: Oxford University Press

Cobern, W.W. (1993). College Students' Conceptualizations of Nature: An Interpretive World View Analysis. *Journal of Research in Science Teaching, 30*(8), 935-951. doi: https://doi.org/10.1002/tea.3660300810

Colléony,A., Clayton, S., Couvet, D., Jalme, M.S., & Prévot, A.C. (2017). Human preferences for species conservation: Animal charisma trumps endangered status. *Biological Conservation, 206,* 263-269. doi: https://doi.org/10.1016/j.biocon.2016.11.035

Crist, E. (2004). Against the Social Construction of Nature and Wilderness. *Environmental Ethics, 26*(1), 5-24. doi: https://doi.org/10.5840/enviroethics200426138

Demeritt, D. (2002) What is the 'social construction of nature'? A typology and sympathetic critique. *Progress in Human Geography, 26*(6), 767-790. doi: https://doi.org/10.1191/0309132502ph402oa

Denicolo, P., & Pope, M. (1990). Adults learning teachers thinking. In Day, C. Pope, M. & Denicolo, P. (Eds.), *Insights into teachers' thinking and practice* (pp.155-169). London: Falmer.

Denicolo, P., Long, T., & Bradley-Cole, K. (Eds.). (2016). *Constructivist Approaches and Research Methods: A Practical Guide to Exploring Personal Meanings*. London: SAGE Publications Ltd.

Doucet, A., & Mauthner, N.S. (2008) What can be known and how? Narrated subjects and the Listening Guide. *Qualitative Research, 8*(3), 399-409. doi: https://doi.org/10.1177/1468794106093636

Dunlap, R.E., Van Liere, K.D., Mertig, A.G., & Jones, R.E. (2000). Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale. *Journal of Social Issues, 56* (3), 425-442. doi: https://doi.org/10.1111/0022-4537.00176

Dunlap, R.E. (2008). The New Environmental Paradigm Scale: From Marginality to Worldwide Use. The *Journal of Environmental Education, 40*(1), 3-18. doi: https://doi.org/10.3200/ JOEE.40.1.3-18

Eagly, A.H., & Chaiken, S. (1993). *The Psychology of Attitudes.* Orlando: Harcourt Brace Jovanovich College Publishers.

Edwards, R., & Weller, S. (2012). Shifting analytic ontology: using I-poems in qualitative longitudinal research. *Qualitative Research, 12*(2), 202-217. doi: https://doi.org/10.1177/1468794111422040

Ewert, A., Place, G., & Sibthorp, J. (2005). Early-Life Outdoor Experiences and an Individual's Environmental Attitudes. *Leisure Sciences, 27*(3), 225-239. doi: https://doi.org/10.1080/01490400590930853

Evans, G.W., Brauchle, G., Haq, A., Stecker, R., Wong, K., & Shapiro, E., (2007). Young Children's Environmental Attitudes and Behaviors. *Environment and Behavior, 39*(5), 635-658. doi: https://doi.org/10.1177/0013916506294252

Fiallo, E. A., & Jacobson, S. K. (1995). Local Communities and Protected Areas: Attitudes of Rural Residents Towards Conservation and Machalilla National Park, Ecuador. *Environmental Conservation, 22*(3), 241-249. doi: https://doi.org/10.1017/S037689290001064X

Fisher, A. (2012). *Radical Ecopsychology: Psychology in the Service of Life.* (2nd ed.). New York: State University of New York Press.

Forrest, J., Nikodemos, L., & Gilligan, C. (2016). The experience of receiving scholarship aid and its effect on future giving: a listening guide analysis. *Qualitative Research in Psychology, 13*(1), 47-66. doi: https://doi.org/10.1080/14780887.2015.1106628

Fox, D., & Xu, F. (2017). Evolutionary and socio-cultural influences on feelings and attitudes towards nature: a cross-cultural study. *Asia Pacific Journal of Tourism Research, 22*(2), 187-199. doi: https://doi.org/10.1080/10941665.2016.1217894

Frances, M. (2016). *Nests of Meaning: An alternative way top construe constructs*. Poster presented at The XIIIth European Personal Construct Association Conference A new spirit in PCP: linking people, ideas & dreams, Padua

Gilligan, C. (2015). The Listening Guide Method of Psychological Inquiry. *Qualitative Psychology, 2*(1), 69-77. doi: https://doi.org/10.1037/qup0000023

Glavas, C., Pike, S., & Mathews, S. (2014). Internet-enabled Tourism Entrepreneurs. International Entrepreneurial Values Elicited through Repertory Test and Laddering Analysis. *International Journal of Tourism Research,16*(1)*,* 44-55. doi: https://doi.org/10.1002/jtr.1896

Goins, S., Winter, D., Sundin, J., Patient, S., & Aslan, E. (2012). Self-Construing In Former Child Soldiers. *Journal of Constructivist Psychology, 25*(4), 275-301. doi: https://doi.org/10.1080/10720537.2012.703568

Gosling, E., & Williams, K. (2010). Connectedness to nature, place attachment and conservation behaviour: Testing connectedness theory among farmers. *Journal of Environmental Psychology, 30*(3), 298-304. doi: https://doi.org/10.1016/j.jenvp.2010.01.005

Green, J., & Thorogood, N. (2014). *Qualitative Methods for Health Research*. London: SAGE Publishing Ltd.

Greenway, R. (2010). What is ecopsychology? *Gatherings: Journal of the International Community for Ecopsychology.* Retrieved from: http://www.ecopsychology.org/journal/gatherings/what.htm

Harcourt, A. H., Pennington, H., & Weber, A. W. (1986). Public attitudes to wildlife and conservation in the Third World. *Oryx, 20*(3), 152-154. doi: https://doi.org/10.1017/S0030605300019992

Hartig, T. (1993). Nature experience in transactional perspective. *Landscape and Urban Planning, 25*(1-2), 17-36. doi: https://doi.org/10.1016/0169-2046(93)90120-3

Hanson, S., & Jones, A. (2015). Is there evidence that walking groups have health benefits? A systematic review and meta-analysis. *British Journal of Sports Medicine, 49*, 710-715. doi: https://doi.org/10.1136/bjsports-2014-094157

Hatala, A.R., Waldram, J.B., & Caal, T. (2015). Narrative Structures of Maya Mental Disorders. *Culture, Medicine and Psychiatry, 39*(3), 449-486. doi: https://doi.org/10.1007/s11013-015-9436-9

Hayles, N.K. (1995). Searching for Common Ground. In M.E. Soule. & G. Lease (Eds.), *Reinventing Nature?: Responses To Postmodern Deconstruction* (pp. 47-64). Washing D.C.: Island Press.

Heberlein, T. A. (2012). Navigating environmental attitudes. *Conservation biology: the journal of the Society for Conservation Biology, 26*(4), 583-585. doi: https://doi.org/10.1111/j.1523-1739.2012.01892.x

Hinds, J., & Sparks, P. (2008). Engaging with the natural environment: The role of affective connection and identity. *Journal of Environmental Psychology, 28*(2), 109-120. doi: https://doi.org/10.1016/j.jenvp.2007.11.001

Hinkle, D. (1965). The change of personal constructs from the viewpoint of a theory of construct implications. (Doctoral thesis). Retrieved from http://www.pcp-net.org/journal/pctp10/hinkle1965.html

Hsieh, H., & Shannon, S. E. (2005). Three Approaches to Qualitative Content Analysis. *Qualitative Health Research, 15*(9), 1277-1288. doi: https://doi.org/10.1177/104973230527668

Hughes, J. (2017). *Connection to Nature over the lifespan.* Paper presented at Nature Connections 2017, the University of Derby.

Iantaffi, A. (2011). Travelling along 'rivers of experience': personal construct psychology and visual metaphors in research. In Reavey, P. (Ed.) *Visual Methods in Psychology: Using and Interpreting Images in Qualitative Research* (pp. 271-283). East Sussex: Routledge.

Jack, D.C. (1991). *Silencing the Self: Depression and Women.* Cambridge, MA: Harvard University Press

Johnstone, D. (2016). A Listening Guide Analysis of Women's Experiences of Unacknowledged Rape. *Psychology of Women, 40*(2), 275-289. doi: https://doi.org/10.1177/0361684315624460

Jordon, M., Stevens, P., & Milton. M. (2010). Ecopsychology: Past, present and future. *European Journal of Ecopsychology, 1*(1), 1-3. Retrieved from: http://oro.open.ac.uk/36395/2/8.pdf

Kals, E., Montada, L., & Schumacher, D. (1999). Emotional Affinity toward Nature as a Motivational Basis to Protect Nature. *Environment and Behavior, 31*(2), 178-202. doi: 10.1177/00139169921972056

Kaplan, S. (1995). The Restorative Benefits of Nature: Towards an Integrative Framework. *Journal of Environmental Psychology*, *15*(3), 169-182. doi: https://doi.org/10.11016/0272-4944(95)90001-2

Kelly, G.A. (1955). *The Psychology of Personal Constructs. Volume One: A Theory of Personality*. New York: W.W. Norton & Company Inc.

Kidd, R. M., & Kidd, A. H. (1996). Developmental factors leading to positive attitudes toward wildlife and conservation. *Applied Animal Behaviour Science, 47*(1), 119-125. doi: https://doi.org/10.1016/0168-1591(95)01015-7

Kidegheshor, J.R., Røskaft, E., & Kaltenborn, B.P. (2007). Factors influencing conservation attitudes of local people in Western Serengeti, Tanzania. *Biodiversity and Conservation, 16*(7), 2213-2230. doi: https://doi.org/10.1007/s10531-006-9132-8

King, N., & Horrocks, C. (2010). *Interviews in Qualitative Research*. London: Sage Publications Ltd.

King, N. (2012). 'I forget my problems- the problems are in the soil': Encountering nature in Allotment Gardening. In: C. Horrocks and S. Johnson (Eds.), *Advances in Health Psychology: Critical Approaches.* Basingstoke: Palgrave Macmillian.

Knegtering, E., Hendrickx, L., Van Der Windt, H.J., & Schoot Uiterkamp, A.J.M. (2002). Effects of Species' Characteristics on Nongovernmental Organizations' Attitudes toward Species Conservation Policy. *Environment and Behavior, 34*(3), 378-400. doi: https://doi.org/10.1177/0013916502034003006

Kolar, K., Ahmad, F., Chan, L., & Erickson, P.G. (2015). Timeline Mapping in Qualitative Interviews: A Study of Resilience with Marginalized Groups. *International Journal of Qualitative Methods, 14*(3),13-32. doi: https://doi.org/10.1177/160940691501400302

Krippendorff, K. (2004). *Content Analysis: An Introduction to its Methodology* (2nd ed.). California: Sage Publications Ltd.

Lee, G.L., Neimeyer, R.A., & Chan, C.L.W. (2012). The Meaning of Childbearing Among IVF Service Users Assessed via Laddering Technique. *Journal of Constructivist Psychology, 25*(4), 302-324. doi: https://doi.org/10.1080/10720537.2012.703573

Liu, S-C., & Lin, H-S. (2014). Undergraduate students' ideas about nature and human–nature relationships: an empirical analysis of environmental worldviews. *Environmental Education Research, 20*(3), 412-429 doi: https://doi.org/10.1080/13504622.2013.816266

Linzmayer, C.D., & Halpenny, E.A. (2014). 'I might know when I'm an adult': making sense of children's relationships with nature. *Childrens Georgraphies, 12*(4), 412-428. doi: https://doi.org/10.1080/14733285.2013.821262

Louv, R. (2005). Last Child in the Woods: Saving our children from Nature Deficit Disorder. New York: Workman Publishing Company.

Lumber, R., Richardson, M., & Sheffield, D. (2017). Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection. *PLoS ONE 12*(5), 1-24. doi: https://doi.org/10.1371/journal.pone.0177186

Madill, A., Jordan, A., & Shirley, C. (2000). Objectivity and reliability in qualitative analysis: Realist, Contextualist and Radical Constructionist Epistemologies. *British Journal of Psychology, 91*(1), 1-20. doi: https://doi.org/10.1348/000712600161646

Maller, C., Townsend, M., Pryor, A., Brown, P., & St Leger, L. (2005). Healthy nature healthy people: 'contact with nature' as an upstream health promotion intervention for populations. *Health Promotion International,* 21(1), 45-54. doi: https://doi.org/10.1093/heapro/dai032

Martell, L. (1994). *Ecology and Society: An Introduction*. Oxford: Blackwell Publishers Ltd.

Martin, C., & Czellar, S. (2016). The extended Inclusion of Nature in Self scale. *Journal of Environmental Psychology, 47,* 181-194. doi: https://doi.org/10.1016/j.jenvp.2016.05.006

Masud, M.M., & Kari, F.B. (2015). Community attitudes towards environmental conservation behaviour: An empirical investigation within MPAs, Malaysia. *Marine Policy, 52*(1), 138-144. doi: https://doi.org/10.1016/j.marpol.2014.10.015

Mauthner, N.S., and Doucet, A. (1998) Reflections on a Voice Centred Relational Method of Data Analysis: Analysing Maternal and Domestic Voices. In J. Ribbens and R. Edwards (Eds.), *Feminist Dilemmas in Qualitative Research: Private Lives and Public Texts* (pp. 119-144). London: Sage

Mauthner, N.S. (2002). *The darkest days of my life: Stories of post-partum depression.* Cambridge, MA: Harvard University Press

Mayer, F. S., & Frantz, C. M. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology, 24*(4)*,* 503-515. doi: https://doi.org/10.1016/j.jenvp.2004.10.001

McAdams, D.P. (1993). *The stories we live by: Personal myths and the making of the self*. New York: The Guildford Press.

Mehta, J. N., & Heinen, J. T. (2001). Does community-based conservation shape favorable attitudes among locals? an empirical study from nepal. *Environmental management, 28*(2), 165-177. doi: https://doi.org/10.1007/s002670010215

Macnaghten, P., & Urry, J. (1999). *Contested Natures*. London: Sage Publications Ltd.

Miles, M.B., & Huberman, A.M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook.* London: SAGE Publications.

Milton, K. (1993). *Environmentalism: The View from Anthropology.* London: Routledge.

Mitchell, R. and Popham, F. (2008). Effect of exposure to natural environment on health inequalities: an observational population study. *The Lancet, 372* (9650), 1655-1660. doi: https://doi.org/10.1016/S0140-6736(08)61689-X

Moffat, B.M., Johnson, J.L. and Shoveller, J.A. (2009). A gateway to nature: Teenagers' narratives on smoking marijuana outdoors. *Journal of Environmental Psychology, 29*(1), 86-94. doi: https://doi.org/10.1016/j.jenvp.2008.05.007

More, C. (2000). *Understanding the Industrial Revolution*. Oxon: Routledge.

Müller, M., Kals, E., & Pansa, R. (2009). Adolescents' emotional affinity toward nature: A cross-societal study. *Journal of Developmental Processes, 4*(1), 59-69. Retrieved from: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.465.963&rep=rep1&type=pdf

Murray, M. & Sargeant, S. (2011). Narrative Psychology. In D. Harper & A. Thompson (Eds.), *Qualitative research methods in mental health and* psychotherapy London: Wiley-Blackwell. Retrieved from https://www.researchgate.net/profile/Michael_Murray3/publication/272050115_Narrative_Psychology/links/54d9bd300cf2970e4e7c9fcd/Narrative-Psychology.pdf

Natural England (2013). *Kaleidoscope: Improving support for black, Asian and ethnic communities to access services from the natural environment and heritage sectors (NECR127)*. Retrieved from http://publications.naturalengland.org.uk/publication/5289189142691840

Natural England (2016). *Conservation 21: Natural England's Conservation Strategy for the 21st Century*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/562046/conservation-21.pdf

Natural England (2016). *Monitor of Engagement with the Natural Environment: a pilot to develop an indicator of visits to the natural environment by children*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/498944/mene-childrens-report-years-1-2.pdf

Neimeyer, R.A., Anderson, A., & Stockton, L. (2010). Snakes versus Ladders: A validation of laddering technique as a measure of hierarchical structure. *Journal of*

*Constructivist Psychology, 14*(2), 85-105. doi: https://doi.org/10.1080/10720530125990

Nisbet, E.K., Zelenski, J.M., & Murphy, S.A. (2009). The Nature Relatedness Scale: Linking Individuals' Connection With Nature to Environmental Concern and Behavior. *Environment and Behavior, 41*(5), 715-740. doi: https://doi.org/10.1177/0013916508318748

Nisbet, E., & Zelenski, J. (2011). Underestimating nearby nature: Affective forecasting errors obscure the happy path to sustainability. *Psychological Science, 22*(9), 1101-1106. doi: https://doi.org/10.1177/0956797611418527

Pain, H. (2012). A Literature Review to Evaluate the Choice and Use of Visual Methods*. International Journal of Qualitative Methods*, *11*(4), pp. 303-319. doi: https://doi.org/10.1177/160940691201100401

Palmer, J.A. (1993). Development of Concern for the Environment and Formative Experiences of Educators. *Journal of Environmental Education, 24*(3). 26-30. doi: https://doi.org/10.1080/00958964.1993.9943500

Palmer, J.A., Suggate, J,. Bajd, B.,Hart, P.K.P., Roger, H.P.Ho, Ofwono-Orecho, J.K.W., Peries, M., Robottom, I., Tsaliki, E., & Van staden, C. (1998). An Overview of Significant Influences and Formative Experiences on the Development of Adults' Environmental Awareness in Nine Countries. *Environmental Education Research, 4*(4), 445-464. doi: https://doi.org/10.1080/1350462980040408

Papathomas, A., Smith, B., & Lavallee, D. (2015) Family experiences of living with an eating disorder: A narrative analysis. *Journal of Health Psychology, 20*(3), 313-325. doi: https://doi.org/10.1177/1359105314566608

Pérez, M.P., Sala, L.G., & Ortega, M.C. (2016). Identity Construction as a Mother: A Comparative Study Between Adopted and Nonadopted Women. *Journal of Constructivist Psychology, 29*(2), 184-196. doi: https://doi.org/10.1080/10720537.2015.1083920

Peterson, A. (1999). Environmental Ethics and the Social Construction of Nature. *Environmental Ethics, 21*(4), 339-357. doi: https://doi.org/10.5840/enviroethics19992142

Pettorelli, N., Evans, D. M., Garner, T. W. J., Katzner, T., Gompper, M. E., Altwegg, R., Branch, T.A., Johnson, J.A., Acevedo-Whitehouse, K., DaVolls, L., Rantenen, E., & Gordon, I. J. (2013). Addressing gender imbalances in Animal Conservation. *Animal Conservation, 16*(2), 131-133. doi: https://doi.org/10.1111/acv.12032

Pidgeon, N., & Henwood, K. (1997). Using grounded theory in psychological research. In N. Hayes (Eds.), *Doing qualitative analysis in psychology*, Hove: Psychology Press.

