

**Exploring Nature's Benefits through Tourism and
Eudaimonic Well-being: A Case Study of the Jurassic
Coast, Dorset**

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**As a thesis for the degree of
Doctor of Philosophy in Geography**

October 2013

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Abstract

This research is concerned with advancing understanding of human-nature relationships and the ways in which people benefit from interactions with nature. This is important since economic accounts of the value of natural resources are most often used to determine priorities for action, leaving the more deep-felt and intangible ways that people experience and value nature largely excluded from decision making processes. The imperative to understand the more nuanced ways that people benefit from and value nature has gained traction in recent years most notably through high-profile analysis of natural resources which have made explicit their links to human well-being.

This study aims to capture these wider values of the Jurassic Coast, Dorset and the ways in which it comes to resonate as significant and valuable to people. It uses both quantitative and qualitative techniques to gain rich insights into what this World Heritage Site really means to visitors and how experiences here underpin psychological well-being. A methodological innovation is presented in the human needs framework which is used to test the extent to which human needs thought to be important for psychological well-being are satisfied through interactions in the landscape. Moreover, it is hypothesised that this satisfaction leads to eudaimonic well-being which is concerned with positive psychological functioning and 'flourishing' (Ryan & Deci, 2001).

This research has implications for tourism planning and management to ensure opportunities are created or maintained for human needs to be met in the landscape and for optimal visitor experiences to result. More widely, this research also has implications for understanding environmental value from a broad perspective and for using innovative methodologies to reveal these values, and to incorporate them in decision making processes in diverse policy areas.

Acknowledgements

I would firstly like to thank my supervisory team for their continuous and unfaltering efforts to guide me through a maze of growing literature and to keep my thoughts on track. Dr Rob Fish in particular for his expertise in the ecosystem services arena and Dr Stewart Barr for his excellent knowledge of quantitative research techniques.

Thanks also to partners at Dorset County Council, Don Gobbett, Head of Planning in particular for his continued support through this process and for enthusing others within his team and beyond to engage with this work.

Finally, special thanks must also be offered to all who took part in this study and made it possible.

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List of Abbreviations

DEFRA	Department for the Environment, Food and Rural Affairs
UNESCO	United Nations Educational, Scientific and Cultural Organisation
MEA	Millennium Ecosystem Assessment
UKNEA	United Kingdom National Ecosystem Assessment
NEF	New Economics Foundation
ONS	Office for National Statistics
UNWTO	United Nations World Tourism Organisation
CBD	Convention on Biological Diversity
NHS	National Health Service
LGA	Local Government Association
CV	Contingent Valuation
WTP	Willingness to pay
WTA	Willingness to accept
TEEB	The Economics of Ecosystems and Biodiversity
NEF	New Economics Foundation
WHS	World Heritage Site
DCC	Dorset County Council
PCA	Principal Components Analysis

Chapter 1: Introduction

1.1 Context and Background to Research

The aim of this study is to advance current thinking around human-nature relationships and the ways in which people benefit from experiences and interactions with nature. It argues, from an analysis of traditional approaches to environmental valuation, that such benefits cannot always be effectively captured by neoclassical economic techniques and importantly, that not all things that matter to people can be measured in monetary terms. These claims have increasingly been recognised in policy circles and a shift in thinking has become evident in recent years in which ideas of how natural resources underpin human well-being have come to take on a central focus. The UK Government's Natural Environment White Paper (Defra, 2011) for example, highlights this connection and states that 'nature is sometimes taken for granted and undervalued, but people cannot flourish without the benefits and services our natural environment provides' (p3). This idea of nature enabling human flourishing is one which is central to this research as it implies a deep and important connection between people and nature and a wider understanding of well-being, beyond ideas of 'the commodity metaphor' (Williams et al., 1992) or nature providing goods such as food and fresh water to ideas of nature providing psychological nourishment. Exploring this connection could provide significant insights and point to a wider understanding of the diverse ways in which natural resources become significant and valuable for people.

The academic literature is replete with rich evidence of the ways in which people benefit from experiences in nature which has been explored for example, in terms of an evolutionary pull and biological disposition to nature (Kellert and Wilson, 1993) and also through the health inducing properties of nature (Abraham et al., 2010; Kaplan, 1995; Ulrich, 1979). By exploring and building on these theoretical frameworks, specifically with regards to psychological well-being, this research aims to reveal a more detailed and empirically informed picture of the experiences of visitors to the natural touristic landscape of the Jurassic Coast, Dorset. In particular, analysis focuses on the dimension of psychological well-being which is described as 'eudaimonia' which refers not simply to how happy people feel in an environment but how being there serves to influence meaning in life and the degree to which a person

is 'fully functioning' (Ryan and Deci, 2001 p141). It is the aspect of human well-being which is underpinned by a sense of competence, of perspective and feelings of vitality which may contribute towards people attaining goals and reaching individual potentials; all of which have far reaching consequences not only for the individuals concerned but also for society as a whole. For these reasons, it is vital that understanding the connections between nature and eudaimonia is advanced so that these benefits of nature can be understood, harnessed and taken into consideration in decisions which affect the landscape.

These ideas also inform discussions around environmental valuation and why certain landscapes may be more valuable and significant for people. Identifying the value of nature is however, complicated, not least because of the complexity around what is meant by value and whether values are 'held' or 'assigned'. The distinction being that held values are aligned to beliefs and are arguably more subjective than assigned values which express the relative weights of values as compared to other values, often in monetary figures (Satterfield and Kalof, 2005). Moreover, values may not always be understood by 'use values' or the value of actually using natural resources. Taking into account 'non-use' values may prove to be as, if not more significant in assessments of value. Non-use values are however, more difficult to account for and are referred to as 'the intangible benefits to society' (Tisdell & Wilson, 2012, p444). Such benefits are often seen as 'belonging to the realms of the individual and the personal and thus marginal for public purposes' (Hughes, 1995 p52). This means they are often left out of decisions around managing landscapes when in fact, they could be a central focus for them and taking account of them could result in better environmental decisions being made.

Thinking about environmental value in this way resonates with what Satterfield and Kalof (2005) refer to an 'axiomatic' position and this represents a dissatisfaction with economic and in particular, with monetary assessments of value. Whilst this thesis recognises the importance of monetary assessments of value in some circumstances, not least as an effective way of communicating value, it is within this axiomatic tradition that this thesis largely rests. As Satterfield and Kalof (2005) state, 'practitioners in this field are working to identify new methods for valuation where

traditional welfare or neoclassical economics cannot be depended on to adequately capture the full range of values' (p. xii).

Value in this way is thus defined as 'what we care about' (Keeney, 1992, p. 3). What we care about however, is of course subjective and can be shared across cultures and may even be recognised formally such as in landscape designations. Cultural values can thus be seen as an expression of what we care about both in a collective sense and as individuals. Cultural values may even transcend the experience of actually visiting a place, as value may arise for people residing a long way from the source of value (Hay-Edie, 2003). In this sense, such values may shape thoughts and behaviours towards natural resources. This thesis explores how values are also shaped, coloured and texture and nuance added by individuals through perceiving, experiencing and benefitting from nature first-hand.

Some understanding of the cultural and non-use value of the Jurassic Coast is implied in its designation as a UNESCO World Heritage Site. This brings with it a certain shared cultural appreciation and 'social recognition' (Tisdell & Wilson, 2012, p. 112) of the value of the site. Arguably less well understood and documented however, are the more profound and intangible values associated with this landscape and the wider meanings it has for visitors to it. The methodology developed through this study aims to uncover these meanings and to develop an understanding of how experiences in this area serve to underpin human psychological well-being and what a more nuanced understanding of this relationship might mean from a planning and management perspective.

These ideas have gained currency in recent years and it is fortuitous that this study is undertaken at this time as it speaks to a range of politically current agendas. It will for example, make a valuable contribution to the burgeoning evidence regarding the role of nature in human well-being (MEA, 2005; Natural England, 2009, UKNEA, 2011) and the importance of measuring what matters to people and of finding new ways to measure prosperity (Stiglitz et al., 2009; NEF, 2012; ONS, 2011). On a more localised scale, it will provide stimulating and useful reading for those involved in managing tourism at the Jurassic Coast. For example, evidence of the relationship between the Jurassic Coast and the psychological well-being of visitors to it may

have implications for both visitor interpretation and marketing based on ideas of uniqueness and non-material benefit. Furthermore, it extends the ideas enshrined in the European Landscape Convention which highlights the importance of developing landscape policies dedicated to the protection and management of landscapes and for including people and their values in those policies (Council of Europe, 2000). An improved understanding of the ways in which landscapes underpin psychological well-being could prove useful in moving forward towards these aims.