Pike, S. (2011). Destination positioning opportunities using personal values: Elicited through the Repertory Test with Laddering Analysis. *Tourism Management, 33*(1)*,* 100-107. doi: https://doi.org/10.1016/j.tourman.2011.02.008

Plous, S. (1993). Psychological Mechanisms in the Human Use of Animals. *Journal of Social Issue, 49*(1), 11-52. doi: https://doi.org/10.1111/j.1540-4560.1993.tb00907

Pointon, P. (2014). 'The city snuffs out nature': young people's conceptions of and relationship with nature. *Environmental Education Research, 20*(6), 776-794. doi: https://doi.org/10.1080/13504622.2013.833595

Polkinghorne, D.E. (1995) Narrative configuration in qualitative analysis. *Qualitative Studies in Education, 8*(1), 5-23. doi: https://doi.org/10.1080/0951839950080103

Pretty, J., Peacock, J., Hine, R., Sellens, M., South, N., & Griffin, M. (2007). Green Exercise in the UK Countryside: Effects on Health and Psychological Well-Being, and Implications for Policy and Planning. *Journal of Environmental Planning and Management, 50*(2), 211-231. doi: https://doi.org/10.1080/09640560601156466

Prévot, A.C. Clayton, S., & Mathevet, R. (2016). The relationship of childhood upbringing and university degree program to environmental identity: experience in nature matters. *Environmental Education Research*, *23*(2), 1-17. doi: https://doi.org/10.1080/13504622.2016.1249456

Raskin, J. D. (2002). Constructivism in psychology: Personal construct psychology, radical constructivism, and social constructionism. In J. D. Raskin & S. K. Bridges (Eds.), *Studies in meaning: Exploring constructivist psychology* (pp. 1-25). New York: Pace University Press.

Reavey, P. (Eds.). (2011). *Visual Methods in Psychology: Using and Interpreting Images in Qualitative Research*. Sussex: Psychology Press.

Rejnö, Å. Berg, L.& Danielson, E. (2013). The narrative structure as a way to gain insight into peoples' experiences: one methodological approach. *Scandanavian Journal of Caring Sciences, 28*(3), 618-626. doi: https://doi.org/10.1111/scs.12080

Reser, J.P. (1995). Whither Environmental Psychology?: The Transpersonal Ecopsychology Crossroads. *Journal of Environmental Psychology, 15*(3), 235-257. doi: https://doi.org/10.1016/0272-4944(95)90006-3

Reynolds, T.J., & Gutman, J. (1988). Laddering Theory, Method, Analysis and Interpretation. *Journal of Advertising Research. 28*(1), 11-31. Retrieved from http://web.b.ebscohost.com.libaccess.hud.ac.uk/ehost/pdfviewer/pdfviewer?vid=2&sid=60d54468-010e-4e15-b255-1a0ef2faddc0%40sessionmgr102

Richardson, M., Cormack, A., McRobert, L., & Underhill, R. (2016). 30 Days Wild: Development and Evaluation of a Large-Scale Nature Engagement Campaign to Improve Well-Being. *PLoS ONE 11*(2), 1-13. doi: https://doi.org/10.1371/journal.pone.0149777

Richardson, M., Hallam, J., & Lumber, R. (2015). One thousand good things in Nature: aspects of nearby nature associated with improved connection to Nature. *Environmental Values, 24*(5), 603-619. doi: https://doi.org/10.3197/096327115x14384223590131

Rogerson, M. & Barton, J. (2015). Effects of the Visual Exercise Environments on Cognitive Directed Attention, Energy Expenditure and Perceived Exertion. *International Journal of Environmental Research and Public Health, 12*(7), 7321-7336. doi: https://doi.org/10.3390/ijerph120707321

Sarbin, T.R. (Ed.) (1986). *Narrative Psychology: The Storied Nature of Human Conduct*. Westport CT: Praeger Publishers

Saunders, C.D. (2003). The Emerging Field of Conservation Psychology. *Human Ecology Review, 10*(2), 137-149. Retrieved from: http://www.humanecologyreview.org/pastissues/her102/102saunders.pdf

Savani, K., & Job, V. (2017). Reverse ego-depletion: Acts of self-control improve subsequent performance in Indian cultural contexts. *Journal of Personality and Social Psychology, 113*(4), 589-607. doi: https://doi.org/10.1037/pspi0000099

Schindler, S., Cimadom, A., & Wrbka, T. (2011). The attitude towards nature and nature conservation on the urban fringes. *Innovation: The European Journal of Social Science Research, 24*(3), 379-390. doi: https://doi.org/10.1080/13511610.2011.596700

Schlegel, J., & Rupf, R. (2010). Attitudes towards potential animal flagship species in nature conservation: A survey among students of different educational institutions. *Journal for Nature Conservation, 18*(4), 278-290. doi: https://doi.org/10.1016/j.jnc.2009.12.002

Schreier, M. (2013). Qualitative Content Analysis. In U. Flick (Eds.), *The SAGE Handbook of Qualitative Data Analysis* (pp. 170-183). London: Sage Publications Ltd.

Schultz, P.W. (2001) The structure of environmental concern: concern for self, other people, and the biosphere. *Journal of Environmental Psychology, 21*(4), 327-339. doi: https://doi.org/10.1006/jevp.2001.0227

Schultz, P. W. (2002). Inclusion with nature: The psychology of human-nature relations. In P. Schmuck & W. P. Schultz (Eds.), *Psychology of sustainable development*, (pp. 62-78) Norwell, MA: Kluwer Academic.

Scott, T.L., Masser, B.M., & Pachana, N.A. (2015). Exploring the health and wellbeing benefits of gardening for older adults. *Ageing and Society, 35*(10), 2176-2200. doi: https://doi.org/10.1017/S0144686X14000865

Shipman, P. (2010). The Animal Connection and Human Evolution. *Current Anthropology, 51*(4), 1-21. doi: https://doi.org/10.1086/653816

Sia, A.P., Hungerford, H.R., & Tomera, A.N. (1985). Selected Predictors of Responsible Environmental Behavior: An Analysis. *The Journal of Environmental Education, 17*(2), 31-40. doi: https://doi.org/10.1080/00958964.1986.9941408

Simpson, J., Heath, J., & Wall, G. (2013). Living with a pituitary tumour: A narrative analysis. *Journal of Psychology and Health, 29*(2), 162-176. doi: https://doi.org/10.1080/08870446.2013.840784

Sodhi, N. S., Davidar, P., & Rao, M. (2010). Empowering women facilitates conservation. *Biological Conservation, 143*(5), 1035-1036. doi: https://doi.org/10.1016/j.biocon.2010.02.014

Sonntag-Öström, E., Stenlundb, T., Nordind, M., Lundellc, Y., Ahlgrenb, C., Fjellman-Wiklundb, A., Järvholma, L.S., & Dolling, A. (2017). Nature's effect on my mind" – Patients' qualitative experiences of a forest-based rehabilitation programme. *Urban Forestry and Urban Greening, 14*(3)*,* 607-614. doi: https://doi.org/10.1016/j.ufug.2015.06.002

Stapleton, S.R. (2015). Environmental Identity Development Through Social Interactions, Action, and Recognition. *The Journal of Environmental Education, 46*(2), 94-113. doi: https://doi.org/10.1080/00958964.2014.1000813

Steg, L., van den Berg, A.E., & de Groot, J.I.M. (2013). Environmental Psychology: History, scope and methods. In L.Steg, A.E. van den Berg and J.I.M. de Groot (Eds.), Environmental Psychology: An Introduction (pp 1-11). West Sussex: Wiley-Blackwell.

Swanagan, J. S. (2000). Factors Influencing Zoo Visitors' Conservation Attitudes and Behavior. *Journal of Environmental Education, 31*(4), 26-31. doi: https://doi.org/10.1080/00958960009598648

Tabernero, C., & Hernández, B. (2011). Self-Efficacy and Intrinsic Motivation Guiding Environmental Behavior. *Environment and Behavior, 43*(5), 658-675. doi: https://doi.org/10.1177/0013916510379759

Tam, K.P. (2013). Concepts and measures related to connection to nature: Similarities and differences. *Journal of Environmental Psychology, 34*, 64-78. doi: https://doi.org/10.1016/j.jenvp.2013.01.004

Tanner, T. (1980). Significant life experiences. *Journal of Environmental Education. 11*(4), 20-24. doi: https://doi.org/10.1080/00958964.1980.9941386

Taylor, B.R. (Ed.) (2005). *The Encyclopedia of Religion and Nature*. London: Thoemmes, Continuum.

Thomas, K. (1984) *Man and the Natural World: Changing Attitudes in England 1500-1800.* London: Penguin Books Ltd.

Thomashow, M. 1995. *Ecological Identity.* Cambridge, MA: MIT Press.

Torgerson,D. (1999) *The Promise of Green Politics: Environmentalism and the Public Sphere.* USA: Duke University Press

Tugurian, L.P., & Carrier, S.J. (2017). Children's environmental identity and the elementary science classroom. *The Journal of Environmental Education, 48* (3), 143-153. doi: https://doi.org/10.1080/00958964.2016.1191415

Tyrväinen,L., Ojala, A. Korpela, K., Lanki, T., Tsunetsugu, Y., & Kagawa, T. (2014). The influence of urban green environments on stress relief measures: A field experiment. *Journal of Environmental Psychology, 38*, 1-9. doi: https://doi.org/10.1016/j.jenvp.2013.12.005

Udaya Sekhar, N. (2003). Local people's attitudes towards conservation and wildlife tourism around Sariska Tiger Reserve, India. *Journal of environmental management, 69*(4), 339-347. doi: https://doi.org/10.1016/j.jenvman.2003.09.002

Ulrich, R.S., Simons, R.F., Losito, B.D., Fiorito, E., Miles, M.A., & Zelson, M. (1991). “Stress Recovery During Exposure to Natural and Urban Environments”. *Journal of Environmental Psychology, 11*, 201-230. doi: https://doi.org/10.1016/S0272-4944(05)80184-7

United Nations (2015). *Paris Agreement*. Retrieved from http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf

Van Auken, P. M., Frisvoll, S. J., & Steward, S. I. (2010). Visualising community: using participant-driven photo-elicitation for research and application. *The International Journal of Justice and Sustainability*, 15(4), 373-388. doi: https://doi.org/10.1080/13549831003677670

Van den Berg, A. E., & Koole, S.L. (2006). New wilderness in the Netherlands: An investigation of visual preferences for nature development landscapes. *Landscape and Urban Planning, 78,* 362–372. doi: https://doi.org/10.1016/j.landurbplan.2005.11.006

Van den Berg, A.E., & Custers, M.H.G. (2011). Gardening Promotes Neuroendocrine and Affective Restoration from Stress. *Journal of Health Psychology, 16*(1), 3-11. doi: https://doi.org/10.1177/1359105310365577

Van Lier, L.E., Utter, J., Denny, S., Lucassen, M., Dyson, B., & Clark, T. (2017). Home Gardening and the Health and Well-Being of Adolescents. *Health Promotion Practice, 18*(1), 34-43. doi: https://doi.org/10.1177/1524839916673606

Vining, J., Merrick, M.S., & Price, E.A. (2008). The Distinction between Human and Nature: Human Perception/s of Connectedness to Nature and Elements of the Natural and Unnatural. *Research in Human Ecology,* 15(1), 1-11. Retrieved from: http://apjh.humanecologyreview.org/pastissues/her151/viningetal.pdf

Williams, C.C., & Chawla, L. (2016). Environmental identity formation in non-formal environmental education programs. *Environmental Education Research, 22*(7), 978-1001. doi: https://doi.org/10.1080/13504622.2015.1055553

Willig, C. (2013*). Introducing Qualitative Research in Psychology*. (3rd ed.). Berkshire: Open University Press

Wilson,E. O. (1984). *Biophilia.* Cambridge: Harvard University Press. Berkshire: Open University Press.

Winter, D.A. (2017). Ebola 'Done Done'—But What Has It Left Behind, *Journal of Constructivist Psychology*, 1-16. doi: https://doi.org/10.1080/10720537.2017.1333472

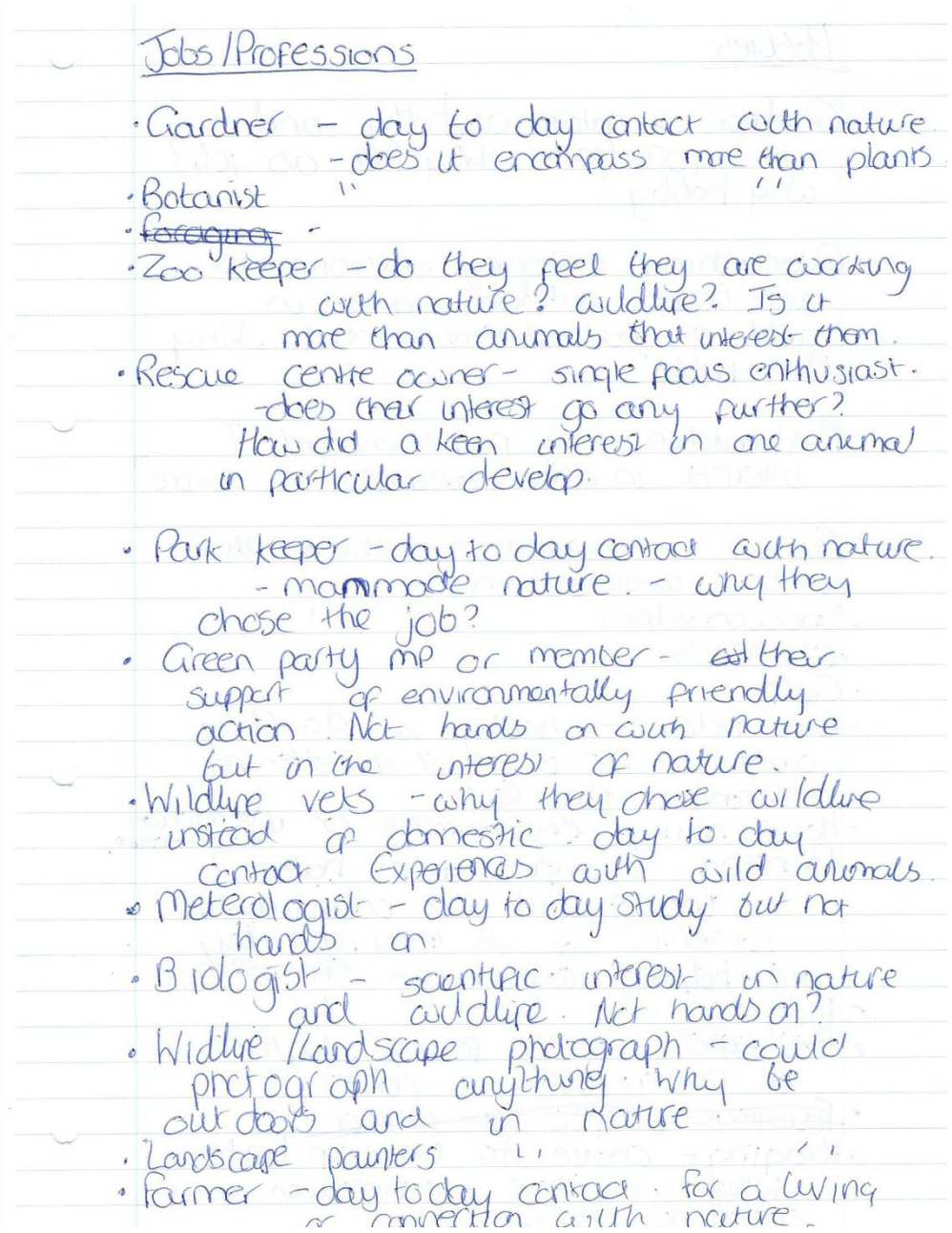
Worster, D. (1994). *Nature's Economy: A History of Ecological Ideas. 2nd ed.* Cambridge: Cambridge University Press.

Yang, N., Zhang, E., & Chen, M. (2010). Attitudes towards wild animal conservation: a comparative study of the Yi and Mosuo in China. *International Journal of Biodiversity Science, Ecosystem Services & Management, 6*(1-2), 61-67. doi: https://doi.org/10.1080/21513732.2010.509630

Young, R.A., Freisen, J.D., & Borycki, B. (1994). Narrative structure and parental influence in career development. *Journal of Adolescence, 17*(2), 173-191. doi: https://doi.org/10.1006/jado.1994.1017

# Appendices

## Appendix 1- Notes on ideas for sampling



Jobs / Professions

- Gardner – day to day contact with nature – does it encompass more than plants
- Botanist "
- ~~Foraging~~ -
- Zoo keeper – do they feel they are working with nature? wildlife? Is it more than animals that interest them.
- Rescue centre owner – single focus enthusiast. – does their interest go any further? How did a keen interest in one animal in particular develop.
- Park keeper – day to day contact with nature. – manmade nature. – why they chose the job?
- Green party MP or member – either support of environmentally friendly action. Not hands on with nature but in the interest of nature.
- Wildlife vets – why they chose wildlife instead of domestic. day to day contact. Experiences with wild animals.
- Meterologist – day to day study but not hands on.
- Biologist – scientific interest in nature and wildlife. Not hands on?
- Widlife / Landscape photograph – could photograph anything why be outdoors and in Nature.
- Landscape painters "
- Farmer – day to day contact for a living or convention with nature.

## Lifestyles

- Buddhist – as a religion has strong ties and connection with natural world. Is this something you feel led to the choice of religion or did the religion emphasise the connection?
- Pagan?
- Vegetarians or Vegans – reasons tied to environment concern or connection to wildlife and environment?

## Hobbies

- Gardners – nature as hobby and in spare time. Why not as job? why hobby?
- Geocaching – exploring environments and being outdoors often in wild or natural environments. Why this hobby?
- Birdwatchers – why focus on birds? interest in other animals? or nature?
- Surfers – is nature something taken into consideration?
- Snowboarders
- Climbers
- Golfers
- Bike rider – hobby or do they want to do it as it is better for environment than cars.
- Horse riding – environments or interaction with nature.
- Hunting – Compassion for nature? Interest but not wanting to conserve? or do they feel they are helping conservation efforts?
- Fishermen –
- Beekeeper – single focus. Nature or conservation a factor?
- ~~Farmers = day to day contact~~
- Foraging – choice to live off land. Why? is there a connection with wildlife as well?

# Appendix 2- Email to potential participants

Dear Potential Participant,

I am a research student at The University of Huddersfield and I am currently working towards my PhD in the Centre for Applied Psychological Research.

I am interested in how people relate to the natural world around them and how this develops over time. A further understanding of connections to nature as part of people's identities will hopefully aid research in this area and ultimately facilitate more interest in conservation of our natural world.

I am carrying out interviews to explore this topic and would greatly appreciate your help. If you are interested please read the attached information sheet for more information.

I hope to hear from you soon and look forward to discussing this with you.

Thank you,

Jamie Sutcliffe

# Appendix 3- Information sent to participants before interview and given in interview

## How do people understand their own relationship with nature and how did this develop?

Jamie Sutcliffe
PhD candidate at The University of Huddersfield

### Participant Information Sheet

My name is Jamie Sutcliffe and I am a research student, working towards a PhD, at The University of Huddersfield. As part of my research I am exploring how people understand their current relationship with the natural world and how this relationship developed.

**What is the research about?**

My research aims to gain an insight into how people understand who they are in relation to the natural world. It will explore how people understand their connection to nature and what it is they value about nature. It also aims to understand and explore how people understand the development of this relationship.

**What will I be asked to do?**

You will be asked to take part in an interview with me. The discussion should take approximately an hour and a half in total. The interview includes two separate activities which can be done on the same occasion or at separate times, this is up to you. During the first activity you will be asked to explore the development of your current relationship with nature in a timeline type activity. In the second part you will be asked to view some pictures of the natural world and then asked to explore the similarities and differences between the settings of these pictures. This is to explore your current relationship with nature.

**Do I have to take part?**

No, participation is voluntary but your help would be greatly appreciated. If you do decide to take part and then later change your mind, you have the right to withdraw at any time with no consequences to yourself. If you take part and then later decide you would no longer like our discussion to be part of the research you have up until I begin to analyse the data, on 1st November 2014, to withdraw the interview.

**What will you do with the findings from the research?**

The findings will form part of my thesis. Where quotations are used in my final research report, a pseudonym will be used as to keep your identity anonymous. It is also likely that the research may be published in a journal or presented at a conference.

**Will I be personally identified in the research?**

No, your identity will be kept anonymous by the use of a pseudonym. No information that could lead to your identification will be included within the research report, or any future publications arising from the research.

**Will the information I provide be confidential?**

Yes. The interview will be audio recorded. This will only be listened to by myself for transcription and also extracts may be listened to by my supervisors to help me with my analysis. The transcription, which will include the false names, will be seen by my supervisors and examiners. The audio recording and the transcription will both be kept secure on a password protected computer. The recording will be kept securely for five years after the end of my PhD and then deleted.

**Is taking part likely to have any detrimental effect on me?**

This is highly unlikely. However, when taking part in any research it is possible that issues may arise that may make you feel distressed. If this happens please feel free to contact the following service.

Samaritans:
08457 909090

**If you have any questions or are interested in taking part, please contact me via the email:**

U1054740@hud.ac.uk

**Or contact my supervisor, Dr Viv Burr, on:**

**01484472454**
**Email: v.burr@hud.ac.uk**

# Appendix 4- Consent form given to participant before the interview began

## How do people understand their own relationship with nature and how did this develop?

Jamie Sutcliffe- PhD Candidate at The University of Huddersfield

**Consent Form to Take Part in Interview**

Thank you for considering taking part in the interview for my research. I appreciate your time and help. Before the interview begins please read the following and tick to show you fully agree with the statements.

I have been fully informed of the nature and aims of the research and consent to taking part. ☐

☐

I have been fully informed of what is expected of me within the research.

I understand that I have the right to withdraw from the interview at any point without having to give an explanation and with no consequences for me. ☐

I understand that I have the right to withdraw my data from the research at any time up until the analysis, beginning 1st November 2014 ☐

I understand that the recording will be downloaded to a password-protected computer, securely stored for five years beyond the end of Jamie's PhD, and then deleted. ☐

I understand that no person other than the researcher and her supervisors will have access to the recording. ☐

I understand that anything I say within the interview will be kept anonymous as my identity will be protected by the use of a pseudonym, and that no information that could lead to my being identified will be included in the research report or other publications. ☐

I have had the opportunity to ask questions and have these answered. ☐

Name of participant:

Signature:

Date:

Name of researcher:

Signature:

Date:

There will be two copies of this document completed, one for you as a participant to keep and one for the researcher to retain.

# Appendix 5- Interview guide used by interviewer

**Interview Guide**

**River of Experience**

Firstly, can I ask you to think about the significant moments, people, pets, books, films or places that you feel have had an impact on your relationship with nature and your feelings towards the natural world?

If you could write each one down on these post-it notes. One post it note to each significant thing.

You can start from as far back or as recently as you feel any influence has occured.

*Once done...*

I would now like you to think of the journey of your developing relationship with nature over your life. Imagine this journey as a river, with a bend in it every time there is a significant moment or episode in your relationship with nature.

Could you now draw this river for me? And place the post it notes on the river where you feel they go, like a timeline

So, I would like to now discuss this with you, so firstly can you tell me a bit about this first post it, what you experienced then?

So can you tell me about your interests at this point, what your feelings towards nature were?

*Repeat as many times as needed*

So what are the differences, if any, between you here and you here on the timeline?

*What issues are coming up as important to them, wildlife, plants, ecosystems, conservation for sustainability, experience in future, to maintain lifecycles?*

**Construct Elicitation**

If I could ask you to look at the scenes in these photographs and sort them out into piles. One pile being the scenes you like, one of the ones you feel indifferent to and one pile being the scenes you dislike. Try to do this without thinking about it too much, just off your gut feelings.

If I could now ask you to look at the three pictures here and tell me how two are similar but differ from the other one?

*Repeat as needed with different combinations of images*

Anything else?

Now can I ask you about your ideal scenarios, if you could pick to be in one type of environment over the other and you had to pick, would you prefer to be in

..... or.....

*Now look at what they have said they like and dislike in relation to the types of environments they have said they prefer. Are there any anomalies that stand out? If so ask about the picture. What types of environment they would class it as, you said you liked it but then would not chose it as your preferred environment. Why?*

**Laddering**

Now if I could just take some of these constructs we have been discussing and just try to explore these a little further with you.

*Pick out constructs to explore*

You said you would prefer this to this. Why?

And what would you say is the opposite to this?

And why would you want this? And what is the opposite of this?

## Appendix 6- Example of a construct worksheet used by the researcher to record the constructs elicited from participants

**..... ..... .....**

Construct: ..... → .....
Pictures: ..... .....

Construct: ..... → .....
Pictures: ..... .....

Construct: ..... →
.....
Pictures: ..... .....

Construct: ..... → .....
Pictures: ..... .....

**..... ..... .....**

Construct: ..... → .....
Pictures: ..... .....

Construct: ..... → .....
Pictures: ..... .....

Construct: ..... → .....
Pictures: ..... .....

Construct: ..... → .....
Pictures: ..... .....