The notion that monetary measures of what is significant and valuable to people do not always capture the rich and textured ways in which value arises, is increasingly being recognised in a variety of policy contexts such as in landscape management (Natural England, 2009, 2011) and in wider economic contexts where the idea of prosperity is being broadened to take account of more than money (Stiglitz et al., 2009; NEF, 2012). This has led researchers to look elsewhere in search of new ways to understand the value of nature and the human-nature relationship. Such a relationship is manifest in nature-based tourism settings where nature experiences are at the heart of the interaction. The fact that tourism is an enormous industry globally and an important foundation of many regional economies (UNWTO¹) means that often it is the economic benefits which come to dominate discussions around planning and managing the landscape for tourism. Such discussions however, can obscure the very reasons why people visit different landscapes which may be bound up with ideas of fulfilling different human needs through contact with nature. As Harmon suggests, people engage in tourism in nature because ‘natural landscapes offer a clear-cut contrast to the getting and spending that drives so much of modern life’ (Harmon, 2003, p24). In this role as an ‘antidote’ to modern life, the natural environment deserves further considerations into how it serves to influence people, which landscapes offer the best chance of such ‘escape’ from modern life and the potential for restoration and what degradation of these landscapes might, by extension mean to those who enjoy or even rely on them for such benefits. The following section will discuss in more detail why such considerations are required and how this study contributes to these discussions.

¹ <http://www.unwto.org>

1.2 Rationale for Study

The deep and enduring bond that humans appear to have with nature is referred to and variously described through bodies of literature, from ancient to modern-day. These contemplations of how nature serves to underpin human well-being have a very real place in contemporary considerations about managing landscapes to preserve these connections and the benefits that people derive from nature. Largely, these considerations revolve around a concern about the degradation of the world's ecosystems and what this might mean to human well-being, as explored through the Millennium Ecosystem Assessment (MEA, 2005). This work opened up the debate concerning the myriad ways in which nature underpins human well-being and proposed a framework in which to consider these connections. The challenge to investigate this issue further has been taken up in various guises globally from the Sub Global Assessment Network convened by the United Nations Environment Programme (2007) to the UK National Ecosystem Assessment (2011) and its subsequent and on-going follow up work. These partnerships and bodies of work purport that the natural environment provides a wide range of goods and services that underpin human health, well-being and prosperity and that there is further work to be done in uncovering what these are and how precisely they impact on human well-being. Arguably one of the most notable features of these growing bodies of work is the attention given to the intangible aspects of the human-nature relationship or what have been termed 'cultural ecosystem services' which are defined as 'the non-material benefits that people obtain from ecosystems' (MEA, 2003, p58) and which include values such as aesthetic, inspiration, heritage, spiritual and recreation.

These intangible aspects of the human-nature relationship are important and as Church et al (2011, p679) note; 'cultural goods and services represent the newest way of interpreting human-environment relations: a 21st Century framing in a sequence covering millennia through which societies have expressed the centrality of the natural environment in supporting human life and well-being'. It is through such discussions that attention and legitimacy has been afforded to these non material benefits of nature and the central role they play in underpinning human well-being. Despite the difficulties in articulating exactly what these non-material benefits are and what they mean to individuals, it is argued that they are essential in a wider interpretation of human prosperity which is not solely concerned with monetary gain

but instead with the multiple dimensions of well-being. The apprehension around the degradation of natural resources can therefore be seen not only in terms of economic consequences but also in terms of consequences for human well-being.

Such concerns around the degradation of natural resources and what this might mean for human well-being have inevitably sparked a growing interest in wide policy areas in recent years. A guiding report for the UK's Department for the Environment, Food and Rural Affairs (Defra) for example, noted that 'there is a shifting emphasis from financial or market-based evidence towards a wider information set including costs, benefits and values which are not (fully) represented in existing markets' (Eftec, 2006, p6). Such wider information sets need to include the ways in which people not only think but how they feel about different policy interventions. Techniques are then required to capture and somehow communicate these wider information sets in meaningful ways. The UK Government Treasury 'Green Book' (2003, p1) addresses this need to a certain extent by providing guidance to encourage robust policy appraisals which 'place emphasis on assessing the differential impacts of proposals on the various groups in our society'. With this aim, techniques to take account of wider social costs and benefits are outlined. This guidance also states explicitly that the valuation of non-market impacts is necessary and should be attempted wherever feasible which would take account of values not reflected in economic or monetary measures. Seemingly at odds with this however, they advocate 'attributing monetary values to all impacts of any proposed policy, project or programme'.

The guidance does on the other hand recognise that an understanding of subjective well-being can add to evaluations of how policies affect different groups. In this discussion, it points to the Office of National Statistics (ONS) Household Survey (2011) which attempted to gain a national measure of well-being and also included a measure of eudaimonic well-being through the insertion of the question 'overall, to what extent do you feel the things you do in your life are worthwhile?' Whilst attempting to include subjective notions of well-being is innovative, it is doubtful whether eudaimonic well-being can be measured adequately with just one question and it is proposed that further, more detailed investigation is required if a deeper appreciation of how different policies and interventions may affect eudaimonic well-

being. Recent updates and complements to the UK Government's 'Green Book' have also been produced to include guidance on conducting assessments of well-being and the social impacts of policy decisions. These include the Magenta book (Treasury, 2011) and a report on valuation techniques for social cost-benefit analysis (Fujiwara and Campbell, 2011). Despite reference in these documents to including assessments of how people think and feel about their lives, however, monetary measures are still largely advocated for such evaluations and arguably some nuance is lost in this translation. Techniques which use interpretive and experiential data to get to the heart of how nature underpins well-being appear therefore, to be largely missing from this guidance.

In other policy areas, the need to understand the benefits that people derive from nature, referred to as 'ecosystem services' by the MEA (2003) and for involving people in these discussions, has been increasingly recognised. Defra, for example state; 'in order to value ecosystem services, we will need to continue to develop our public and stakeholder engagement to ensure decisions are informed by how people relate to and identify with their environment, and how changes in ecosystem services impact on human well-being' (Defra, 2007, p25). The report by the Commission on the Measurement of Economic and Social Progress also concluded in a similar vein that 'the time is ripe for our measurement system to shift emphasis from measuring economic production to measuring people's well-being' (Stiglitz et al., 2009, p12).

Alongside these discussions, the strategic review of health inequalities in England (Marmot, 2008) noted that well-being should be a more important goal in society than simply economic growth and that health inequalities should be included in measures of well-being. This report included environmental sustainability as a key part of ambitions to reduce health inequalities and creating healthy and sustainable places emerged as a key priority objective. The report recommended integrating environmental and health systems (as well as planning, transport and housing) in order to address health issues in communities, and the degree to which they enable and promote healthy behaviours. Such thinking came in the run up to the transfer of the public health function from the National Health Service (NHS) to local government when 'renewed emphasis was placed on local authorities to tackle the wider determinants of health' (LGA, 2012, p2).

In this regard, Dorset County Council (DCC) demonstrated a progressive interest in exploring ideas around the contribution of the natural environment to health and well-being and how an understanding of this connection might influence their own policies and priorities for action. The connections between the unique natural assets of the county and the well-being of its residents and visitors could for example, inform not only thinking in the health arena but could also inform landscape management and tourism strategies through a deeper understanding of how people use and experience the landscape. With an eye to academic thinking around this subject, an innovative partnership was thus created between Dorset County Council and the University of Exeter, from which this study emerged, with a focus on the unique natural landscape of the Jurassic Coast and the nature, meaning and significance of the intangible benefits of nature in this setting.

Despite considerable headway being made, most notably by the UK NEA and its follow-on work into cultural ecosystem services, considerable challenges remain in revealing them and what they mean to individuals. Further methodological developments are thus required to overcome the conceptual problems of including intangible well-being benefits in assessments of the worth of natural resources. This study aims to contribute to thinking around this by presenting a conceptual framework and an innovative methodology for understanding the ways in which touristic encounters with the natural environment serve to underpin human psychological well-being. The following section outlines how recent thinking around these issues has shaped the development of this study.

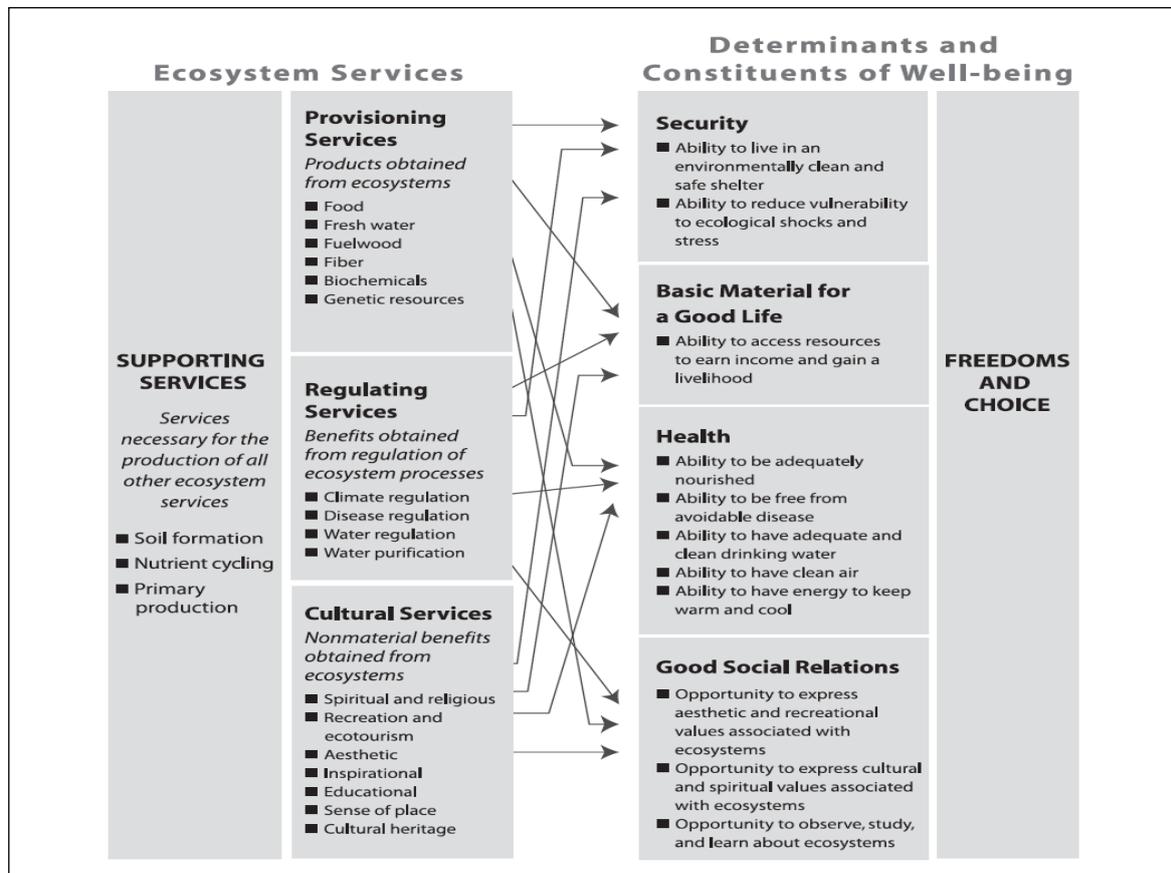
1.3 The Intangible Benefits of Nature: An Important Area for Further Research