# Appendix 7- Pictures used in construct elicitation task

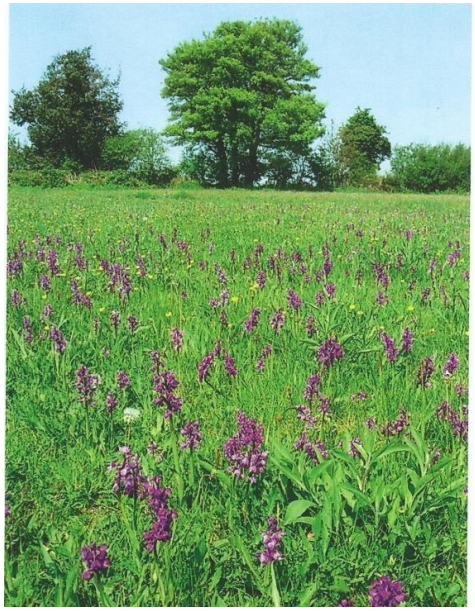
Picture 1-

Picture 2-

Picture 3-

Picture 4-

Picture 5-



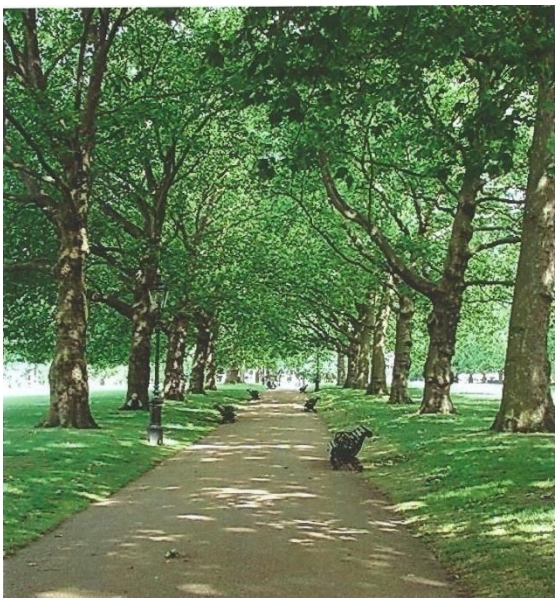
Picture 6-

Picture 7-

Picture 8-

Picture 9-

Picture 10-



Picture 11-

Picture 12-

Picture 13-

Picture 14-

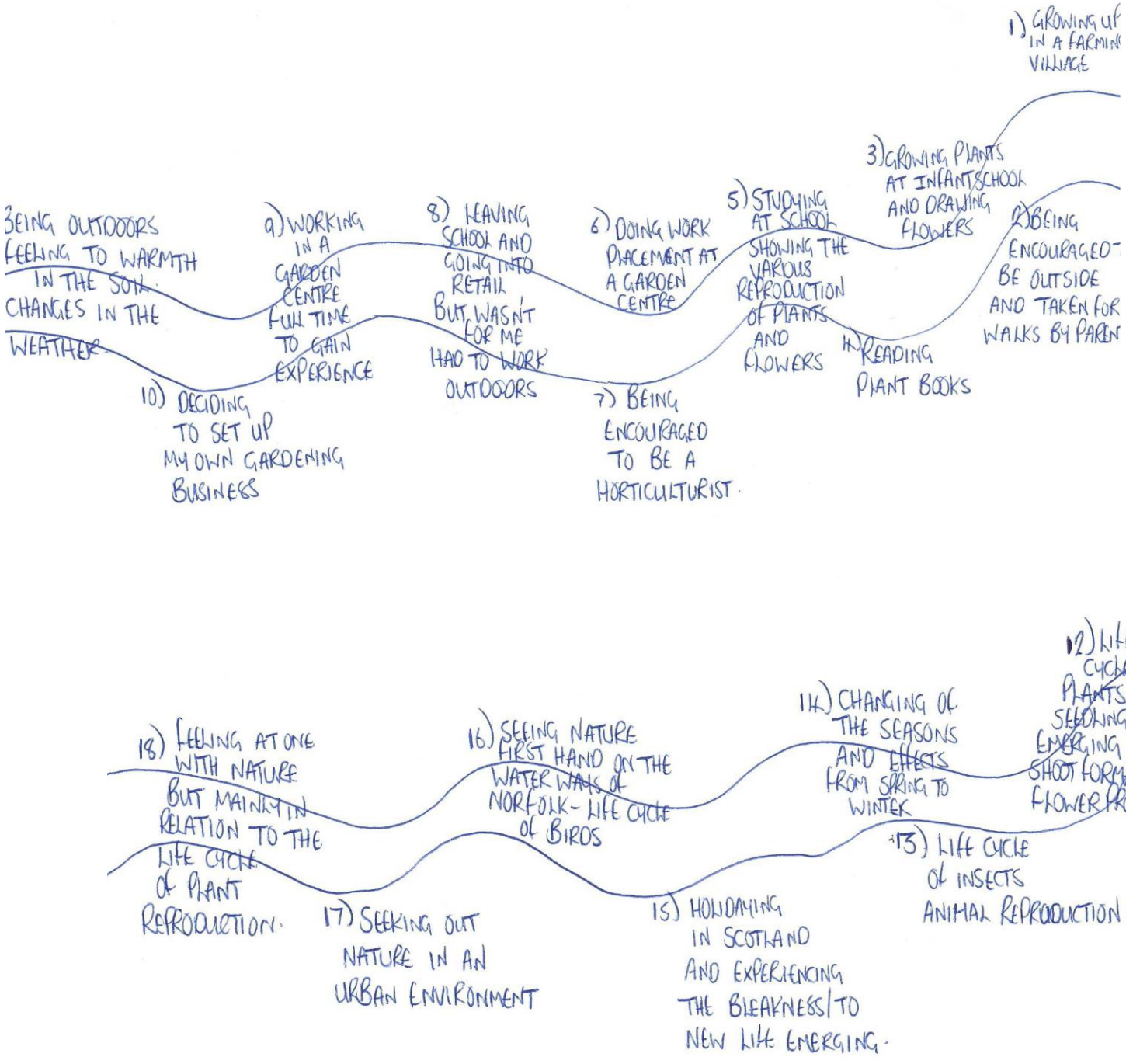
Picture 15-

Picture 16-

Picture 17-

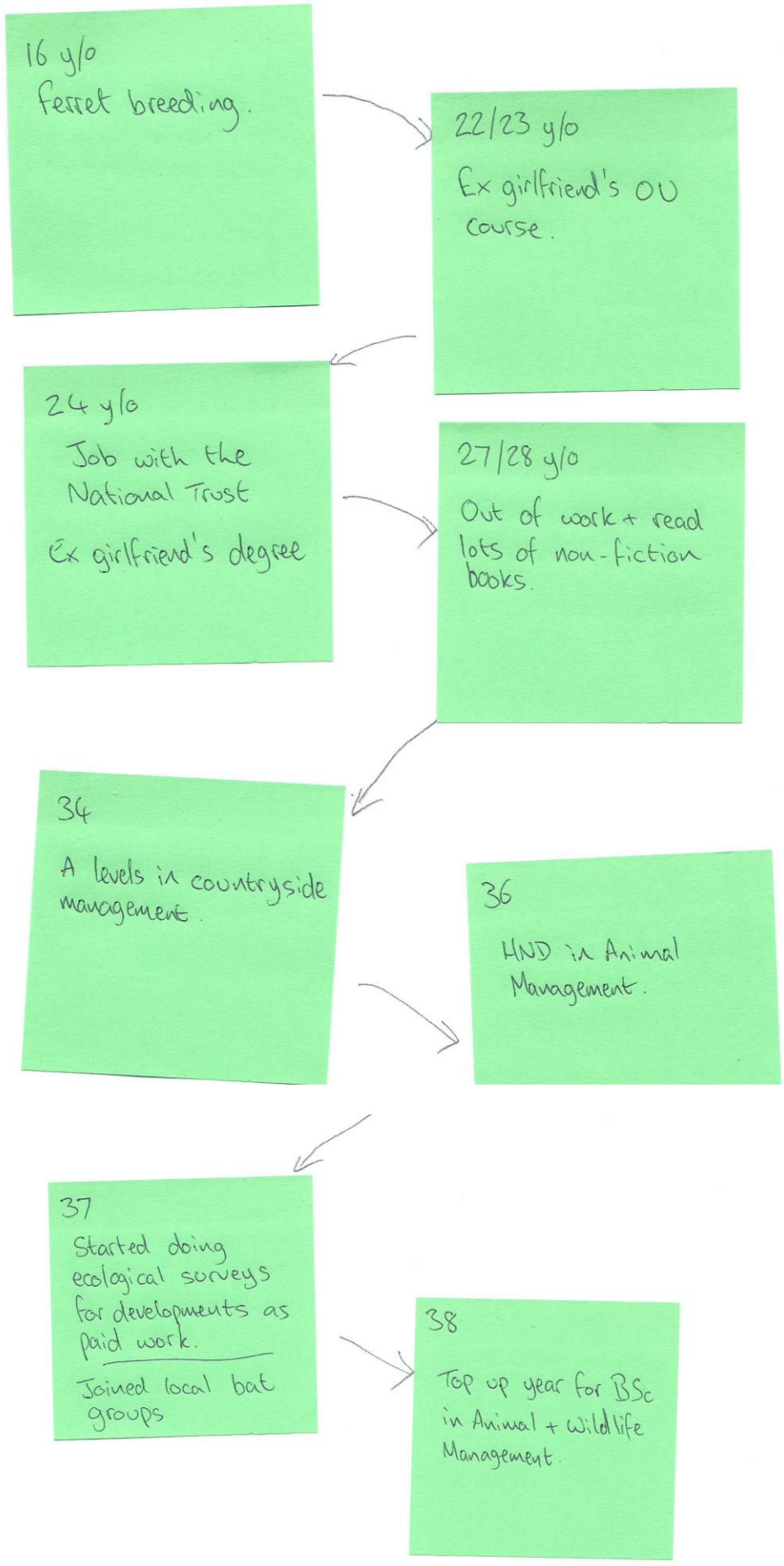
# Appendix 8- Participants' rivers

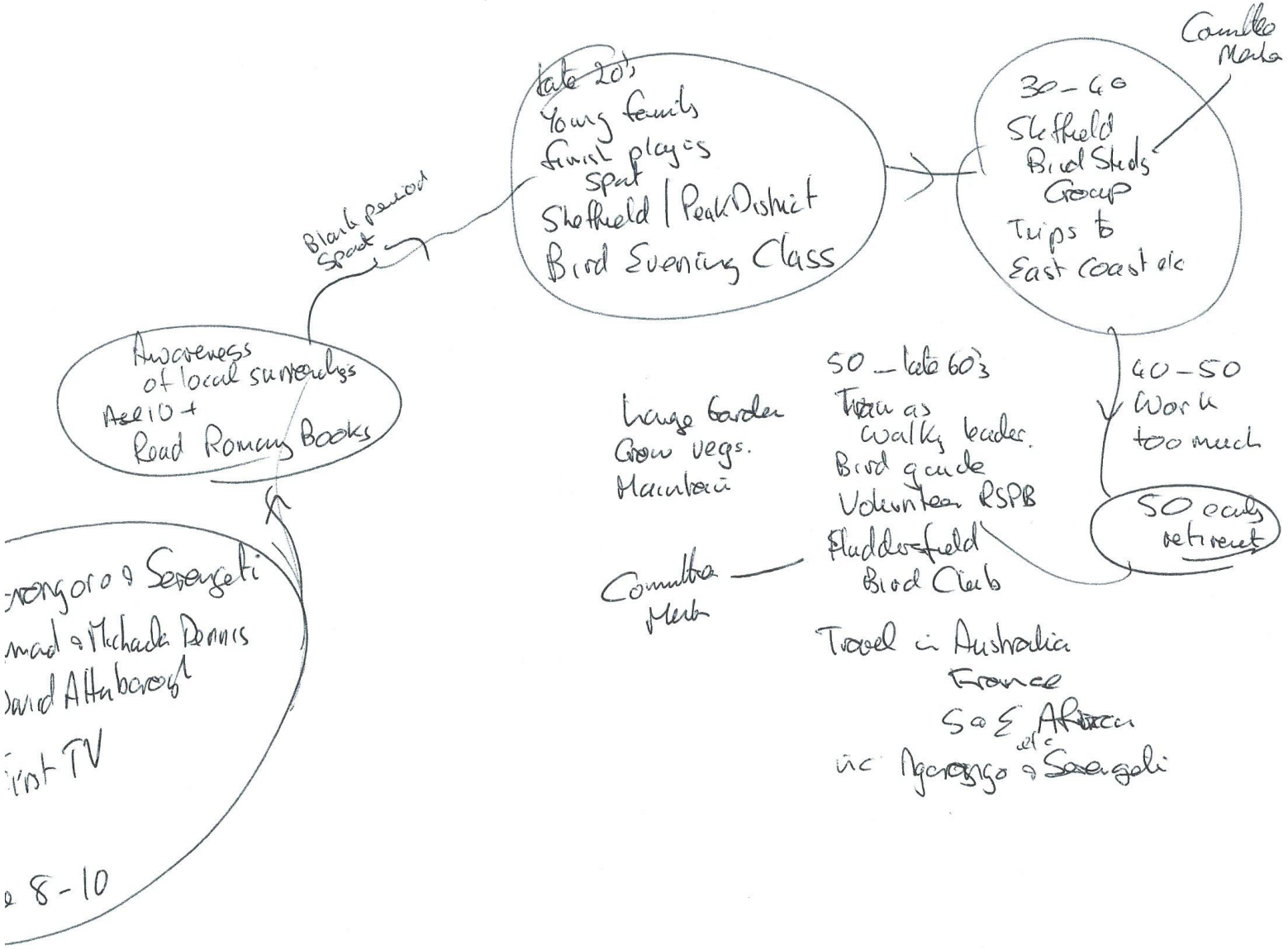
**Keiron's river**



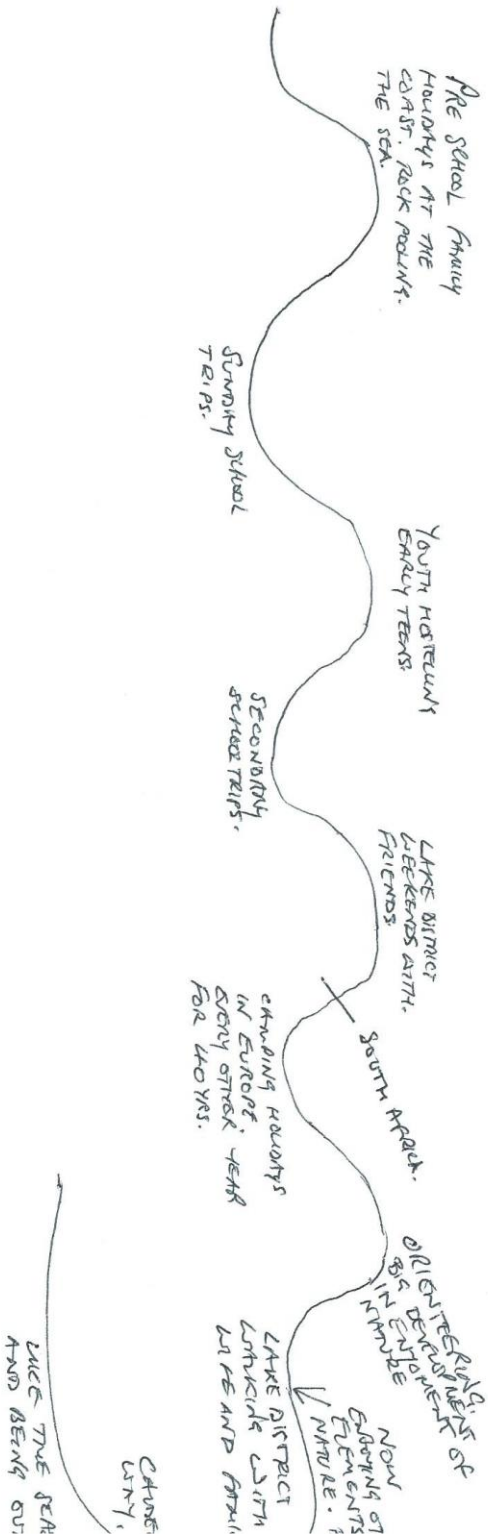
**William's river**

**Andrew's river**

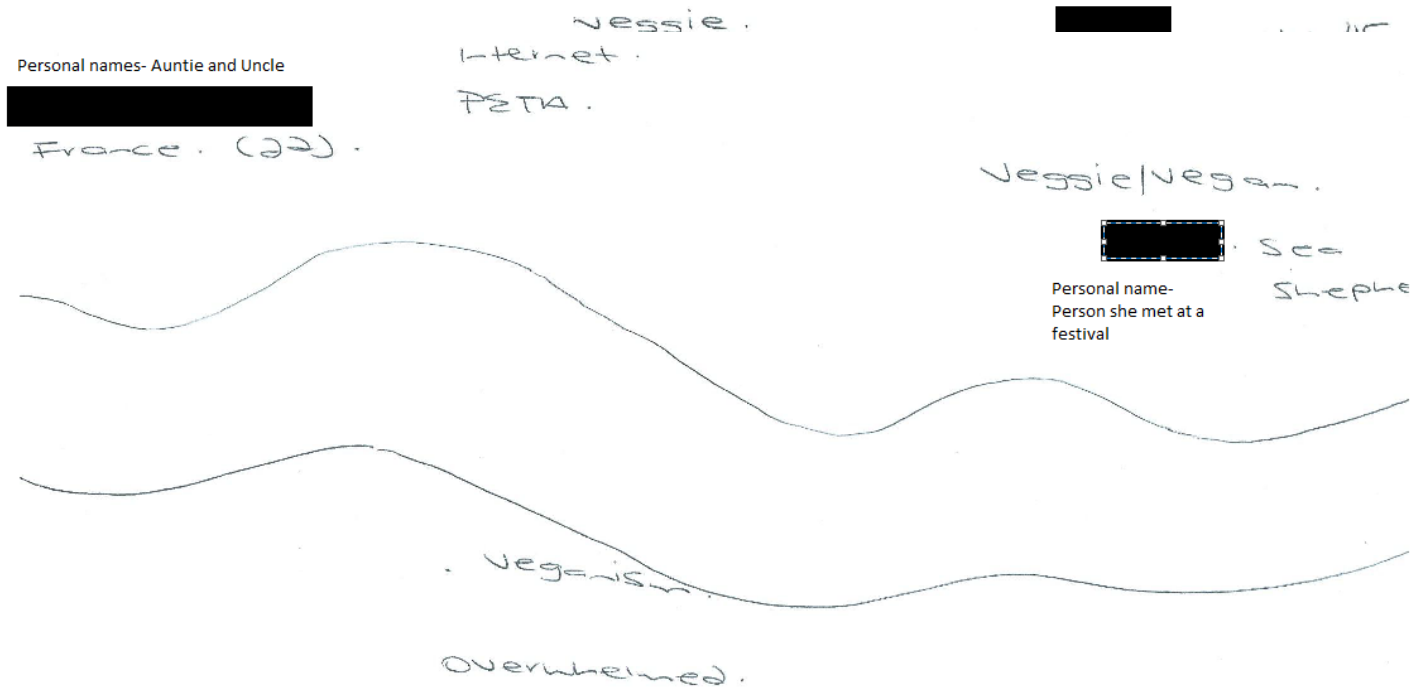



Awareness of local surroundings
Age 10 +
Read Romany Books
Blank period Spot
late 20's
Young family
finish playing spot
Sheffield | Peak District
Bird Evening Class
30 – 40
Sheffield Bird Studs Group
Trips to East Coast etc
Committee Member
40 – 50
Work too much
50 early retirement
50 – late 60's
Train as walking leader.
Bird guide
Volunteer RSPB
Huddersfield Bird Club
Large Garden
Grow vegs.
Maintain
Committee Member
Travel in Australia
France
S & E Africa etc
inc Ngorongo & Serengeti
8 – 10

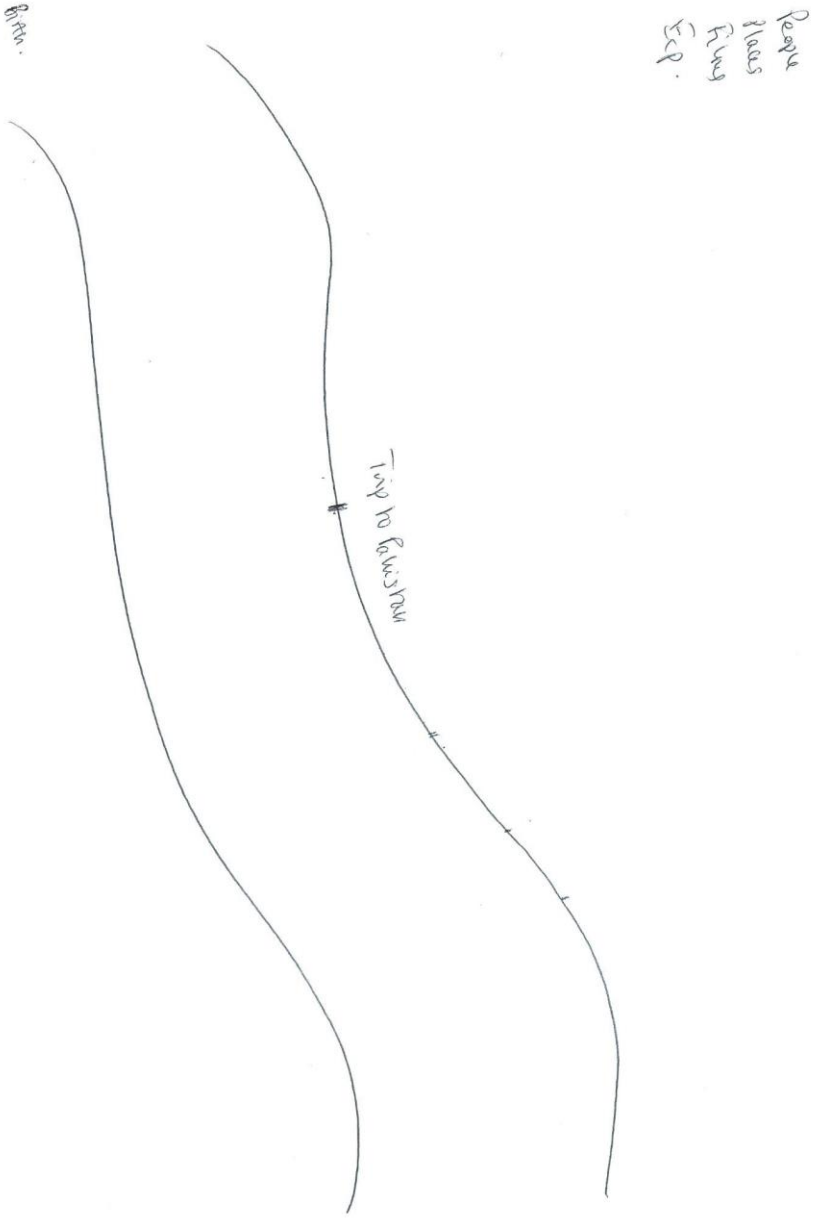
**Tony's river**


PRE SCHOOL FAMILY HOLIDAYS AT THE COAST. ROCK POOLING. THE SEA.
SUNDAY SCHOOL TRIPS.
YOUTH HOSTELLING EARLY TEENS.
SECONDARY SCHOOL TRIPS.
LAKE DISTRICT WEEKENDS WITH FRIENDS.
SOUTH AFRICA.
CAMPING HOLIDAYS IN EUROPE. EVERY OTHER YEAR FOR 40 YRS.
ORIENTEERING. BIG DEVELOPMENT OF IN ENJOYMENT NATURE
NOW ENJOYING OT ELEMENTS NATURE.
LAKE DISTRICT WALKING WITH WIFE AND FATHI
CAMPE WAY.
LUCE THE SEA AND BEING OU

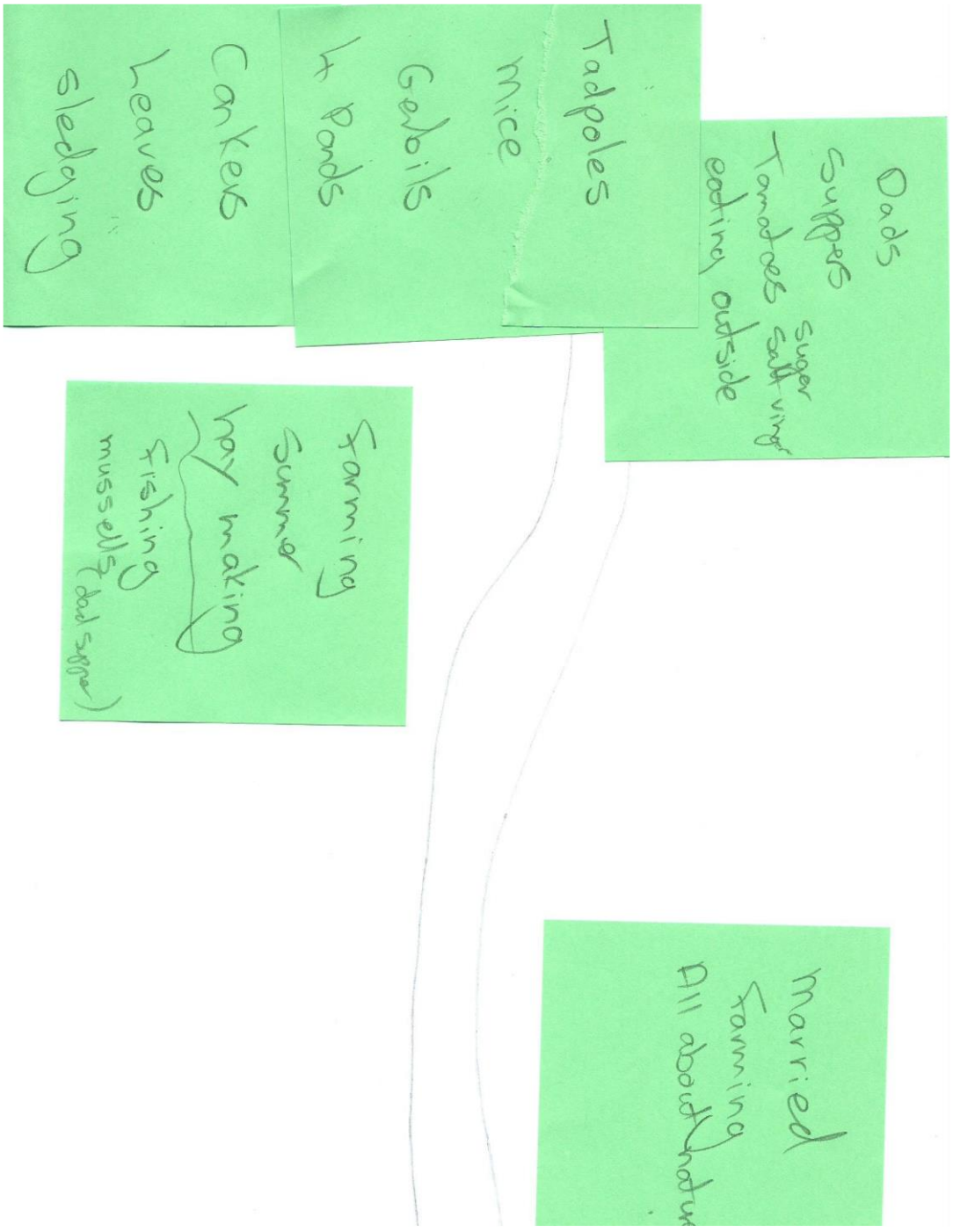
## Tanya's river



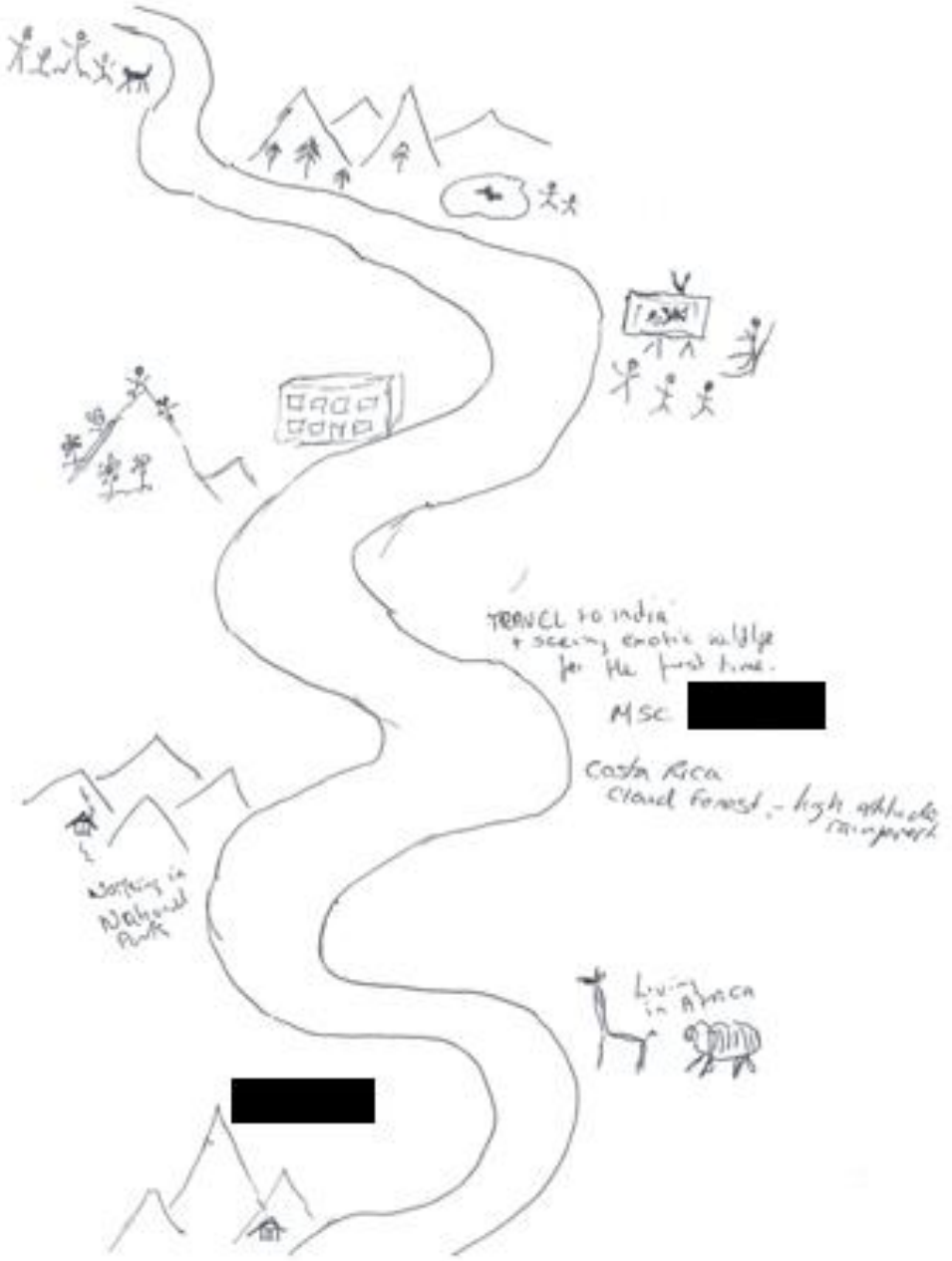
**Ansa's river**



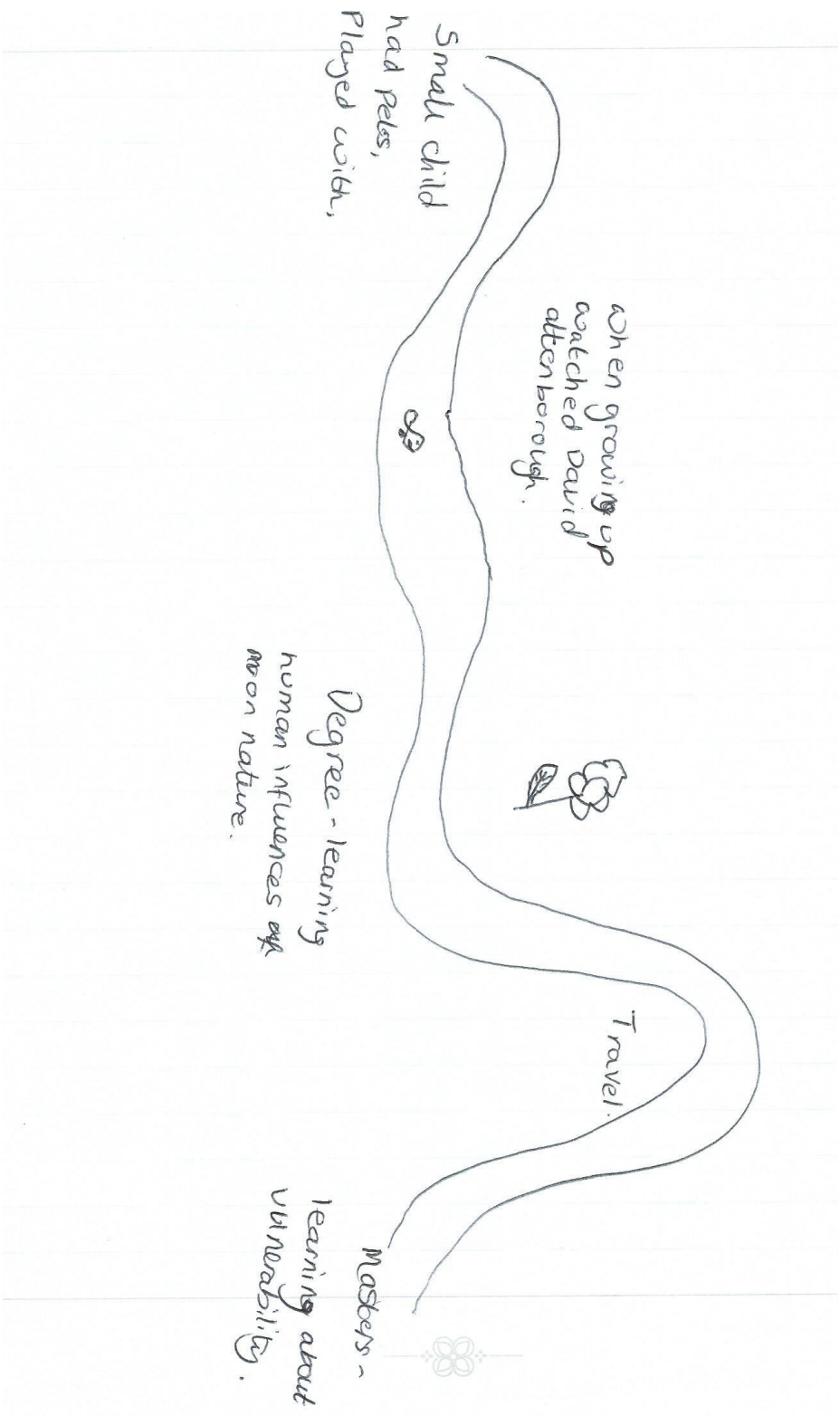
**Grace's River**



**Shirley's River**

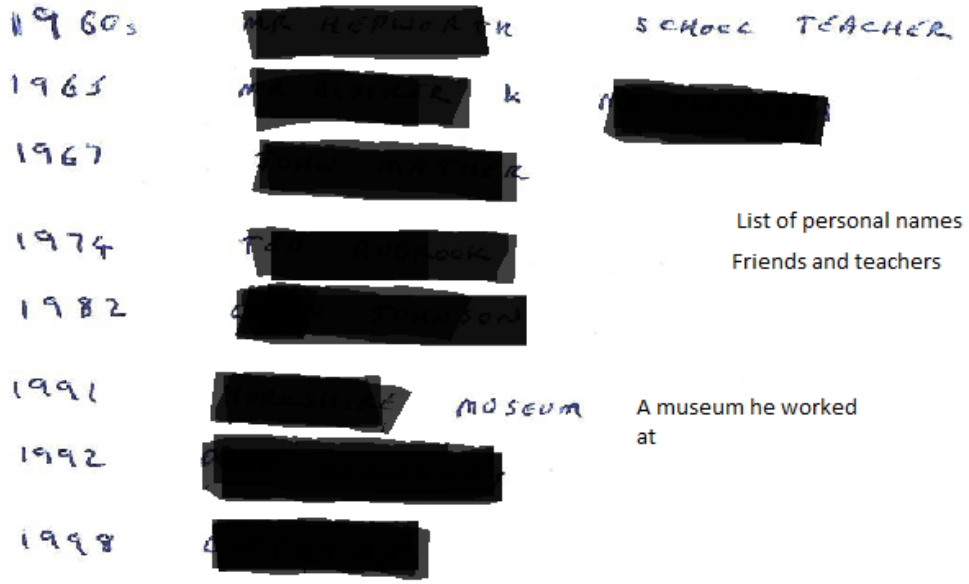


**Samantha's river**



**Britteny's river**

**Dennis' river/t**



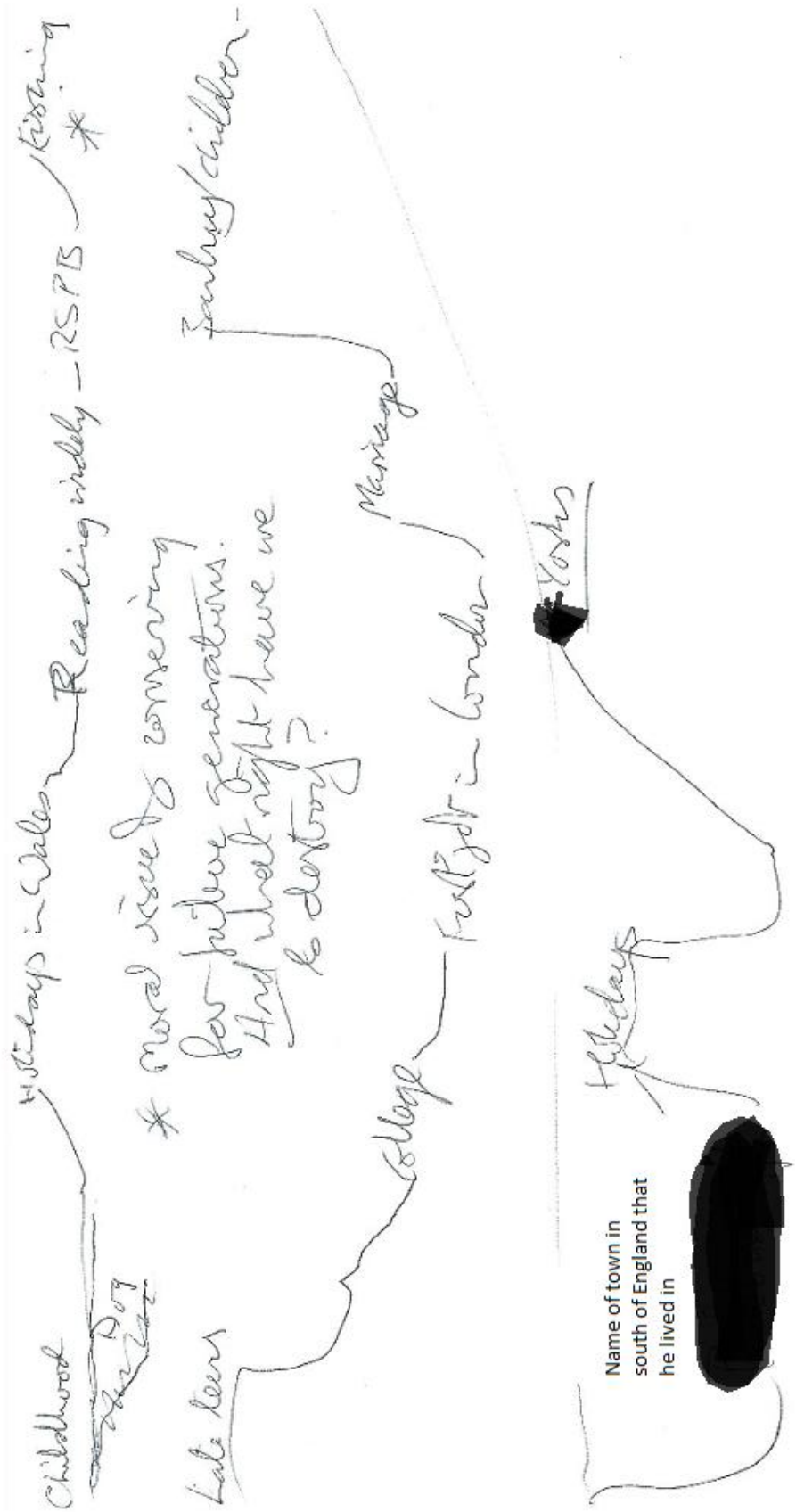

List of personal names

Friends and teachers

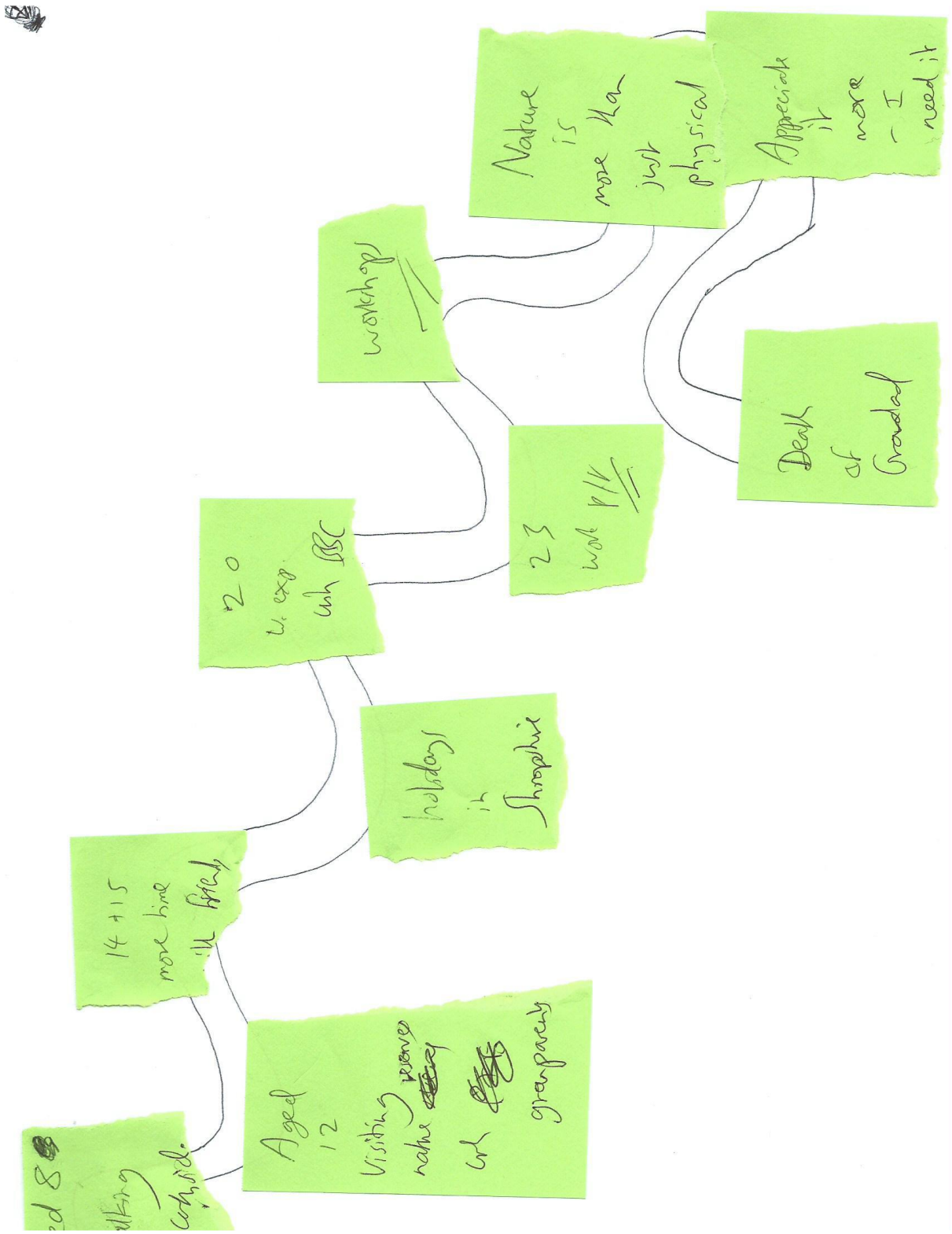
A museum he worked at

F. G. TO THE INSECTS OF BRITAIN & N. EUROPE

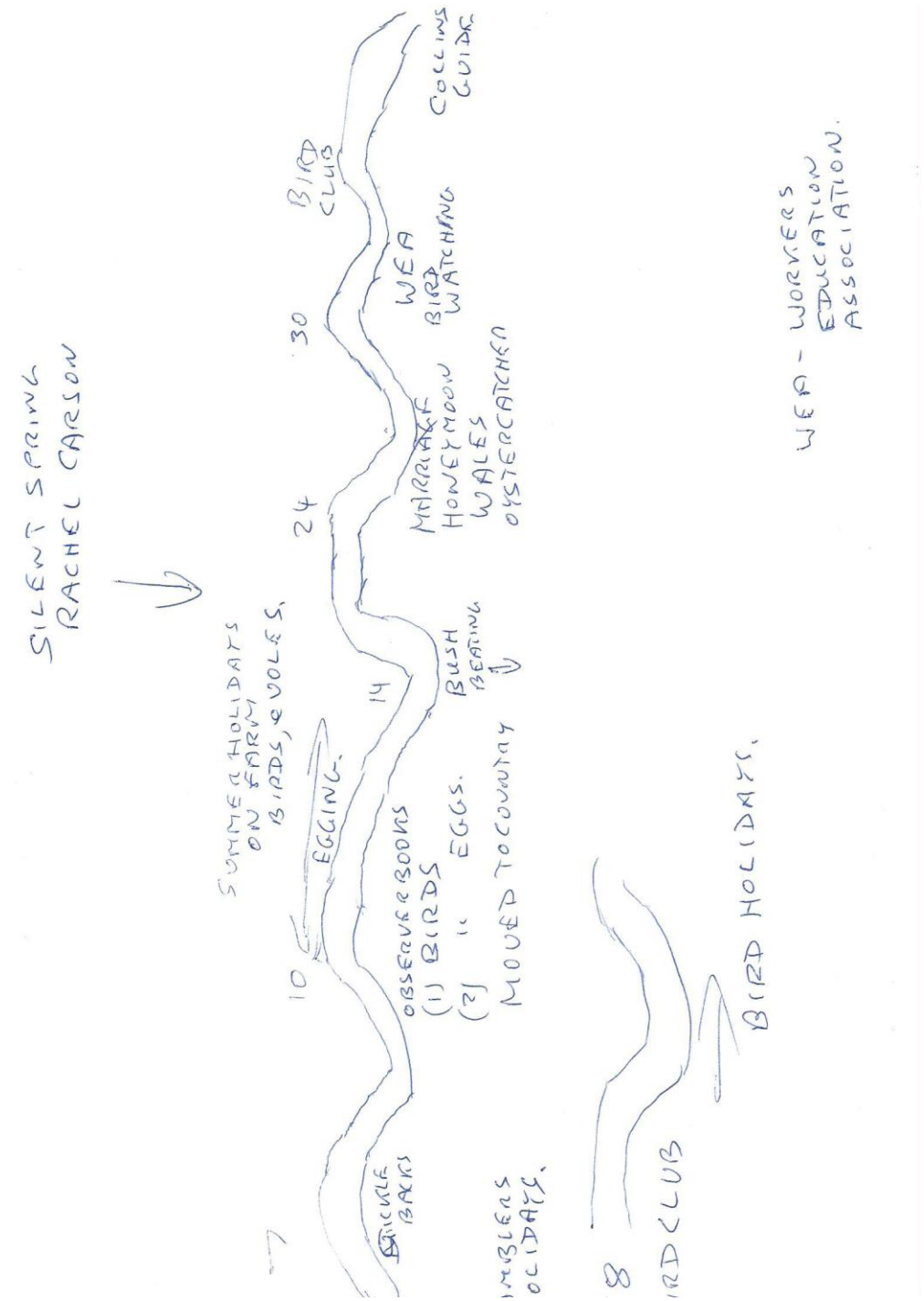
**Tim's River**


Childhood
Dog
Holidays in Wales
Reading widely – RSPB
Kissing
Late teens
College
Fortjob in London
Marriage
Fairbay/children
Yorks
Holidays
Name of town in south of England that he lived in