The attention given in recent years to cultural ecosystem services as an expression of the intangible yet meaningful ways that nature underpins human well-being has highlighted this connection as an important area for further research. The MEA proposed a framework for how the benefits of nature (from provisioning services such as food and water to regulating services including climate regulation, supporting services such as soil formation and cultural services) sustain different constituents of human well-being (see figure 1.1). Whilst this provides a useful

framework for highlighting the place of cultural services in sustaining human well-being and for conceptualising what these intangible services actually are, they are portrayed as being only weakly related to human well-being. Moreover, the determinants and constituents of well-being identified in this framework as supported by ecosystem services appear to be only partially developed and no reference is made to psychological well-being. Evidence through the literature concerning the deeply meaningful ways that nature serves to fortify the human spirit (Driver et al., 1999), how it contributes to a profound sense of connection with the world and with a higher power (Studley, 2010) and how it is conducive to psychological well-being and restoration (Ashbullby et al., 2011; Kaplan, 1995; Ulrich, 1979) suggests that this framework does not adequately represent the importance of these intangible values for human well-being.

A few notable attempts through the literature do attempt to capture the importance of these benefits and to demonstrate how they are meaningful to people. Techniques such as participatory mapping for example, have been tested in various contexts to understand what in the landscape is important to people and why. Brown (2006) for example, used participatory mapping to analyse landscape values relating to tourism and residential developments in South Australia. His study comments on the distinct advantages offered by such innovations in capturing landscape values and concludes that intangible values such as 'intrinsic', 'therapeutic', 'scenic' and 'learning' were more important for residents than the potential economic benefits of further tourism development in the study area. Such insights are vital to good environmental decision-making and yet are often not taken into account because of the difficulties inherent in understanding and capturing them. Raymond et al (2009) tested a similar mapping methodology in South Australia in order to capture this broad range of values and they conclude that 'human beings are agents in the landscape who attribute meaning and value to biophysical features which are not solely instrumental and monetary in nature' (p1314). Understanding the intangible benefits of nature then provides a deeper insight into how and why landscapes and attributes in those landscapes come to have meaning and value for people.

Figure 1.1 Linkages between ecosystem services and human well-being
(Source: MEA 2005 (pvi))



This study seeks to move forward this research agenda by understanding and capturing the intangible benefits of nature at the Jurassic Coast and understanding the ways in which the landscape resonates as important to people. Through this understanding, an evidence base can be gathered to inform management practices and to ensure the things that matter to people are preserved and enhanced. This is particularly important in a touristic landscape where values considered in decision making are so often concerned with economic valuation. By capturing the ways in which touristic encounters with the Jurassic Coast underpin psychological well-being and contribute to eudaimonic well-being, a more comprehensive picture can be developed of the broad ways in which people attribute meaning and value to the landscape. Tourism management can benefit greatly from this information in making decisions about how to manage the landscape for multiple users who use the landscape and benefit from it in diverse ways. It can also feed into marketing

strategies which can develop varying ways to present the Jurassic Coast to a diverse visitor population who may be motivated to visit for different reasons.

Moreover, an appreciation into how the intangible benefits of nature are experienced and have value for people may provide important insights into visitor attitudes and behaviours. It has been proposed for example, that experiencing well-being from nature may provide the motivation for protectionist and environmentally friendly behaviours (Harmon, 2003). If people are motivated to visit a landscape for the purposes of restoration and enhancing well-being for example, they may also be more motivated to preserve that landscape. Understanding this connection at the Jurassic Coast may therefore, stimulate policies for encouraging more people to connect with the landscape in various ways. The following section will outline the specific aims of this research and the questions it intends to address.

1.4 Research Aims, Objectives and Approach

The broad aims of this study are threefold. Firstly, it is concerned with contributing to existing discourse around environmental valuation and adding to it in important ways, which emphasise the subjective and emotional ways in which people connect with the landscape. Specifically, it aims to understand how eudaimonic well-being features as part of landscape interactions for visitors and how it can be preserved and enhanced at the Jurassic Coast for optimal tourist experiences. Within these discussions, it will contribute to understanding the intangible values of natural sites.

The Jurassic Coast for example, is designated as a World Heritage Site by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) who afford such designations to sites on account of indicators of uniqueness and 'outstanding universal value'. For the Jurassic Coast, this is on account of its geological significance. However, UNESCO do recognise the importance of intangible values and include categories such as 'associations with events or living traditions, with ideas or with beliefs' as indicators of uniqueness (UNESCO). The intangible benefits of the Jurassic Coast such as the meanings and associations attributed to it may equally be important in touristic encounters with it and thus have implications for how to manage the site and also how it is perceived in the public consciousness. Revealing what these are for visitors to the site is important in

understanding the full value of the landscape. Understanding ideas of environmental valuation from a psychological well-being perspective, in addition, adds an interesting and original slant to existing environmental valuation literature and emphasises the criticality of natural resources to mental health processes which is argued to be lacking through current discussions (Chiesura and de-Groot, 2003).

Secondly, this research will address the current dialogue around the conceptual and methodological difficulties of capturing and measuring these intangible benefits of nature as expressed most notably through the literature concerning cultural ecosystem services (Daily et al., 2009; Daniel et al., 2012; Chan et al., 2012a). This study aims to assess these benefits and what they actually mean to people at the Jurassic Coast, through developing and testing an innovative methodology to capture the ways in which people benefit from interactions with this landscape and how those interactions lead to eudaimonic well-being.

Finally, this study aims to assess the implications of using these insights into the nuanced ways in which people benefit from and value the landscape, in decision-making processes. In particular, it will explore how such an approach and understanding can be related to and benefit sustainable tourism planning at the Jurassic Coast but also how the methodology developed here could be applied to different situations and integrated into existing and accepted methods for making decisions which require values to be revealed.

1.4.1 Specific Research Questions

Within the broad aims as outlined above, the thesis will address a number of specific research questions as given below and each chapter of the thesis will address a different question as indicated in parenthesis:

1. What has been the evolution in thinking about environmental valuation?
(Chapter 2)
2. How does this evolution in thinking relate to discussions about tourism planning and management? (Chapter 3)

3. What methods can be developed to examine the intangible benefits of nature and how nature underpins eudaimonic well-being? (Chapter 4)
4. What is the relationship between the Jurassic Coast, tourism and eudaimonic well-being? How does this relationship differ for different visitors? (Chapters 5 & 6)
5. What are the implications of these findings for tourism planning and management at the Jurassic Coast? (Chapter 7)
6. Are there implications of these findings beyond the Jurassic Coast? (Chapter 8)
7. What is the intellectual value of this research? (Chapter 9)

1.4.2 Research Approach

Before addressing these questions, it is firstly imperative to establish a clear understanding of what is meant by 'landscape' and 'ecosystems' and how each will be addressed through this study. The European Landscape Convention uses a broad definition of landscape which encompasses both the natural forces at work on the landscape and the human influences that serve to shape the landscape; 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (Council of Europe, 2000). The Convention on Biological Diversity (CBD), in setting out the ecosystems approach and the principles involved in this identified that 'ecosystems' not only refers to the living elements in a system but also the non-living elements on which they live and depend; 'the land, water and living resources'. This study largely follows these understandings and uses 'landscape' in this broad sense to mean the combination of both living ecosystems and non-living elements which serve to make up a scene which is 'consumed' by visitors and from which the individual and collective 'gaze' (Urry, 2002) on the landscape gives rise to the benefits associated with it.