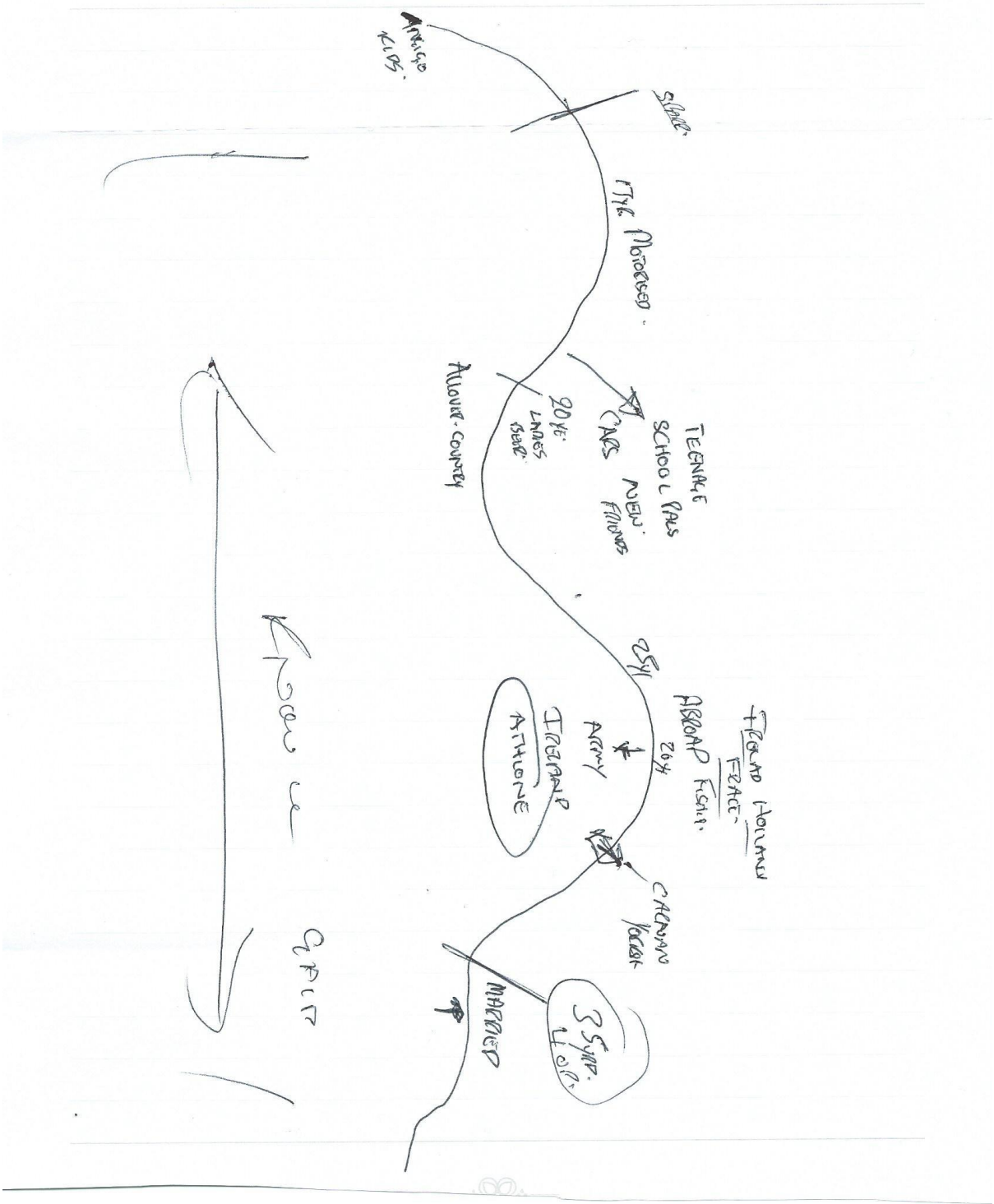
**Max's river**


Nature is more than just physical
Appreciate it more - I need it
workshops
Death of Grandad
23 work p/t
20 w. exp with BBC
holidays in Shropshire
14+15 more time in friends
Aged 12 Visiting nature reserves with grandparents

**Carl's river**


SILENT SPRING
RACHEL CARSON
SUMMER HOLIDAYS
ON FARM
BIRDS, & VOLES.
EGGING.
OBSERVATIONS
(1) BIRDS
(2) " EGGS.
MOVED TO COUNTRY
BUSH BEATING
HONEYMOON
WALES
OYSTERCATCHER
BIRD WATCHING
WEA
BIRD CLUB
COLLINS GUIDE
WEA - WORKERS EDUCATION ASSOCIATION.
BIRD HOLIDAYS.
BIRD CLUB
10
14
24
30
8

**Harry's river**



## Mark's river/timeline

DEFINE NATURE

TO WHAT EXTENT IS 'NATURE' TRULY 'NATURAL'?

PRISTINE NATURE v. CULTURAL LANDSCAPES - degrees of human interaction

What do people understand by 'Nature'? Wildlife, landscape, historical geography, landscape interpretation???? Castaway 2000.

- From a mining family in industrial [redacted] so didn't have any idea what Nature was. No idea where, or how, I might find it.
- I remember someone in a geography lesson at school, identifying Striding Edge on Helvellyn in the Lake District. I didn't even know where the Lake District was.
- Had paid day visits to Snowdonia, and noticed people camping on the shores of Llyn Ogwen, and saying aloud: 'I bet they even walk on the mountains, too', without any idea that that's exactly what they did.

  I had no understanding of why people would want to do that.

  I wasn't even convinced about the camping, except to the extent that I knew that some families did go on camping holidays to seaside resorts.
- But no clear interest in Nature or natural history until 1969. Knew a bird when I saw one; knew butterflies. But had no idea about species.
- In 1970, moved to live and work in North Wales, and then spent every weekend walking on the mountains, and later rock climbing. Later became a voluntary warden in the Snowdonia National Park.
- More aware of elemental Nature, of geology, of different rocks - but no real understanding.
- In 1974, became voluntary warden in Lake District National Park.
- Nature started to become incidental to work as voluntary warden.
- Not until I started writing guidebooks did I begin to perceive Nature, and make an attempt to identify with it.

  - Increasingly, observations about Nature filtered into my writing, and I developed more of an understanding. But it remained largely rudimentary; non-expert.
  - Thus far, Nature is local to me; not a worldwide topic. If I went to Malham Cove, I wanted/needed to understand about limestone pavement and geology. And started to identify flowers, and birdlife, but only to the extent that it would enhance my writing, and give it quality...I didn't refer to 'three trees', I identified them.

INFLUENTIAL PEOPLE

NOT celebrities, not even David Attenborough. Prefer TV programmes presented by people that 'know' rather than by people who are simply presenting information gleaned - not always accurately - by researchers.

Jim Crumley
Robert McFarlane
George Monbiot
Richard Mabey
Gilbert White

Urry: Consuming places/Tourist Gaze

Does our perception of Nature change once it is finally observed?

How did Man attempt to influence our perception of Nature? West...stations - was there a hidden [religious] agenda? Defoe, Celia Fiennes.

What impact do visitors and their perceptions of Nature have on a location. EG Urry argues that it was visitors that created the Lake District. (Consuming Places).

# Appendix 9- Two examples of a listening summary

**William**

Listening 1- Storyline

- Curiosity as a child- ferret breeding aided interest- hands on experience
- "Gaps" in relationship with nature, events in life meant distance from nature, not important at this time.
- Learning through girlfriend's course, interest there and keen to learn- motivated?
- Move to rural area, temporary job at national trust as luck, learning about countryside, helping others understand- hands on experiences
- Jobs in offices and retails- "soul dies"
- Redundancy- library trips- learning- focus on evolution
- Hobbies involved outdoors- learning, questioning, curiosity about things, away from people.
- Investigating and science as interest
- Met wife through "random" email to reconnect, move locally, met neighbour who helped choose course.
- Go to college- further knowledge, diploma and then degree
- Animals main interest- circumstances deepened knowledge of other areas but animals still main interest
- Volunteer for bat groups- learning, hands on experiences
- Offered surveying job through friend, discussed as luck, hands one experiences
- Confidence through learning
- No direction but has taken opportunities

Reflexive notes

- William seemed to play down his role in his success and relationship with nature, referring to luck and others as main influences. He was active in his whole story- making decisions, learning, furthering his own knowledge, motivated and being there to see opportunities.

Listening 2- Narrative tone and Narrative form

- Curiosity as child- dip in teenage years.
- Hands on experiences and learning grow again once an adult
- Gradually learning
- Becomes part of hobbies, volunteering and profession
- Meeting people with opportunities as keeping his relationship developing
- Discourses of "luck" and "chance" –constructs a story of things happening by chance and luck being to play in the development of his relationship with nature

- Optimistic story- short mentions of times where he became detached from nature but focus on step by step how relationship has gradually developed.

Listening 3- I Poem

- Large focus on self but how others have helped – main focus on “I” but some use of “he or she” used reflects this.
- Active choice to get to where he is today.
- Explaining job “you” do this and that, used a lot, trying to explain what he does, passion for job.

Listening 4- Relationships

- Mum- positions self as curious child
- Brother- positions self as helping hand
- Ex-girlfriend- positions self as equal, shared interests, shared knowledge
- Wife- positions self as equal- shared interests, shared experiences
- Children- no mention in terms of relationship with nature
- Neighbour- Positions self as lucky, neighbour could help him with course due to her job.

**Ansa**

Listening 1- Storyline

- Nature as holistic- integrated into whole life, has been since childhood, values taught as a child
- Nature and values around nature tied to religion
- Nature encompassing day to day life and actions taken day to day
- Values around nature about coexistence and protection
- Nature as gods creation
- Relationship with nature disconnected, through cultural norms, but currently trying to reconnect with nature and heritage
- Trips to Pakistan as reconnecting/ enlightening
- Cultural differences between Pakistan, close, hands on experiences with nature through to day to day tasks, and UK, takes effort to connect to nature
- Nature as helping well being, mental and physical
- Current experiences with nature as perspective giving.
- Some struggle with pet culture- values, coexistence, equality to animals
- Value for life, tied to religion and religious practices.

Reflexive notes

- Contrasts with Mark and Samantha who see nature as alternative to religion, nature to Ansa is tied to god and creation
- Nature strongly tied to religion both in values and practice

- Some contradiction in values? All living things as equal but when speaking of pet culture discusses how human life needs to be priority

Listening 2- Narrative tone and Narrative form

- Found it difficult to talk about her story as a development, relationship due to holistic nature of this relationship, values taught as a child
- Enlightenment and pivotal moment in reconnection with nature through trip to Pakistan in late teens, reaffirms values and sparks reconnection- hands on and first hand experiences with nature as reconnecting
- Reconnection with nature as important for well being, actively trying to reconnect.
- Positive story, optimistic, focus on enlightening trips and reconnection with nature.
- Disconnection from nature discussed due to lifestyle and culture but efforts to reconnect focused on.
- Constructing an active relationship with nature, active steps to reconnect
- Positive view of nature- well being
- Protection of nature and coexistence.

Listening 3- I Poem

- “I” and “we” as primary way of discussing and describing experiences and relationship with nature
- “We” used a large amount to discuss both family and also referring to her religion- reflects how her view of and relationship with nature is tied to religion, and religion is important part of her relationship with nature
- “I think” is used a lot, reflects how relationship with nature is tied to her morals and values primarily. “you” also used when describing and explaining values, trying to position me, as a researcher, in her position and see from her perspective?

Listening 4- Relationships

- Parents- parents as inspiration, heritage, guidance in her relationship with and values around nature. Positions self as a pupil to their teaching and guidance
- Niece- sharing experiences and values. Also teaching niece values. Positions self as equal but also teacher or facilitator.
- God- Teacher, guidance on moral and values around nature and how to commune with nature. Discussed as an example to follow. Positions self as pupil or follower.

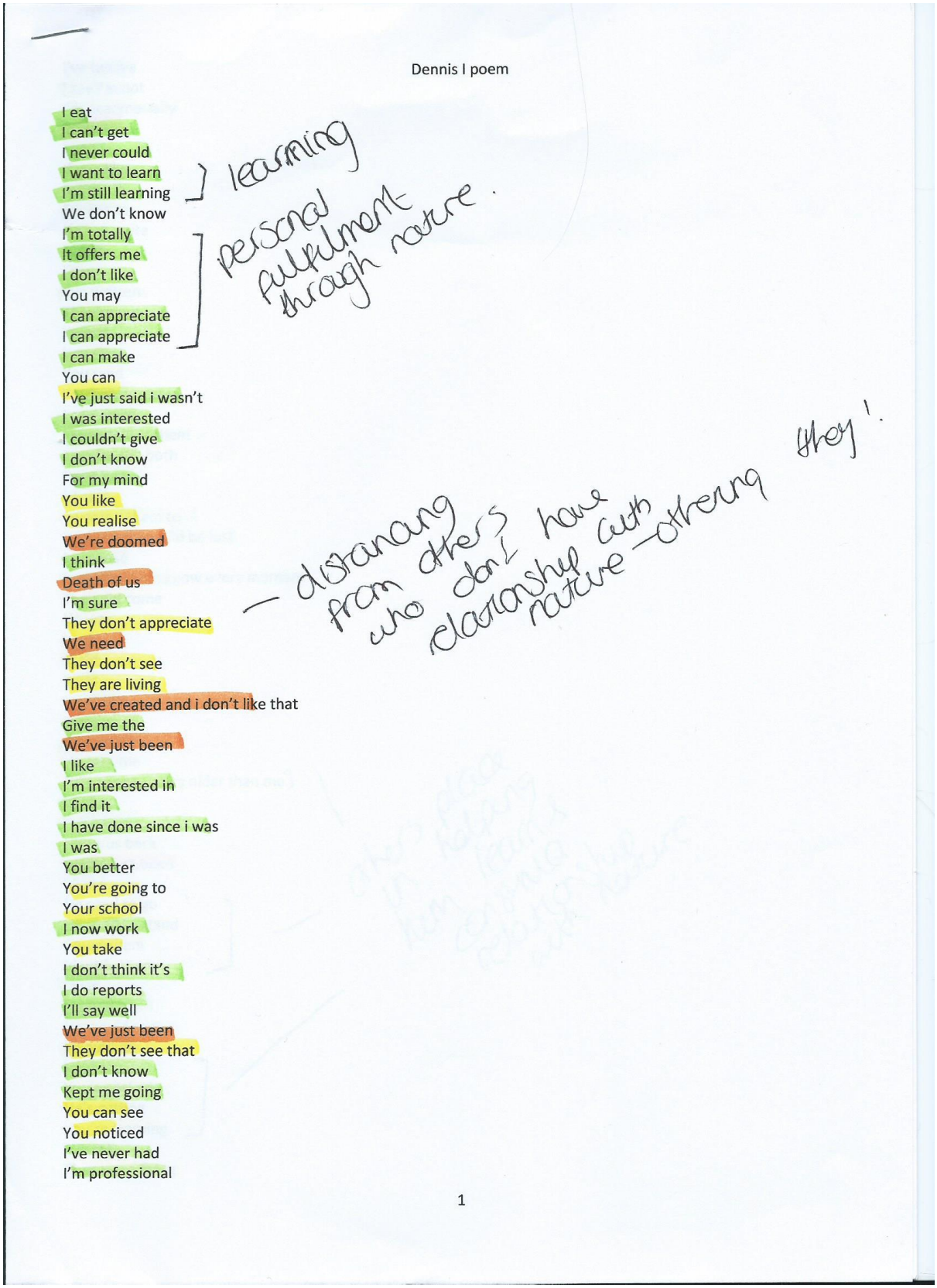
## Appendix 10- The Listening Matrix

| | Grace | Shirley | Tanya | Brittany | Samantha | Ansa | Keiron | William |
|---|---|---|---|---|---|---|---|---|
| **Listening 1**<br><br>**PLOT** | -Nature as controlling<br>-Hands on experiences<br>-Tradition with family<br>-Cycles<br>-Learning | -Passion<br>-Learning<br>-Understanding<br>-Travelling<br>-Hands on experiences<br>-Botany<br>-Life dominated by nature | -Perspective giving<br>-Vegetarianism<br>-Values<br>-Appreciation<br>-Inner conflicts | -Relaxing<br>-Animals<br>-Hands on experiences<br>-Morals/ values<br>-Need for nature to stay the "same" | -Learning<br>-Understanding<br>-Wildlife<br>-First hand experiences- trip to Africa<br>-Sustainability<br>-Inspiration | -Holistic<br>-Religion<br>-Values<br>-Coexistence<br>-Reconnecting<br>- Well being<br>-Perspective | -Lifecycles<br>-Exploring- Hands on experiences<br>-Encouragement<br>-Comfort and freedom<br>-Need to be in nature | -Curiosity<br>-Hands on experiences<br>-Animals<br>-Learning<br>-Luck<br>-Opportunities |
| **Listening 2**<br><br>**FORM & TONE** | Form<br>Gradual Growth<br><br>Tone<br>-Optimistic- focus on positives. 1 negative in positive light.<br>- Adventures | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- no negatives.<br>-Opportunities and experiences, choosing these. | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- negatives discussed but overcame them.<br>-Still developing and challenging self.<br>*-Imagery- Organically, planted seeds* | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- only good discussed<br>-Morals, empathy, connections | Form<br>1 key event<br><br>Tone<br>Optimistic- pessimistic view of human/nature relationship.<br>-Helping, conservation, active | Form<br>1 key event<br><br>Tone<br>Optimistic- negatives discussed but focus on reconnection.<br>-Enlightenment, reconnecting, religion, heritage and protection. | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- Negatives briefly mentioned, given positive light.<br>-Encouragement, exploring, comfort, self | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- negative briefly mentioned, focus on positive.<br>-Luck and chance. |
| **Listening 3**<br>**PRONOUN Poems** | -largely refers to "we"-tied to family<br>-"I" as active-verbs used after show active | -uses "I"-own construction<br>-active-verbs- first hand experiences<br>-all encompassing | -uses "I" mainly<br>-"I think" I feel" a lot, tied to morals<br>-"we" refers to people in relationship<br>"they" distances from other humans | -"I" used mainly<br>"We" used a lot in childhood, reflects parents as key part of developing relationship with nature | -"I" used mainly, focus on own construction<br>-"we" used to refer to humans as separate from nature-distrust of "we" | -I and we used mainly<br>-we refers to family and religion<br>-I think used a lot- tied to morals<br>-you used to position researcher in her position | -focus on childhood "I used to"<br>-encouragement from relationships "she" and "they" | -uses "I" mainly but he and she reflect others role and help<br>-"you" to position researcher as him when describing job, passionate |
| **Listening 4**<br><br>**RELATION SHIPS** | -Father<br>-Children<br>-Mother<br>-Husband<br>-Brother | -Father<br>-Lecturer<br>-Husband<br>-Mother<br>-Brother<br>-Grandparents | -Partner<br>-Pets<br>-Grandad<br>-Auntie and Uncle<br>-Stepdad<br>-Mother<br>-Grandma | -Father<br>-Mother<br>-Pets<br>-Boyfriend | -Grandma<br>-Pets<br>-Siblings | -Parents<br>-Niece<br>-God | -Mother<br>-Teachers | -Wife<br>-Ex-partner<br>-Brother<br>-Mother<br>-Children<br>-Neighbour |