To answer the specific research questions and explore the relationship between interactions at the Jurassic Coast and eudaimonic well-being and to make some conclusions regarding embedding these understandings into tourism management, a variety of techniques are required. This study uses both quantitative and qualitative methods to gain rich insights into what this natural heritage landscape actually

means to visitors. This approach to understanding the intangible benefits of nature and what they mean for well-being, builds on the reasoning put forward by Church et al (2011) who argue; 'the contribution of environmental settings to human well-being stems from their ability to satisfy human needs in context specific ways' (p679). This was explored through the 'Human-Scale Development Framework' proposed by Chilean economist Max-Neef (1992) who argued that nine fundamental human needs exist which were explored in the context of four existential needs (being, having, doing and interacting). This approach is useful in understanding how different environmental settings serve to satisfy those needs and thus contribute to well-being. It has huge potential for example, in terms of situating development decisions in the context of human needs and wider landscape values and in understanding where priorities for management may lie.

The idea that human needs can be satisfied in nature has been previously explored through ideas of restoration and stress reduction whereby depleted needs can be restored through contact with nature (Ulrich, 1979; Kaplan and Kaplan, 1989; Hartig et al., 1991). Such ideas have largely been tested by these researchers through the use of photographs to elicit preferences and physiological measures of contact with different environments for example. However, building on the Max-Neef framework which assumes a fundamental list of needs which require satisfaction for well-being to be achieved, systematic methods of capturing the ability of different settings to satisfy different needs is possible. Comparisons of different landscapes and their ability to enhance psychological well-being are also possible. This provides the methodological foundation for this study of visitors to the Jurassic Coast. Indicators of human needs are incorporated into a questionnaire to capture and explore the extent to which different human needs are satisfied in this landscape. The concepts and methodologies offered through the well-being literature also provide rich input into this assessment and use are made of them in this study. In particular, the various psychometric scales used through the literature to assess the extent to which individuals feel certain beneficial effects of being in different settings (Hood, 1977; Ryff and Keyes, 1995; Han, 2003; Costanza et al., 2007; Diener et al., 2010) are assessed and use made of them in developing the questionnaire. Qualitative techniques complement this questionnaire and provide texture in the exploration of

how the landscape shapes well-being and comes to have value and significance for people.

Previous attempts evidenced through the literature to test the links between nature and human well-being have largely focussed on experimental methodologies which present participants with images of different landscapes or ask respondents simply to imagine being in a particular setting (Hartig et al., 1996; Herzog et al., 2003; Staats and Hartig, 2004; Berto, 2005). Evidence taken from real landscapes is somewhat lacking in such studies, with only a few notable exceptions using actual experiences in nature to test some of these ideas (Williams and Harvey, 2001; Kjellgren and Buhrkall, 2010). Despite the methodological differences in these studies however, there is overwhelming agreement through the literature regarding the potential of nature to restore and revitalise and to underpin human well-being. This study will explore these connections even further and delve deeper into what non-material benefits there actually are at the Jurassic coast, how they manifest themselves and what they actually mean to those who perceive them. This study therefore, asks visitors in-situ how they feel about being in the landscape *at the present moment*. Whilst the sample used in this study is not representative of the entire visitor population, it does give some poignant insights into how visitors use and perceive the landscape and why they consider it to be so special and beneficial to their psychological well-being.

1.5 Structure of Thesis

The thesis will explore in detail the background to these discussions and the rationale for researching the ways in which the Jurassic Coast has meaning and significance for visitors. Empirical evidence from two case study sites along the Jurassic Coast, Durdle Door and Charmouth beach will give weight to these discussions. The innovative methodology used to evaluate the relationship between the landscape and visitors will be presented which includes quantitative and qualitative research methods to assess the extent to which human needs are satisfied in the landscape and what this actually means to visitors.

The thesis is structured to present a logical account of the evolution in thinking around human-nature relationships, the value of nature and how this is advanced by

discussions focussed on the contribution of nature to psychological and eudaimonic well-being. Chapter two discusses how methods of valuing natural resources have been traditionally dominated by monetary measures and how this has been challenged by an increasing acceptance and legitimacy afforded to new ways of understanding the myriad ways that people value nature, including subjective and emotional accounts. It highlights the connections to human well-being and more recent concerns around how the degradation of natural resources could affect this well-being. This chapter also considers the definitions of well-being and argues that eudaimonic well-being is a far more profound construct which has far reaching implications for how people benefit from natural area encounters. It suggests that if people are able to gain enhanced eudaimonic well-being and are able in a sense, to function more positively and to flourish and reach potentials (Ryan and Deci, 2001) through contact with nature, then this provides a compelling reason to understand this relationship more fully and to ensure that understandings are extended to managing and protecting natural areas.

Chapter three extends these discussions into the tourism arena, which it is argued provides an interesting context to study this relationship. The role of eudaimonic well-being in touristic encounters is explored as well as the ways in which the well-being benefits of nature contribute to tourists' motivations to visit certain destinations. The extent to which this has implications for tourism planning and management is also discussed and a conceptual framework is presented to facilitate understandings of these emerging concepts. This framework builds on the cultural values model of Stephenson (2008) who suggested that value clusters around the physical landscape itself, the activities undertaken in the landscape and the meanings and interpretations ascribed by visitors to the landscape. The problems and prospects for revealing these well-being benefits for people is highlighted which leads into discussions of how this might be achieved; a challenge tackled by chapter four.

In debating the question of what methods can be employed to reveal the eudaimonic well-being benefits of visits to the Jurassic Coast, chapter four presents an innovative methodology, using a psychometric scale as its basis. It outlines the rationale for this approach which utilises a human needs framework to develop a questionnaire to determine the extent to which the case study locations act to satisfy

various human needs. This chapter discusses in detail how this quantitative data is complemented by qualitative assessments of how people experience and engage with the Jurassic coast and how these interactions serve to satisfy human needs and enhance eudaimonic well-being.

Chapters five and six present the results of the quantitative and qualitative data in an amalgamated way to reveal how human needs are satisfied at the Jurassic Coast. It explores which human needs are satisfied and how and what these benefits actually mean to visitors and their assessments about the worth or value of the landscape. It extends the conceptual framework presented in chapter three by exploring the relationship between tourism, the Jurassic Coast and eudaimonic well-being through an analysis of the three dimensions of physical landscape, activities in the landscape and the meanings and interpretations of the landscape. These chapters also make assessments of the differentiated experiences of the landscape for visitors in terms of how benefits are distributed through the visitor population and the ways in which the relationship between the physical landscape and eudaimonic well-being are actually manifested in the survey sample.

Chapter seven goes on to explore how these insights gained from the empirical evidence, into how visitors perceive and experience the Jurassic Coast and how it enhances eudaimonic well-being, can be used to inform tourism management practices. It examines the ways in which the Jurassic Coast is currently managed and proposes ways in which these insights can add value to and benefit current practices. It also examines the ways in which similar insights of 'intangible values' have been used in landscape management practices elsewhere to determine what might be learned from these.

Chapter eight builds on these understandings to evaluate the ways in which they may inform decisions in wider policy contexts at different levels of thinking. It explores how the insights gathered through this study might be used beyond the Jurassic Coast and how the methodology developed here could be built into assessments of different landscapes and how human needs satisfaction could change under different future proposals. This chapter focuses on the tourism industry to discuss the significance of a clearer understanding of human-nature

relationships to sustainable tourism planning and management. It also explores how this thinking could be integrated with public health policy which could prove an innovative way to promote both specific tourist destinations and the benefits of contact with nature for increasingly disconnected societies.

The thesis concludes in chapter nine with a thorough assessment of the issues involved and how consideration of them serves to advance key debates in this area. These relate to advancing knowledge of and the technical ability to capture the intangible benefits of nature which it explores in the context of the ways in which eudaimonic well-being is enhanced through interactions with the landscape. It argues that such insights can add considerable theoretical and practical weight to arguments around conserving the things that are important to people and that will support and sustain human well-being.

Overall, this study presents a fresh look and casts a critical eye over the approaches to environmental valuation which have been debated through the literature. Recent shifts in thinking have moved forward these debates considerably to take account of the subjective and the hard-to-define as legitimate accounts of value. Approaches which seek to understand the well-being benefits of nature and how it serves to underpin the important construct of eudaimonia may be critical in approaching natural resource management from a position of understanding what in the landscape actually has worth and significance to people. This study will add considerable weight to these discussions and will have impact in terms of advancing thinking around human-nature relationships and also methods to reveal this relationship based on a more nuanced understanding of human well-being.

Chapter 2: Literature Review

From Money to Well-being: Developments in Thinking about Environmental Valuation

2.1 Introduction

This chapter reviews the literature concerning environmental valuation and discusses how thinking has moved on from a widespread acceptance of monetary methods of valuing natural resources to encompassing ideas of value as being wrapped up in emotional and subjective accounts of what nature means for people. In highlighting how these evolutions in thinking have come to shape research agendas, this review shows how the ideas for this research have been developed.

The idea of valuing nature has a long history and has sparked various debates regarding the best way to approach it. The debates centre around the parallel arguments that natural resources have such intrinsic value as to be resistant to human valuation and at that same time that they must be valued or else fail to be considered in decisions which may see their demise. Modern day concerns around the best ways to value natural resources largely stem from a growing awareness of their limited supply and an awareness that populations have become so geographically and psychologically distant from nature that they have become apathetic about its value to them (Gossling, 2002).