| | Andrew | Mark | Tony | Harry | Tim | Dennis | Carl | Max |
|---|---|---|---|---|---|---|---|---|
| **Listening 1**<br><br>**PLOT** | -Learning<br>-Outdoor hobbies<br>-Changing relationship<br>-Travelling<br>-Hands on experiences<br>-Nature as "real" | -Teaching<br>-Evolving Relationship<br>- Walking<br>-Travel<br>Need to understand | -Hobbies<br>-Trips<br>-Hands on experiences<br>-Sense<br>-Morals<br>-Learning | -Hands on experiences<br>-Learning<br>-Source of life<br>-Helping and maintaining<br>-Wildlife<br>- Morals<br>-Understanding | -Learning<br>-Understanding<br>Well being- physical and mental<br>-Satisfaction<br>-Immersed in nature | -Absorbed by nature<br>-Fulfilment<br>-Appreciation<br>-Understanding<br>-Learning<br>-People, help and hindrance<br>-Passing on knowledge | -Wildlife<br>-Hands on experiences<br>-Bird-watching<br>-Holidays<br>-Contributing<br>-Learning<br>-Understanding<br>-Teaching | -Need for nature<br>-Hands on experiences<br>-Sharing experiences<br>-Well being- physical and mental<br>-Privilege |
| **Listening 2**<br><br>**FORM & TONE** | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- only positives<br><br>-Learning, developing, evolving | Form<br>Gradual Growth<br><br>Tone<br>Optimistic<br>-knowledge<br><br>*-Imagery- evolving, organic, drawn to, soak up.* | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- no negatives or barriers<br><br>Exploring, adventure, beauty | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- negatives given positive light<br><br>-Adventures, exploring, fun, learning | Form<br>Enduring<br><br>Tone<br>Optimistic- mention negatives, some detachment but reconnect<br>-Leaning, knowledge growth | Form<br>Gradual Growth<br><br>Tone<br>Optimistic- only negatives of human/nature relationship.<br>-Fulfilment, absorption, interest, purpose, luck | Form<br>Enduring<br><br>Tone<br>Pessimistic- nature as taking a back seat, still interrupted relationship.<br>*-Imagery- floating along, river runs on* | Form<br>Gradual Growth- kundalini moment<br>Tone<br>Optimistic- acknowledgment of negatives, given positive light.<br>-Need, connection, spiritual, reliance, privilege |
| **Listening 3**<br><br>PRONOUNS | -I used mainly, reflects little input of others<br>-we used when discussing need for nature | -use of I reflects very little discussion of others<br>-importance of passing on knowledge "I need"<br>- learning-"I soak up" | -I, we, you, all used equally<br>-senses to nature, I saw and hear used repeatedly<br>-I and we used with verbs to show communing with nature | -we referred to mainly, experiences throughout life with family and friends-active<br>-I used when discussing personal moments<br>- | -I used mainly<br>-active relationship currently shown by "we do"<br>-"you" used to position researcher when discussing wildlife experiences- passion | -I used mainly, prefers to be alone<br>-we used to refers to human race when talking about conservation- we need to do something | -Focus on using "i" at beginning of discussion, solitude as child<br><br>-Current feeling of detachment- repetition of "i can't" | -I used primarily, own decisions and construction, verbs reflect active role<br>-some use of he or they when speaking of relationships<br>-I and we used when discussing need for nature |
| **Listening 4**<br><br>**RELATIONSHIPS** | -Father<br>-Son<br>-Daughter<br>-Wife | -Children<br>-Wife | -Wife<br>-Son<br>-Daughter<br>-Father | -Friends<br>-Wife<br>-Mother<br>-Family in Ireland<br>-Child | -Parents<br>-Wife<br>-Daughter<br>-Godmother | -Teacher<br>-Parents<br>-Friends<br>-Business partner | -Father<br>-Wife<br>-Daughter<br>-Aunt and Uncle | -Grandparents |

# Appendix 11- An extract of the lists of pronouns made for two participants

-An extract from Dennis' pronoun list



Dennis I poem

I eat
I can't get
I never could
I want to learn
I'm still learning
We don't know
I'm totally
It offers me
I don't like
You may
I can appreciate
I can appreciate
I can make
You can
I've just said i wasn't
I was interested
I couldn't give
I don't know
For my mind
You like
You realise
We're doomed
I think
Death of us
I'm sure
They don't appreciate
We need
They don't see
They are living
We've created and i don't like that
Give me the
We've just been
I like
I'm interested in
I find it
I have done since i was
I was
You better
You're going to
Your school
I now work
You take
I don't think it's
I do reports
I'll say well
We've just been
They don't see that
I don't know
Kept me going
You can see
You noticed
I've never had
I'm professional

learning

personal fulfilment through nature.

distancing from others who don't have relationship with nature — othering

they!

1

I've been a
I say i'm not
I'm acadmecially
We say
I was
If you like
Set me in
For me to
He can write
I can't
I can
I've written
They're not
You sit
You sit
You read
You're interested
I can make
I keep telling them
They're still both
I was just
My life
I wanted them to
Without them, i'd be lost
I suppose
I must admit, i know every moment
They did come
He was
I got
I said
I was
I met him
I was
He told me
He sent me
He's twenty years older than me.
I got a
I've had a
Harks us back
We've just been
I'll use
He used to go
He used to stand
Count them
Identify them
I was
I would say
He would say
I would say
He'd say
You've asked
He's getting
You're learning
I learnt
They were flying

others place in helping him learn & continue relationship with nature.

I spent a lot of time
I became
I was
I was
I never stopped
I've been absorbing all my life and all I want to do
I bought
I tended to
I then got
I started looking
You fo
You say
I've seen
I've seen
I've seen
You start reading
Tells you
I'm thinking I want to do
I want to
I know somebody
Help me
I have started
He was
I used to
Would tell me what they were
I could build
My own
I found a
I knew what
We couldn't identify
He said
I show
He sent it
My door
I lived
You find
I think
I was interested
I've started using, let me just
I was in
I've mentioned
He was
I could learn from
I became
I became
You can be
You make a
You just perpetuate
You can't afford
I don't want
I'm that type of
I spend hours
I am not happy
Brings us up
I've met

all encompassing & absorbing nature of his relationship with nature.

own active involvement in using others knowledge & help to build own understanding.

absorbing

-An extract from Harry's pronoun list

Harry

I'm concerned
I'm an
I would
My life
You can't
You can't
I'm making
I'd define
You step
You see
We look
Our friend
I don't
You know
Our heart
I've always
You know
You know
We were
We've been
We've always been
I suppose
You get
I used to
My first
I did
Took me
You know
You did
You were
My love
We were
We were
We used to
We used to
We got
We started to
I sort of like got
We've got
We spend
Our time
I mean
We join
We join them
I don't need
I have spent
They did
We've got
We got
We were
You are
We started
I fished

First hand experiences

1

were
You've almost hit
We used to go
We all
We used to go
We used to be able
We used to go
We used to cycle
We used to go
We used to watch
You know
My mum bought me
She went
Bought me
I started
Watch them
I fancy a go
I started
We call
You know
You can
We started
We got
We actually bought
We lived
We had
We had
We used to sit
Shoot them
We used to
We were
We had
I suppose
You know
You did
We were
We used to
We went
They used to give you
Giving them
You had to
Brush them
Clean them
I used to
We got
We got
Give us our scooters
We used to go
We used to go
We used to jump
Our bikes
We had
We learnt
You know

memories
with
friends
first hand
experience
with nature
actively spending
time outdoors
& creating
hobbies

# Appendix 12- All construct from construct elicitation grouped into themes

**Level of Human Touch**

Manmade/Natural P12, 13, 11, 1, 4,5,7, 10
Natural/ unnatural P4,9
Untouched by man/Modelled by man P9
Mans influence/ Near to completely natural P7
Controlled/ Left to devices P13
Interrupted/ Fallow P12
Heavy human impact/ Low human impact P3
Tourist intrusion/ Wild P12
Clutter/ Naturally evolving P12
Manmade/ Pristine nature P12
Artificial/ Wild P14
Pristine/ Intensive P11
Spoilt/ Unadulterated P13
Agriculture/ Allowed to develop without interference P13
Untamed/ Purpose for people P15
Artificial/ Natural P14, 3
Very agricultural/ Free from contemporary management P11
Municipal/ Wild P11
Architectural/ Natural P13
Unspoilt/ More Spoilt P15
Natural/ Cultivated P16
Manmade/ Naturally forming P15
Artificial/ Nature P2
Natural Systems/ Work and human based P6
Human based/ Natural, untouched P6
Manufactured/ Nature P8
Parkland/ Wild P12
Human exploiting nature/ Untouched P6
Touched by man/ Untouched P2
Cultivated/ Forest
Natural/ Created P7
Untouched/ Affected by man P2
Natural/ Manmade influence P13
Wild places/ Mans presence P9
Virgin natural forest/ Cultivated P9
Created by man/ more natural P5
Natural ecosystem/ Constructed habitat P5
Artificial/ Tough natural environment P7
Manmade naturalising/ Self functioning, resilient ecosystem P5

Developed/ Organic P16
Human activity/ Pristine, unspoiled P3
Natural/ Human created P6
Natural/ Created P7
Aftermath of human interaction/ As it should be, has been P8
Planted/Fluid P16
Thought about/ Is what it is P16
Manmade/ Harsh P7
Natural/ Human P6
Hand of man/ Wild P9
Manmade and inhospitable/ Natural and could survive there P3
Spoilt by man/ Unspoilt P10
Managed/ Wild P11
Managed/ Unmanaged P12
Hostile/ Controlled P11
Manicured/ Wild P11
Heavily man modified/ Wild P11
Managed/ Wilder P9
Nurtured/ Natural element P16
Managed sensitively/ badly managed P10
Constructed/ Managed P12
Past management/ No management P3
Manicured/ Natural woodland P4
Manicured wilderness/ Truly wild wilderness P5
Controlled/ Natural P11
Natural/ Agricultural P5
Real nature/ Over farmed P2
No manmade influence/ Agricultural P11
Agriculture/ True wilderness P5
Farmland/ Wild P9
Farmland/ Wild forest P9
Animal/Human P2
Animal life/ human life P2
Wildlife/ Human P5
People/No people P3, 1
Wild places/ Lots of people around P9
Inhabited/ Uninhabited P2
Nature Imposing/ Nature considered P15
Constructed beauty/ Untouched P15
Force of nature/ Power of human P15
Imposing upon nature/ Blended in P15
Naturally formed/ Landscaped for human greed P15
Sheer beauty/ man in the environment P7
Moral Imperative to conserve/ people ruin nature P11

**Engagement with environment – 19 constructs**

Mental

Interesting/Bland P3
Interesting/Dangerous P2
Interesting/everyday P8
Magical/Not stimulating P4
Like to go/Not bothered about going P6
Rewarding/Crap P4
Dull/ exciting P9
Exciting/Mundane P15
Boring/ Exciting P13
Interesting/ Boring P11
Interesting/ No interest P11
Intriguing/ Familiar P14
Don't draw you in/ Exciting P14
Sad/ Interested P2
Interest to go/ No appeal to go P7
Exploring/ Restricted P14
Exploration/Sterile P5
Things to explore/ Nothing to do P1
Find things to/ Nothing to inspire self P4
Like to go see/ Extreme P2
Want to go/ Not want to go P1
Afternoon stroll/ Places to be endured P7
Go to for pleasure/ Less pleasurable P16
Enjoyable, pleasant/ Uncomfortable wild places P7
Places to enjoy/ Loud P6
Mood/ Emotionless P14

Aesthetic appeal

Less harsh/ Harsh P8
Inviting/Off putting P10
Pleasant/Miserable P14
Pleasant/Harsh P7
Not appealing/ Appealing P13
Appealing/ Not appealing P16
Artistic/ Ugly and Built up P5
Beautiful/Bland P4
Postcard Beauty/ Everyday P7
Sheer beauty/ Harsh Beauty P7
Rural Beauty/ Can see every day P8
Manmade beauty/ Natural Beauty P7

Eye sore/ Appealing P2

Personal Attachment
Personal memories/ don't do anything for memories P7
Memories/ No attachment P2

**Health of Nature- 37 constructs**
Lush greenery/ Barron, no plant life P13
Less fertile/ Rich P15
Injured/ Healthy P15
Full of wildlife/ Empty P11
Life-cycles/ Barron P10
Cycles/ Static P10
Hope/Despair P10
Good for nature/ Ecosystem Together P2
Future/ Hopelessness P10
Fertile/ Less fertile P16
Importance to conserve/ no opposite P1
Bio-diverse/ Wildlife poor P11
Lush Green, fertile/ Barron P13
Green/ Brown, dead P13
Wildlife rich/ predictable population of wildlife P11
Lush/ Stunted growth P13
Flourishing/ Barron P13
Wildlife friendly/ Barron P13
Interesting living/ Nothing living P3
Flourishing/withering P10
Life going forward/ Barron P10
Variety in nature/ Mundaneness P10
Stuff living there/ Stuff not living there P3
no growth/ Flourishing P13
Extreme/ favourable to things growing P13
Thriving greenery/ Struggling P13
Dry and hot/ fertile P16
Ecological desert/ Interesting wildlife P3
Ecological diversity/ monoculture P3
Vegetation/ less vegetation P5
Vast variety in nature/ Sameness P10
Habitat destruction/ Natures maintained P4
No diversity of species/ Biodiverse P4
Wildlife friendly, species rich/ Species poor P3
Biodiversity hotspot/ Monoculture P5
Resilient/ Disrupted ecosystem P5
Miserable/ A lot of wildlife P9

Humans exclude everything/ Natural habitats, more species P4

**Safety- 9 constructs**
Peaceful/foreboding P15
Challenging/Controlled, safe P11
Eerie/Comfortable P14
Relaxing/ Somewhere you need to protect yourself P4
Extreme/Down to earth P2
Safe/Challenging P4
Extremes/Average P9
Inviting/ To be respected P10

**Familiarity- 23 constructs**
Not familiar/ familiar P16
Alien/Familiar P15
Local/ Foreign P3
Exotic/ English P1
Familiarity/ Aw-inspiring P10
Abroad/Here P1
Home/ Abroad P2
English/South American P9
English/ Exotic P16
UK/ Abroad P12
Tropical/ Local P16
Western/ Exotic P16
English/ Foreign P7
England/ Not England P2
Humid/ Rural England P13
Countryside/ Hostile P8
Garden/ Out of the way P2
Hot countries/ Local P8
Different/ Common Place P11
English/ African P7
Normal/ Not encounter P16
Different animals/ Close to home P2
Travel/ Home P2
Mysterious/ Obvious P11
Holiday/ England P2

**Function- 14 constructs**
Food/ Pleasure P8
Attractive/ Functional P12
Leisure/ Work P1
Harsh/ Productive P6

Gain/ Leisure P8
Enjoy/ Work P6
Calming/ Functional P6
Wild/ Practical P16
Recreation/ AgricultureP3
Playground/ Have to do P5
Wild places/ playground P9
Recreation/ Open P9
Playground/ Walking P7
Utilised for public enjoyment/ Residential or own enjoyment P13

**Sense of Scale- 11 constructs**
Narrow focus/ Expanse P16
Endless/Measured P13
Dense/Open P14
Open/Closed P6
Open air/ Enclosed P5
Free, not hemmed in/ Claustrophobic, can't get away P4
Open/ Condensed P14
Vast/ tampered with P16
Vast/ Narrow P16

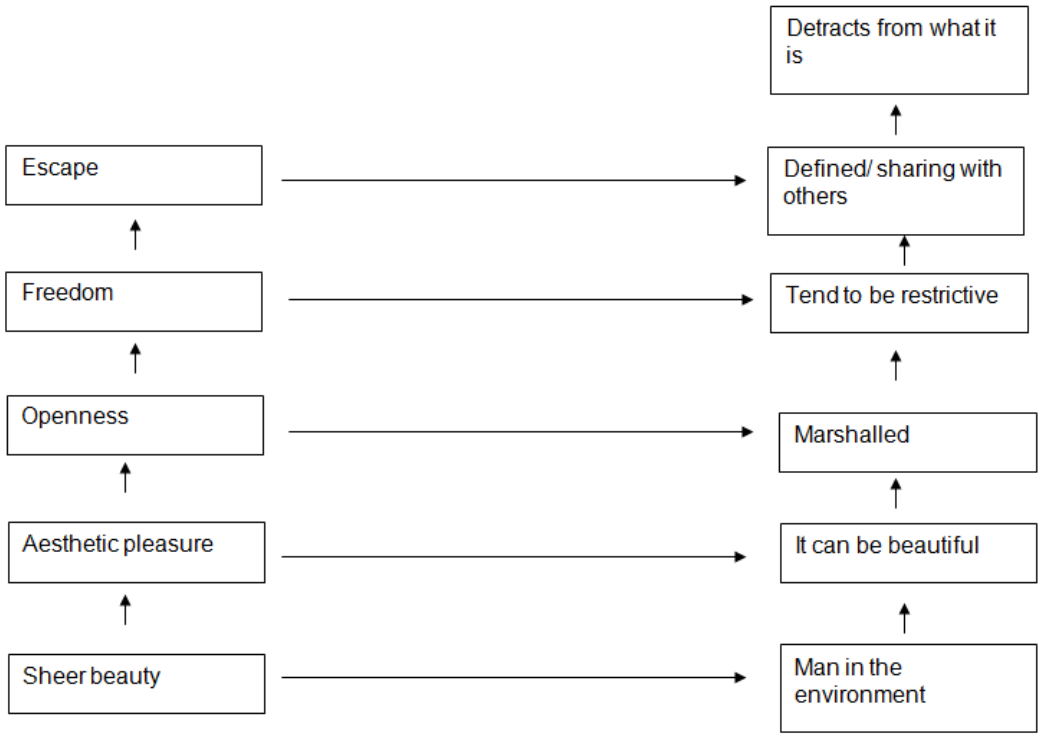
**Physical features of environment- 36 constructs**
Cold/ Warm P6, 4, 1, 16
Temperate/ Polar P3
Temperate/ Montane P11
Very cold/ Warm P11
Hot/ Cold P2
Frozen/ Desert P4
Summer/ Winter P1
Autumn/ Summer P1
Colourful/ Dull P1, 14
Bright/ Dull P1
Wide range of colour/ grey P10
Sand and blue sky/ Lack of colour P14
Bland/ Colourful P13
Colourful/ Green P16
Green/ Not green P1
Lowland/ Mountain P11
Flat/ Hilly P1, 13
Flat/ Not flat P1
Altitude/ Sea Level P12
Jungle/ prairie P1
Rainforest/ park P14