Valuing nature, which can be done in a variety of ways, is an expression of how nature is thought of, appreciated and accounted for in decisions. This way of thinking has a history and a provenance which this chapter will review, from economic and monetary values to an increasing acceptance of other ways of appreciating what nature means to people. This chapter will chart this evolution in thinking through these complex issues and review how this increased attention on nature reflects a growing awareness of the limited supply of natural resources and their importance to human well-being. Moreover, this chapter will explore how these concerns are being considered in the particular policy context of tourism development and management and how an understanding of how people value nature might contribute to tourism thinking and strategy.

2.2 Objectivity and the Monetisation of Nature

As strategies of communicating the worth of resources, using monetary measures have proved to be extremely powerful. This section outlines the reasons why this is so and also goes on to critique such methods of communicating value which can subsume other ways of measuring what matters to people.

Throughout history, measures of the value or worth of natural resources have been made through monetary transactions which give a de-facto monetary value to nature. This is understandable when trading natural goods, and in this sense, mathematical and quantitative reasoning have an important role to play in providing values in a transparent way. Looking towards more complex issues such as trade-offs in environmental decisions, Porter (1995), in his study of the modern history of social quantification, argues that translating issues into quantitative language enables standardization of reasoning and 'permits reasoning to become more uniform and in this sense, more rigorous' (p5). As a result, society has come to 'trust in numbers' (Porter, 1995) much more than trusting in intuition, which is open to much more scrutiny and criticism, and numbers at least have the appearance of being fair and impartial. As a result, neo-classical economists have gained great prominence in developing techniques to enable businesses and governments to manage affairs more effectively using ideas of monetary exchange. In plural societies, this has largely found favour since decisions have to be made which are (or at least are seen to be) fair and value for money. Money and numbers legitimise such decisions and make transparent the (monetary) reasons why decisions were made.

Whilst the monetary quantification of resources may be well suited to communicating widely ideas of value, since money as a statement of value is generally well understood, when looking at the question of valuing nature and what this actually means to people, it is the value of nuance that is perhaps most important. This is because people understand and value nature in vastly different ways, often in ways which are highly personal and difficult to communicate. As a consequence of the power of numbers, rival measures of value are placed at a great disadvantage, because they are perceived to lack legitimacy in public decisions. However, if what counts in decisions is only that which can be put into monetary figures, much of what constitutes value for people will not be considered.

The question of why numbers and quantitative measures of value are most often used and understood in environmental decisions has been largely answered in the text so far and good reason can be seen for this approach in 'generating a more comprehensive informational base for the policy formulation and decision-taking process' (Turner et al., 2003 p494) The question as to how this is done and how goods which have no ready market price can be valued is one which needs to be considered in any assessment of how accurate these valuations are. Economists generally approach the issue of environmental value through a taxonomy which make up total economic value (TEV) (O'Neill et al., 2008; Carson, 2005) The key distinction is between use and non-use values. Use values relate to the value placed upon actually using a resource whilst non-use value is tied up with ideas of how resources are valued simply for existing, today or in the future, whether or not the valuer has any intention of ever using the resource.

Turner et al. (2003) argue that an economic perspective on nature portrays it as an asset providing a flow of goods and services. Where alternative means to provide for these goods and services can be found, and if they compensate for their loss, these means can be used to value losses in nature's services and thus impute monetary measures upon them. However, there are limitations to such approaches and dissatisfaction with economic definitions of value has helped to fuel alternative approaches to exploring the question of value in nature (Satterfield and Kalof, 2005; Putney, 2003; Lockwood, 1999). In addition, an understanding that numbers are as much a product of human skill and subjective interpretation as they are scientific and objective representations of 'fact', leads to a view that numbers construct a 'world of artifice' (Porter, 1997 p11). Such artifice is however, arguably required in order to preserve what matters to people and to ensure that the relative value of natural resources is widely understood and taken into account in decision making. One of the first studies to argue that growth strategies which prioritise economic growth over natural resources would undermine the goals of sustainable development was *Blueprint for a Green Economy* (Pearce et al., 1989). This study argued not only that environmental assets need to be taken into account but also that economies need to account for environmental losses. Valuing environmental goods and services is however, not an easy undertaking and how to do this has since become the focus of

much innovation as well as controversy. Developing techniques to impute monetary measures on non-market goods has led to radical ways to think about the value of nature by environmental economists.

The next section will outline some of the ways that nature has been monetised and some of the controversy and limitations involved.

2.3 The Limitations of Monetary Measures

Despite the question of moral acceptability of imputing monetary measures of value on natural resources, there remain questions as to the suitability of this approach. Valid substitutes for goods and services for example, may not always be found which means that market measures for those goods and services may be difficult to gauge. In addition, human cognitive limitations may impede the process of valuing nature, especially where non-use values are concerned; people will often find it difficult to make a judgment on the value of natural resources. Moreover, where nature sustains deeply meaningful functions such as those of a spiritual nature, monetary valuations may be judged to be not only inadequate but also highly inappropriate. Turner et al. (2003) suggests that scale may be an important factor in determining the appropriateness of using monetary measures to value nature. For example, they state that small scale changes in the environment may be amenable to monetary valuation whereas the loss of forests on a global scale 'would be beyond the margin of analysis' (p497). Where values for nature's goods and services are not readily available due to a lack of real markets, they must be constructed for these purposes. Economists have developed a variety of tools with which to make these evaluations.

Neo-classical economics and the use of money in valuing natural resources has a wide appeal in decision making contexts due to the seeming 'theoretical rigor' such techniques offer. However, they are arguably reductionist and even 'deliberately exclude a range of potential options and an interdisciplinary approach' (Chiesura and de-Groot, 2003 p220). Whilst a wide variety of economic valuation techniques have been developed or utilised in valuing nature's goods and services, stated preference techniques which attempt to elicit what a person would be willing to pay for a certain good in question in a hypothetical market, have become popular choices in environmental valuation assessments. Importantly, stated preference techniques are

thought to be the 'only option available for estimating those services which are valued for non-use purposes' (Atkinson et al., 2012 p30). Whilst such techniques then may have a place in valuing natural resources, they have received widespread criticism in the literature, particularly with regards to the contingent valuation (CV) method which is by far the most widely applied stated preference technique. The following section will discuss the criticisms levied at the contingent valuation technique in some detail.

Farber et al. (2005 p35) identified six main monetary methods for valuing non-market goods, which include 'hedonic pricing' in which a proxy good such as property values is employed to estimate a price for environmental goods and the 'travel cost' method which employs the costs incurred by individuals to use an environmental amenity to estimate values. The Contingent Valuation technique uses hypothetical constructs to ask individuals what they would be willing to pay (WTP) for a good or accept in compensation for its loss (WTA). This method has gained prominence as the major technique for the assessment of environmental amenities (Kahneman and Knetsch, 2005 p231) but it has also received widespread criticisms for a variety of reasons, most notably because of the technique's susceptibility to influence from cognitive and contextual biases. Because of these, a large part of the environmental valuation literature is taken up with discussions about the accuracy of carrying out such valuations and of the validity of the values they elicit. This is largely for technical reasons relating to survey design and biases which can occur during the process of value elicitation and also due to ethical considerations which limit the ability of people to think about environmental goods in monetary terms (Clark et al., 2000).

Notably in the literature, Kahneman and Knetsch (2005) provide a critique of contingent valuation based on the idea that 'the assessed value of a public good is demonstrably arbitrary, because willingness to pay for the same good can vary over a wide range depending on whether the good is assessed on its own or embedded as part of a more inclusive package' (p232). This phenomenon, they refer to as 'the embedding effect' which elicits a lower value if a good is valued as part of a package rather than if it was valued on its own. This may be due to the rational mental accounting process which takes account of budgetary constraints and if a budget is to be shared across a range of goods, each will usually receive a lower amount that

if just one good was being considered in the given budget. Furthermore, they assert that hypothetical situations constructed for the purposes of the survey will also affect the values given depending for example, on whether payments are described as a one off payment or whether they are presented as a long term commitment. Again, this is understandable since one-off payments will more likely have a greater affect on the household budget than lesser payments made over a period of time. This argument is also echoed by Dolan and Metcalf (2008) who comment that 'loss aversion' may result in lower WTP estimates as individuals may be far more motivated to avoid losing their income than they are to gaining the proposed benefit.

Individuals may also be willing to pay less than they actually believe the value of the improvement to be. Costanza et al. (1997) for example note that the aesthetic enhancement of say a forest may be highly valued, but yet respondents may only commit to paying a nominal fee for the improvements. So, the value that people state they are willing to pay does not necessarily equal the amount at which the resource is actually valued. Moreover, humans are apt to allocate a lesser amount to a good or cause that is publicly 'owned' as they take account of the amounts that others would also pay, a phenomenon that has come to be known as the 'free-rider problem' (O'Neill et al., 2008; Kahneman and Knetsch, 2005). People in this bracket understand that they will still receive the same amount of benefit from offering a lower personal amount as it would be difficult to control who used a given amenity such as a park that has been rejuvenated according to how much they were willing to pay for the improvement at the outset. In addition, Kahneman and Knetsch (2005) point to the problem that people will often offer values which they feel morally obliged to, which may not actually represent what they would be willing to pay in a real market. They conclude therefore, that WTP estimates cannot be equated to an accurate measure of economic value, since what people are actually purchasing is a sort of 'moral satisfaction' (p238) rather than a clear indication of what they value the good to be.

Methodologically, order bias also causes considerable problems in designing CV surveys and difficulties in assuring the validity of responses. The problem is that the ordering of questions and/or of amounts for the good offered as choices to the respondent can cause biased responses since people may simply agree with the

statements or amounts which appear first in the survey to keep it brief. They may also be influenced by the researcher's starting point value which may be higher or lower than they would have otherwise have stated. In addition, the information given to respondents at the beginning of the survey may also bias responses and debates in the literature focus on the appropriate amount of information which should be given and whether and to what extent this influences respondents' statements of WTP (Kahneman and Knetsch, 2005; Clark et al., 2000; Costanza et al., 1997).

Ethically, arguments against monetary measures stem largely from the conceptual problem of reducing nature to monetary values which signifies transferability and substitutability and as Holland (1995, p28) comments, 'it seems to be true of certain environmental goods that their very irreplaceability is part of what we value'. For some, it is simply unthinkable that such values as those that people hold for nature could be reduced to monetary measures. As an expression of this, 'protest zeros' can appear on contingent valuation surveys (O'Neill, 2007, p23) or even unrealistically high figures which renders the entire process worthless as it is difficult to decipher these from true amounts. Interestingly, O'Neill also points to what is almost a design flaw in CV surveys since if a respondent of limited means answers honestly that they can only afford to pay a modest amount for the good in question, this amount clearly is not a true reflection of how they actually value the good so their values are 'effectively silenced' as a result no matter how much they actually care for the good (O'Neill, 2007, p28).

Contributing to these criticisms of CV surveys, Gregory et al. (1993) observe that because people are largely unused to dealing with environmental goods in monetary terms, the process of conducting a CV survey actually imposes unrealistic cognitive demands upon respondents. Values elicited are therefore, rather arbitrary and are in fact 'constructed rather than revealed' (p179). Robust assessments of the monetary measure of environmental goods is, for these many reasons, an extremely difficult and even unrealistic undertaking. However, the challenge remains that in order to take these non-market goods into consideration in policy assessments, some measure of their worth is required. The problem of incommensurability or the absence of a 'common unit of measure across plural values' (Martinez-Alier et al., 1999; O'Neill et al., 2008) or of comparing 'apples and oranges' in trade-off decisions

remains a challenge but not necessarily one which needs to be met with further monetary techniques. O'Neill for example, puts forward the ideas that decisions do not necessarily have to be made using common metrics and they can in fact be made through a variety of processes in which choices and preferences are deliberated.

If the artifice of putting a price on nature is thus understood, it may not be so far-fetched to include notions of the subjective, of human thoughts and feelings into the overall calculus of what matters in nature and to whom. The next section will explore how these ideas of moving beyond money to other ways of understanding and expressing environmental value have taken shape in the academic literature and in the policy world.

2.4 Moving Beyond Money

It has been discussed that the perceived persuasiveness of economic and monetary language provides a powerful means of communicating the value of nature to people although there are some clear limitations to such techniques. Despite these, monetary measures can at least help policy-makers to make reasoned choices in decisions affecting the environment. However, the idea of valuing nature in non-monetary terms also has a history and a resonance with a deep understanding of what it is to be human and to be inextricably linked to the natural world. Leopold for example, in 1949, wrote about combining a scientific understanding of nature with a profound and emotional connection with it. He argued that people behave ethically towards nature when they feel, understand and love it. Takacs (1996) takes up this argument and points to how the idea of biodiversity, talked about in this way, not simply as a resource for human consumption but as a resource to be cherished, is used to shape public perceptions about the world and how it should be used and valued. He concludes that 'throughout the twentieth century, biologists have wrestled with how best to present the natural world to us so that we may share their apprehension about its fate' (p11). Emphasising the biological and emotional connections that humans have with nature has thus continued alongside endeavours to represent nature in commutable monetary figures.

In more recent years, the idea of taking a holistic view of nature and its worth to people has found popular expression in the concept of an Ecosystems Approach. This idea has its roots in the Convention on Biological Diversity which adopted the ecosystems approach in May 2000 to explicitly propose a ‘holistic management of land, water and living resources’². The ecosystems approach is the primary framework for action under the Convention for which twelve principles provide operational guidance. Central to the approach and to the guiding principles is the recognition that humans, with their cultural diversity, are an integral component of the world’s ecosystems. The principles explicitly recognise that ecosystems are integrated and management therefore, requires a wide, flexible and adaptive stance which takes into account different stakeholders at different scales (Shepherd, 2008).

This approach has received much attention in the wake of the Millennium Ecosystem Assessment (MEA, 2005) which was co-ordinated by the United Nations Environment Programme and which focused the world’s attention on the consequences of natural ecosystem degradation for human well-being. The MEA used the concept of ecosystem services to explore how nature benefits and has value for people. They defined ecosystem services as ‘the benefits people obtain from ecosystems’ (pv) which presents an anthropocentric picture of how nature has value and reveals the connections between nature and human well-being. It is arguably for this reason that ecosystem services have gained traction particularly in the policy world since they highlight the value of nature in terms that humans can relate to more clearly. The report identified four categories of ecosystem services, these are; *provisioning services* such as food, water, timber, and fibre; *regulating services* that affect climate, floods, disease, wastes, and water quality; *cultural services* that provide recreational, aesthetic, and spiritual benefits; and *supporting services* such as soil formation, photosynthesis, and nutrient cycling. The report goes on to state that humans, to varying extents, are fundamentally dependent on these ecosystem services for their well-being and this provides persuasive reasoning for preserving nature and the flow of ecosystem services.

² www.cbd.int/ecosystem

Such compelling assertions have paved the way, particularly over the last decade, for innovations in understanding the ways in which nature underpins human well-being and how this can be measured. Imputing monetary figures on this value to well-being has continued to advance in the arena of environmental economics. Bateman et al. (2011) for example, estimate that in the United Kingdom, ecosystem services help contribute to 3 billion outdoor recreational visits annually, with the social value of the output created by these trips likely to be more than £10 billion (cited in Atkinson et al., 2012). Whilst there is undoubtedly 'genuine substance that these data can be used to guide policy thinking and decisions' (Atkinson et al., p23), debates around using metrics other than money and accounting more for the well-being benefits of nature, continue to gain attention. The next section will examine these debates and how they have been expressed through the literature.

2.5 Measuring What Matters

In expressing value, it is important to consider that economic value does not necessarily equate to monetary value. To an economist for example, economic value arises through any contribution to human well-being. This can include the benefit from aesthetic preference for example, so if a person is made to feel better off through viewing a scenic landscape, then economic value has arisen (Holland, 1995). This is quite distinct from market value which reflects the idea of exchange and the benefits of obtaining a good versus the opportunity cost of obtaining the good, which is usually expressed in monetary values. Economic value can therefore, arise in a number of ways which are not captured through monetary methods. The importance of developing techniques to capture, measure and understand such values in ways which do not rely on monetary measures is expressed in a number of recent national and international studies.

The G-8/EU initiated 'TEEB Review' (The Economics of Ecosystems and Biodiversity (TEEB, 2010) and the UK National Ecosystem Assessment (UKNEA, 2011) and current NEA follow-on work, can be viewed as attempts to take this analysis further by demonstrating the significance of biodiversity loss to human well-being. Both assessments use, and build on, the conceptual framework of the MEA, and most notably within these assessments, detailed account is taken of cultural services or

the 'non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experience' (MEA, 2005), which proved most resistant to measurement in the MEA . Significantly, the TEEB report states that 'at times, it suffices simply to recognise value – be it intrinsic, spiritual or social as recognition can stimulate policy response' (TEEB, 2010, p3). This demonstrates how thinking has moved on from widespread acceptance of money as the dominant measure of value to taking account and recognising the value of much more intangible values, which are also important to human well-being. This is not to suggest that such non-material values as encompassed in the idea of cultural ecosystem services, should supersede monetary measures, since such measures do have a role to play in communicating value in a common language across a global audience 'in the language of the world's dominant economic and political model' (TEEB, 2010, p3). Putting cultural ecosystem services on the policy table does however, lend a legitimacy to a more holistic way of understanding why nature matters to people, notwithstanding the uncertainties which are a feature of capturing both economic and experiential ways of thinking.

The UKNEA (2011) similarly made a powerful case for considering the full value of nature and for making explicit the ways in which the natural world, its biodiversity and ecosystems are critically important to human well-being. Exploring in detail the role of cultural ecosystem services in this relationship, Church et al. concluded that these services 'make a significant contribution to achieving people's key needs' (2011, p634). Such sentiments make for compelling reasons to understand much more how such services are generated, what influence they have on human well-being and by extension, what consequences there might be for humans in any future changes in cultural service provision. The NEA document speculates on some of this detail and investigates people's relationships with environmental settings and how these contribute to meeting human needs. The follow-on work to this (in press), continues this line of investigation and attempts much more to understand how such hard to define values can be revealed through different methodologies. It also aims to develop indicators which might prove useful in identifying the relationships between ecological and social systems, and the quality and ability of different environmental settings to satisfy human needs and enhance well-being.