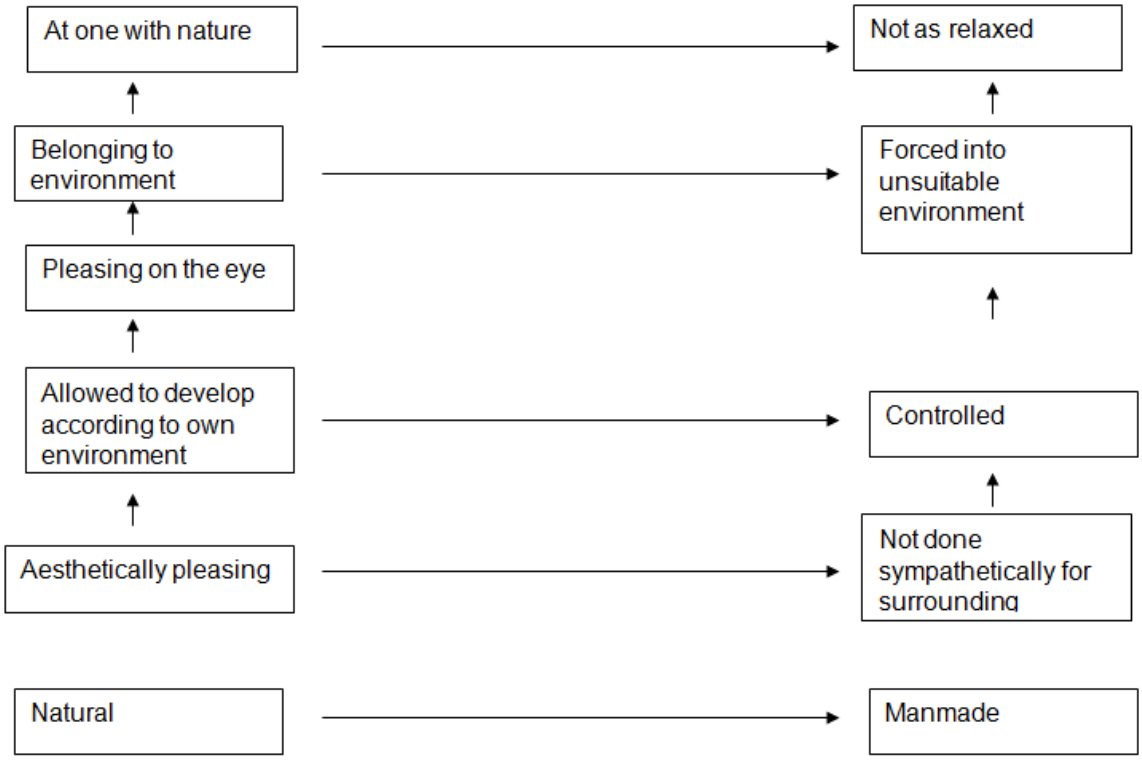
Jungle/ Savannah P9
Sea/ Desert P9
Dryland/ Sea P8
Water/ Desert P8, 1
Oceanic/ Coastal P12
Dryness/ Verdant P10
Sea/ Land P16
Moisture/ Desert P9
Marine/ terrestrial P3, P2
Marine/ fresh water P3
Arboreal/ Marine P3
Fish/ No fish P3
Not terrestrial species/ Aquatic and terrestrial species P3
Flowers/ No flowers P9
Trees/ No Trees P3, 9
Blue/ Overcast P2
Water/No water P3

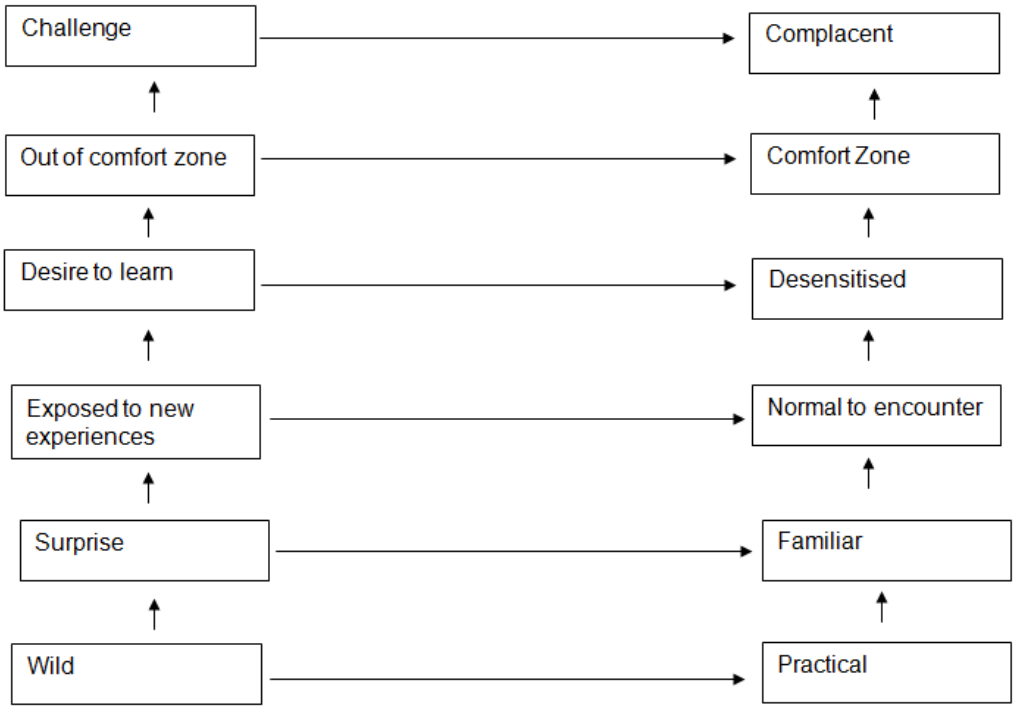
**Idiosyncratic- 9 constructs**
**P14- Depth**
No depth/ depth P14
Halves in composition/depth P14
Layers/no layers P14
**P6- Escapism**
Forget busy life/ Reminder of bust life P6
Calming/ Busy life and problems P6
**P15-**
Primary nature in forfront/ Nature incidentally P15
Put there no other thought/ A way to get closer to nature P15
**Ansa-**
Perspective/ everyday, desensitised P16
Bigger perspective/ Narrow Perspective P16

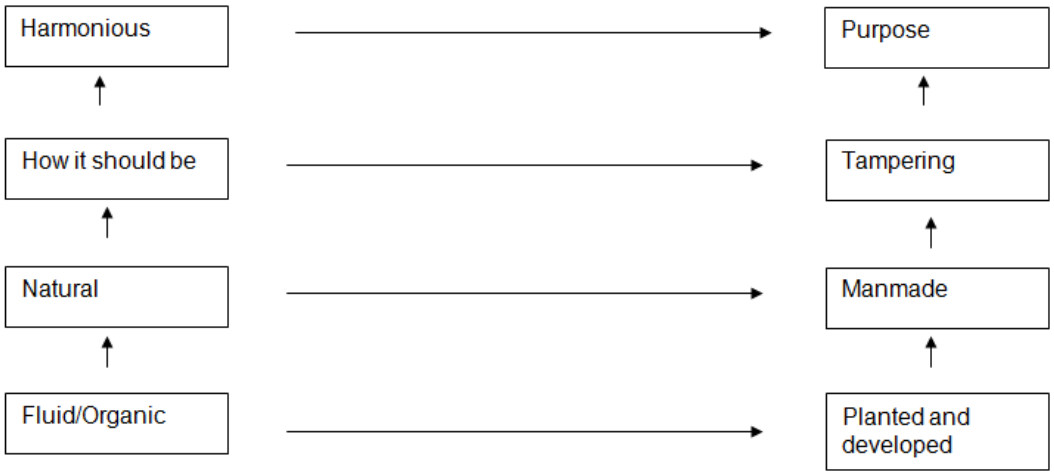
**Miscellaneous- 9 constructs**
Purpose to appreciate nature/ Easy and convenient P15
Hardwork/ Harsh natural environment P7
Without it wouldn't be life/ Sustains native species P8
Enjoying natural surroundings/ Enjoying in cities museums P5
Activity/ Inactive P5
Well understood and aware of importance/ Not enough known to call as important P6
Where I would take kids/ where I wouldn't take kids P3

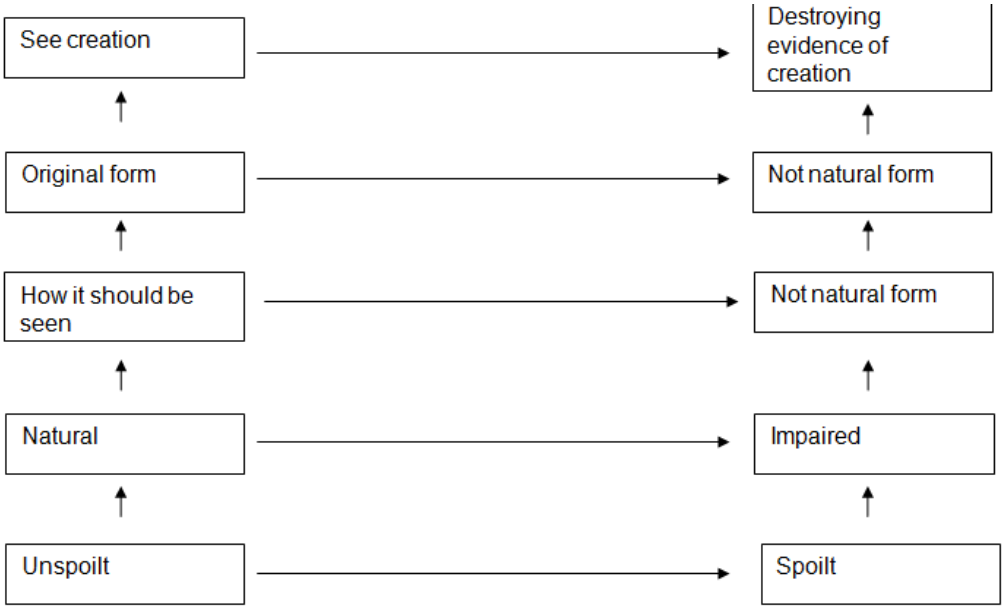
# Appendix 13- Some examples of participant's ladders



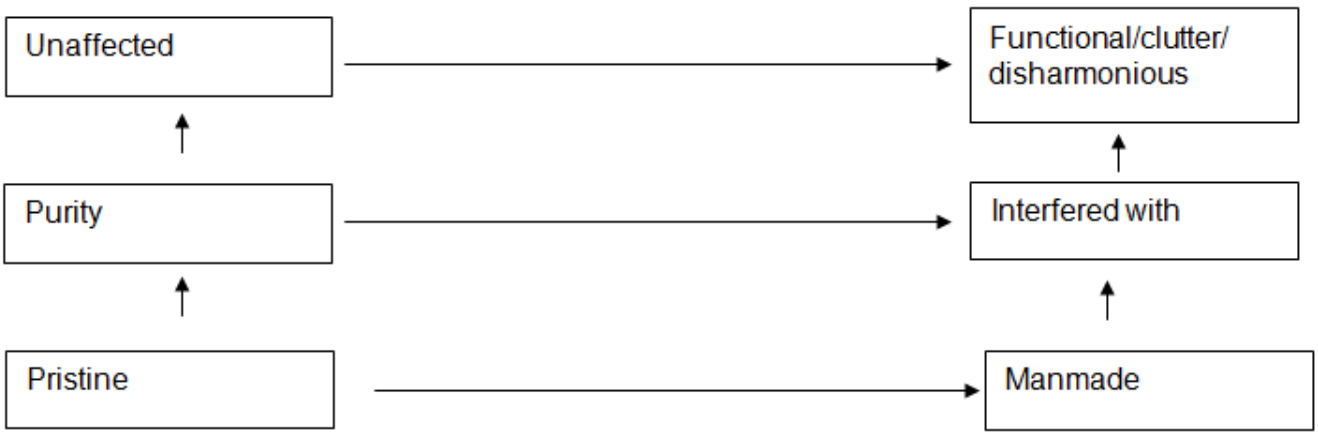




Challenge
Complacent
Out of comfort zone
Comfort Zone
Desire to learn
Desensitised
Exposed to new experiences
Normal to encounter
Surprise
Familiar
Wild
Practical


Harmonious
Purpose
How it should be
Tampering
Natural
Manmade
Fluid/Organic
Planted and developed


See creation
Destroying evidence of creation
Original form
Not natural form
How it should be seen
Not natural form
Natural
Impaired
Unspoilt
Spoilt

Hold on to sense of who you are
Swayed by external sources
Avoid disembodied and lost feeling
Consumed by anxiety
Time to think and reflect
Worrying about future
Peaceful
Foreboding


Unaffected
Functional/clutter/ disharmonious
Purity
Interfered with
Pristine
Manmade

# Appendix 14- The form given to Assistants B and C to judge superordinacy

Superordinate construct: These are constructs which are higher in the hierarchy of a person's construct system and reflect their core values.They are overarching constructs which have many subordinate constructs to which they can be applied

Below are 71 pairs of bipolar constructs. Please highlight one construct in each pair that could be described as superordinate, according to the definition above. If you feel you cannot make this distinction for a pair, please highlight both bipolar constructs.

If there is anything you are not sure of in this task, please contact me at: Jamie.Sutcliffe@hud.ac.uk

Pair 1
Uncomfortable versus Pleasant
Achievement versus Boredom

Pair 2
Escape versus Defined
Sheer beauty versus Man in the environment

Pair 3
Natural versus Created
Real/Raw versus Artificial

Pair 4
Postcard beauty versus Everyday
To look at versus Do something

Pair 5
Natural versus Manmade
At one with nature versus Not as Relaxed

Pair 6
Relaxed versus Not want to spend time there
Flourishing versus Barren

Pair 7
Plants will grow versus Nothing Flourishing
Favourable, things will grow versus Extreme

Pair 8
No concept of visual space versus Workable environment
Endless versus Measured

Pair 9
Pleasing versus Ugly
Attractive versus Functional

Pair 10
Naturally evolving versus Clutter
Impressing versus Unappealing

Pair 11
Unaffected versus Functional
Pristine versus Manmade

Pair 12
Learning versus Waste of time
Wild versus Parkland

Pair 13
Relate to island nation versus Relatable
Coastal versus Inland

Pair 14
Wild versus Practical
Challenge versus Complacent

Pair 15
Fertile versus Less fertile
Sustenance versus Redundant

Pair 16
Harmonious versus Purpose
Fluid versus Planted and Developed

Pair 17
Colourful versus Green
Multidimensional versus Snapshot

Pair 18
Alien versus Familiar
Life about Powerful experience versus Stunted

Pair 19
Energising versus Drained
Healthy versus Injured

Pair 20
Peaceful versus Foreboding
Hold on to sense of who you are versus Swayed by external sources

Pair 21
Sense of others, world bigger than us versus Becomes about you
Naturally forming versus Manmade

Pair 22

Originality versus Transient
Power/Force of nature versus Power of human

Pair 23
Stimulation versus Nothing/Sterile
Bio-diverse versus Wildlife Poor

Pair 24
Sustainability/ handing to next generation versus Little to hand on/Ruined
Bio-diverse versus Wildlife Poor

Pair 25
Others have an opportunity versus Lack of conscience
Moral imperative to conserve versus People ruin nature

Pair 26
Controlled versus Hostile
Comfort zone versus Too challenging

Pair 27
Opportunity to learn versus Fewer opportunities
Mysterious versus Obvious

Pair 28
Physical challenge versus Within capabilities and familiar
Challenging versus Controlled

Pair 29
Unspoilt versus Spoilt
See creation versus Destroying evidence of creation

Pair 30
Cycles versus Static
Development versus Lack of future

Pair 31
Aw-inspiring versus Familiarity
Inquisitive versus Complacency

Pair 32
Relax versus Dangers in meddling with nature
Inviting versus To be respected

Pair 33
New experiences versus Monoculture
Exciting, lots of wildlife versus Dull and miserable

Pair 34
Wild versus Managed
Lucky versus Handed on a plate

Pair 35
See for first time versus No surprises
Forest versus Cultivated

Pair 36
Wild places versus Mans Presence
Prefer to be out in open versus Annoyance

Pair 37
Beauty versus One person's view of finished product
Natural versus Manufactured

Pair 38
Interesting versus Everyday
Stimulating, sparking the brain versus On your doorstep

Pair 39
Easy versus Difficult
Less harsh versus Harsh

Pair 40
Fulfilling versus Pointless
Harsh versus Productive

Pair 41
Achievable versus Stressed
Calming versus Loud, busy life problems

Pair 42
Calming versus Stressful
Natural versus Human

Pair 43
Untouched versus Exploiting Nature
How it should be versus Consequences of change

Pair 44
To help understanding versus Interesting
Well understood versus Not known

Pair 45
Open versus Closed
Makes things seem less important versus Panicked

Pair 46
Exploration versus Sterile
Achievement against elements versus Stressed

Pair 47

True wilderness versus Manicured wilderness
Primeval, spiritual versus Modern

Pair 48
Inherently valuable versus Less exciting
Natural ecosystem versus Constructed Habitat

Pair 49
Freedom, away from it all versus Takes away freedom
Natural versus Manmade

Pair 50
Relaxing versus Protect yourself
Freedom versus Claustrophobic

Pair 51
Biodiversity of species versus No biodiversity of species
Brain absorbing versus No interest

Pair 52
Everything has its place versus Need to concur nature
Could survive there versus Inhospitable

Pair 53
Pristine versus Human activity
Interesting versus Feels like robbed of something

Pair 54
Interesting/ We spoil things
Low human impact versus Heavy human impact

Pair 55
No management versus Past management
Interesting versus Less interesting

Pair 56
Marine versus Arboreal
Interesting, more knowledge of versus Not as interesting

Pair 57
Necessary evil versus Damaging
Agriculture versus Recreation

Pair 58
Dangerous versus Interesting
Uninhabited versus Inhabited

Pair 59
Planet not just for humans versus Materialistic
Untouched versus Touched

Pair 60
Animal life versus Human life
Efficient versus Wasteful

Pair 61
Different versus Close to home
Experience world, enjoy new things versus Same old stuff

Pair 62
Down to earth versus Extreme
Safe versus Fearful

Pair 63
Relaxing versus Boring, repetitive work
Things to explore versus Nothing to do

Pair 64
No people versus People
Familiar versus Not used to it

Pair 65
Leisure versus Work
Out of routine versus Tied to farm

Pair 66
English versus Exotic
Not too hot versus Too hot

Pair 67
Go about own business, freedom versus Control system, tied down
Natural versus Artificial

Pair 68
The way it's supposed to be as human, freedom versus Can't see what is coming, claustrophobic
Open versus Dense

Pair 69
Exciting versus Don't draw you in
More interesting versus Boring

Pair 70
Intriguing versus Familiar
Unknown versus Repetitive

Pair 71
Comfortable versus Eerie
Familiar versus Sinister