The lessons from the UK NEA were explicitly incorporated into the UK Natural Environment White Paper (Defra, 2011) which was the first on the natural environment in the UK for over 20 years. This paper argues for placing the value of nature at the centre of decisions to enhance our environment, economic growth and personal wellbeing. The commitment to putting natural capital at the heart of economic thinking and the way in which economic progress is measured, reflects a growing understanding of the way that many of the benefits from nature sustain a healthy and vibrant population and by extension, economy. This understanding is important as argued in the paper because 'when nature is undervalued, bad choices can be made' (p4). The White Paper makes a clear argument that human well-being is intimately connected with the natural environment and that regular contact with nature has positive impacts on mental and physical health.

Furthermore, it argues that such benefits may extend beyond the personal and may have wider societal benefits; 'there is a wide range of evidence showing that contact with nature enhances children's education, personal and social skills, health and wellbeing, leading to the development of responsible citizens' (Defra, 2011, p12). This increased interest on the impact of nature on health and well-being is also evidenced in the Marmot review, *Fair Society, Healthy Lives* (2008) which points to the potential of natural environments to improve mental and physical health. This report argued that it is time to move beyond economic growth as the sole measure of social success and instead to incorporate aspects of human well-being into the equation. This sentiment is also echoed in the report by the *Commission on the Measurement of Economic and Social Progress* which concluded that 'the time is ripe for our measurement system to shift emphasis from measuring economic production to measuring people's well-being' (Stiglitz et al., 2009 p12).

These sentiments have been incorporated into thinking in the UK policy arena and advocated through think-tanks such as the *New Economics Foundation* (NEF) which challenge the idea of relying solely on quantitative data for decision making. They argue instead that different kinds of information and evidence should be brought into play in making decisions about natural resources in ways which give more meaning to valuation. Largely, this focuses on human well-being as a way of 'measuring what

matters' and argues for more account to be taken of well-being and how it is affected through environmental changes (Lawlor et al., 2009). Such ideas have attracted increased attention in the UK in recent years and in 2010, the *Office for National Statistics* (ONS) launched a programme of work to measure national well-being. It acknowledged that national well-being is influenced by many factors including economic performance, the state of the environment as well as individual factors (ONS, 2011). It attempted to measure national well-being in a very broad sense by posing the question 'what matters to you?' This was intended to inform UK policies so that they could be better tailored to what matters to people and to what influences their well-being.

This shift in thinking to incorporate ideas of human well-being and what matters to people in policy decisions, is a radical departure from relying solely on monetary measures of value. This leads to the question of what is well-being, can it be measured and how does it relate to the natural environment? The next section will explore the literature around these questions more fully.

2.6 Conceptualising Human Well-Being

Well-being is presented through the literature as a multi-dimensional phenomenon which is usually conceived of in two distinct ways; objective and subjective well-being (White, 2008; Kahneman and Krueger, 2006; Delle-Fave and Massimini, 2005). Objective well-being relates to ideas of the fulfilment of materialistic demands and access to physical, environmental, social and other resources. Indicators for this category of well-being include those incorporated in the Human Development Index and the Audit Commission's Quality of Life indicator which provides assessments of the health of inhabitants of geographically bounded areas. These assessments do not however, include any assessments of individuals' perceptions of their own health or well-being (McAllister, 2005). Subjective well-being on the other hand, relates to self assessments of satisfaction which therefore, renders it much more complex to measure since it includes ideas such as goal achievements and expectations as well as ideas about engagement in meaningful relationships amongst other variables.

Well-being then is a multi-faceted phenomenon which means different things to different people in different situations. Ryan & Deci (2001) argue that well-being can

be understood as comprising two distinct but overlapping concepts, hedonia and eudaimonia. The first focuses on happiness, defined as the presence of positive affect and the absence of negative affect. In the second conceptualisation of well-being, the focus is on living life in a full and deeply satisfying way. This view can be traced back to Aristotle who spoke about the 'highest human good involving virtue and the realisation of one's potentials' (cited in Ryan & Deci, 2008). Such a broader understanding of well-being is important as even if people report being happy, this does not necessarily mean that they are psychologically well. Eudaimonia then is concerned with 'living well and actualising one's human potentials' (Deci and Ryan, 2008, p2). Psychological well-being, as a closely related concept can therefore, be considered as an indicator of eudaimonic well-being. Scales and measures of psychological well-being therefore become important in assessing eudaimonic well-being.

In an attempt to understand and break down the components of eudaimonic well-being, Ryan & Deci (2000) developed their 'self-determination theory' which purports three basic psychological needs must be fulfilled to achieve a sense of eudaimonic well-being; these are: autonomy (having a sense of control over one's life), competence (a sense that one is functioning effectively) and relatedness (having positive interactions with others). This is also reflected in Diener & Seligman's (2004) definition of well-being which they take to mean 'people's positive evaluations of their lives, including positive emotion, engagement, satisfaction and meaning' (p1). Ryff (1989) similarly purports six characteristics of psychological well-being which they use as indicators of eudaimonic well-being. These are self-acceptance, personal growth, relatedness, autonomy, relationships, environmental mastery and purpose in life. Huta & Ryan (2010), in their study of these related aspects of well-being conclude that eudaimonia is associated most evidently with a state of 'elevating experience' which includes feelings of inspiration, awe and transcendence which they define as 'a sense of connection with a greater whole' (p739), all of which involve feeling elevated to a higher level of functioning. Clearly, such a broader range of well-being experiences are important for humans to flourish and to reach goals and potentials. If nature somehow plays a part in this, it is imperative that evidence is gathered about this relationship and that the value placed on natural resources adequately reflects such a contribution. Importantly, within the realms of

environmental valuation, this relationship also refocuses attention on people's experiences of the natural environment and allows for expressions of thoughts, feelings and values in language not usually associated with the economic or decision making arena. The following section will outline the ways in which this relationship has been explored through the literature.

2.7 Nature and Eudaimonic Well-being

People experience the natural environment in different ways and gain important benefits from being in contact with it. It is clear from a growing body of literature that 'landscape is conceptualised as a health resource that promotes physical, mental and social well-being' (Abraham et al., 2010 p59). This relationship has been variously explored through the literature, from the stress reducing properties of nature and the ways in which it helps to regain fatigued cognitive abilities, to a biological connection with it (Kaplan, 2001b; Berto, 2005; Berman et al., 2008; Kjellgren and Buhrkall, 2010). This relationship is complex to unravel and there appears to be a dearth of empirical evidence to fully understand the connection with eudaimonic well-being and the ways in which nature influences how people think and feel about their lives. The reason for this is that such non-material benefits of nature are by their nature, intangible and hard to define. Shultis (2003, p61) for example, notes that 'because these 'deeper' values originate in a pre-conceptual, nonverbal domain of human existence, there may be no fixed set of conceptual dimensions, categories or logical relationships that can completely define or describe them'. This means that whilst at least some of the ways in which nature underpins human health is widely understood, the links with eudaimonic well-being are yet to be really fully explored through empirical evidence.

The subjective and experiential values that individuals ascribe to nature are arguably bound up with a deep and intuitive bond that humans have with the natural world, so tied up with the human spirit and 'wrapped up in primal values' (Putney, 2003, p5) that they are conceivably impossible to deconstruct with any confidence or certainty. These benefits of nature are described variously through the literature in terms which largely relate to their positive effect on people such as the restoration capacity of nature (Van-den-Berg et al., 2003; Hartig et al., 2001, 1996) and the psychological health benefits of being in nature (Ashbullby et al., 2011; Kaplan and Kaplan, 1989;

Ulrich, 1979). The capacity of the landscape to provide these benefits depends on what Driver et al. (1999) term 'an expanded land management ethic' in which both the health of the landscape and the underlying ecosystems are important as well as providing opportunities for people to engage with nature in ways which enhance their well-being. Understanding how these benefits occur in nature and what they mean to people is a difficult undertaking however, as these benefits are largely non-material or intangible and capturing and measuring them is therefore, challenging.

The World Commission on Protected Areas (2000) defined intangible values as 'that which enriches the intellectual, psychological, emotional, spiritual, cultural and/or creative aspects of human existence and well-being' (cited by Putney, 2003, p4). This definition also reflects that coined by the MEA for 'cultural ecosystem services' which they define as 'the non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experience' (MEA, 2005). In both definitions, the inherent difficulties of attempting to capture such benefits is clear, as both pertain to those intangible perceptions which are felt and valued at the level of the personal. Moreover, as Gee & Burkhard (2010) note 'cultural ecosystem services have proven resistant to monetary valuation since many aspects of ecosystems, such as their aesthetic or spiritual qualities are valued precisely on account of the non-market benefits they provide' (p349).

There is much evidence through the literature that humans gain a 'prodigious range and depth of psychological and physiological benefits' through contact with the natural environment which we are increasingly able to understand if 'frustratingly not able to meaningfully incorporate into mainstream economic and political systems' (Shultis, 2003, p69). He goes on to point out that whilst such benefits may be termed 'intangible', they are anything but to those who experience them. Individuals are, it seems, able to identify the benefits they obtain from nature. This was evidenced in an empirical study by Chiesura and De Groot (2003) where participants identified that they 'felt very good in nature' and they consider these feelings to be 'very important for general well-being' (p226). The challenge is to be able to articulate these benefits in a meaningful way so as to bring them into the socio-political arena. The dynamic and subjective nature of well-being however, means that it cannot be

objectively known, although individual narratives of experiences in nature arguably give much richer accounts of how people think and feel than any monetised assessments ever could. The following section outlines the importance and complexity of measuring how nature underpins human well-being.

2.8 Measuring the Well-being Benefits of Nature

The concept of subjective well-being is interpreted in numerous ways through the literature, as a state of mind (Ryff and Keyes, 1995; Ryan and Deci, 2001), as an account of human capability (White, 2008; McGregor, 2006) and the satisfaction of human needs (Max-Neef, 1992; Dodds, 1997). Measurements in all cases however, rely on self reported measures. Whilst these may be unverifiable, exploring how people's own perceptions of how access to nature promotes psychological well-being is important in understanding its myriad effects and the many reasons why nature should be conserved. Jordan et al. (2009) emphasise the importance of this so that 'more than knowing what ecosystems are worth in economic terms, we have the opportunity to understand how they serve the human condition' (p1534). Considering the value of nature from a psychological perspective is an innovative perspective which lends considerable weight to arguments about the value of nature for different people and the imperative to understanding this value. In assessing well-being associated with certain activities, it is interesting to consider the point raised by Huta & Ryan (2010) who argue that 'in hedonia, people focus on the well-being to be obtained at the end of a pursuit. In eudaimonia, people focus more on the quality of the activity itself' (p737). This is interesting when thinking about how well-being is derived in different settings and from different pursuits. If people are engaging in active pursuits in the natural environment such as swimming for example, they may enjoy the hedonic feelings associated with physical activity whilst also being influenced by the natural backdrop to the activity in ways which are more closely associated with eudaimonia. It may be therefore, that well-being is best thought of as a multi-dimensional phenomenon that includes aspects of both hedonia and eudaimonia.

Finding common metrics by which to measure the psychological benefits of contact with nature is however, problematic and measurement will largely depend on how psychological well-being is defined. Kumar & Kumar (2008, p818) contend that the

'interrelationship between man and nature has a strong bearing on the psychological well-being of the individual which remains un-captured by most of the conventional valuation methods'. They do not however, go on to offer any methods by which this may be captured. Perkins (2010) on the other hand, in analysing the concept of love and care for nature which is debatably part of the psychological connection between humans and nature, in that it involves 'emotions of love, awe, wonder and a deep reverence for nature' (p456) developed a 15 point psychometric scale to measure this concept which at least goes some way to making these rather intangible concepts somewhat more tangible.

An approach to capturing the extent to which nature affects psychological well-being can be found in a human needs perspective which Dodds (1997) states has its origins in the idea that there exists certain underlying overlaps in conceptions about what constitutes 'the good life' that are common to all people (p101). The definition of human needs can of course be called into question here and what comprises a need versus a want. These are tricky issues which both Maslow (1943) and Max-Neef (1992) attempt to overcome through the development of typologies of human needs which can be related to different individuals and situations. Interestingly, Maslow defines needs in terms of a hierarchy in which individuals must satisfy lower level needs (largely subsistence needs) before graduating onto higher level needs (more concerning ideas about psychological well-being). Max-Neef on the other hand does not place human needs in a hierarchy and states that 'fundamental human needs are finite, few and classifiable and are the same in all cultures and in all historical periods. It is the means of satisfying these needs which are determined by culture and circumstance' (cited by Dodds, 1997, p103).

The idea that human needs can be satisfied by the natural environment is intriguing as it strengthens the conceptual link between nature and psychological or eudaimonic well-being. This idea also raises the notion of 'poverties' existing for people outside of economic circumstance if human needs are not adequately met (including psychological needs). Dodds suggests some serious consequences for this; 'when these poverties are not adequately addressed, they give rise to individual and collective pathologies: fears and frustrations that may undermine individual and social well-being' (Dodds, 1997, p104). If then, human needs are satisfied through

contact with nature, and that satisfaction leads to greater psychological well-being, this could have serious implications for both individuals and wider society. This leads to a clear imperative then for understanding and somehow capturing these connections and utilising this information in decisions which affect the natural environment. This concept is however, far from simple as Costanza et al. note; 'the relation between specific human needs and perceived satisfaction of them can be affected by mental capacity, cultural context, information, education, temperament and the like, often in quite complex ways' (Costanza et al., 2007, p269). This emphasises the notion that well-being is shaped by a range of influences acting on the individual which may be on a continuum from conscious (such as social dynamics and the weather) to un-conscious (such as associations with landscapes and personality traits which makes some people more susceptible to being affected emotionally by being in landscapes), thus presenting a complex picture of how human needs are satisfied and why.

This relationship has been variously tested through the literature, largely by way of laboratory experiments which have developed psychometric scales to rate the extent to which different landscapes have differing affects on individuals (Berto, 2005; Hartig et al., 1996; Kaplan and Kaplan, 1989; Herzog, 1985). The challenge still remains however, in being able to convey the deep-felt, experiential qualities of landscapes when their intangible value is difficult to convey. Putney (2003) for example notes that landscapes are, for many people 'primal landscapes that deeply touch the spiritual, cultural, aesthetic and relational dimensions of human existence' (p4). Kellert and Wilson (1993) also touched upon this profound connection and innate human attraction to nature which they termed 'biophilia'. Such philosophical understandings of why nature is valued are inevitably difficult to understand and quantify in ways which are meaningful to wide audiences.

Other ways which attempt to capture and communicate these values have been attempted such as via mapping techniques. An example of this is provided by Norton et al. (2012) who sought to understand whether particular intangible values or cultural ecosystem services correspond with particular features in the landscape. In this study, eight cultural services were identified (sense of place, cultural heritage, inspiration, escapism, relaxation, spiritual, learning and recreation) and used in

qualitative assessments of how people responded to particular landscapes and features. Respondents scored each landscape on a scale of high, medium and low in relation to these services and each service was given a final score accordingly which was then used to map the relative strength of feeling of each of the cultural services identified. This approach necessarily utilises a sort of 'benefits transfer' in applying cultural service value estimates for a particular habitat type from one location to another but does not take account of local perspectives and how different people in different locations might 'value' the same sort of habitat. It also does not account for different habitat locations, as villages for example, may score 'low' in inspiration value but given a different location, perched atop a cliff overlooking a body of water for example, may well elicit very different values.

Such techniques, whilst embryonic, are a step forward and a platform to work from. Further techniques for eliciting deep-felt values have also been developed, largely using participatory and deliberative techniques (Fish et al., 2011b; Cruz et al., 2009; Spash, 2008) which require further refinement and testing for their use in a policy arena. Such techniques will in any case serve well in attempts to reveal what landscapes mean for different stakeholders and to reveal what may be hidden or hard to define, which could shape priorities for management. Such values however, are not homogenous across individuals and may be contingent both on the valuer and the context in which values are formed. The following section will explore this idea in more detail.

2.9 The Social Construction of Nature

As previously eluded to, the literature suggests that different landscapes will have different benefits and be valued in different ways by different people. Despite a shared, cultural understanding of the value of a landscape, such as the shared understanding of the value of the Jurassic Coast for example, it is argued that individuals add shape and texture to how the landscape is perceived. This is due to myriad factors which serve to influence how people perceive different landscapes and respond to them. Internal influences such as expectations and personal memories for example may come into play here. In addition, external influences will also serve to colour the ways in which people interact with and benefit from the

landscape. Influences such as the weather and the congruence of the landscape with the intended purpose of the perceiver for example, may serve to shape perceptions. The literature is rich in detail in what has come to be known as 'the social construction of nature' which purports that nature may not be entirely 'objectively' known and that it is in fact a product of diverse factors working together to shape perceptions of nature. Demeritt (2002) for example, highlights that although the social construction of nature can be understood in a variety of ways, the idea gives weight to notions of nature being constructed by people in ways which are contingent on their own interactions and perceptions of it, which may be socially and culturally guided but textured by each individual who creates their own meanings in nature.

Perceptions and values can thus be thought of as being mediated by complex 'lenses' through which people filter information about their surroundings. These lenses enable individuals to 'assign meanings to places and derive meaning in their lives from places' (Davenport and Anderson, 2005, p627) and these meanings may or may not be shared amongst peers and between groups, although they may be situated in a shared, cultural discourse. The connecting theme here is about humans and nature working together to shape the landscape and to co-create value in it. To illustrate this point, Johnson (2007, p4) stated that 'ways of thinking and seeing is what transforms the land and its study into landscape' and this has certainly captured the imagination of a variety of other researchers (Brady, 2003; Wylie, 2007). However, as ways of seeing and thinking are negotiated and re-negotiated through time and space, the question of landscape perception is one with a dynamic answer, contingent upon the observer to which it is directed.

The discussions in the section above point to what seems to be a central debate in landscape perception research which is the dichotomy between whether landscape is 'real' in terms of an external and given phenomenon or if it is constructed through socio-cultural perspectives of the perceiver. Wylie (2007, p7) stated that 'landscape is not only something we see, it is also a way of seeing things, a particular way of looking at and picturing the world around us'. From this perspective, studying landscapes is then about appreciating that each individual, by virtue of their unique attitudes, expectations and socio-cultural makeup will perceive the landscape and

derive benefits from it in different ways, albeit in some instances, in very subtle shades of difference since cultural similarities may mean that some perceptions are shared. Landscape and nature in this sense can be seen as a product of both the observer and the observed. This is an interesting point as it highlights that landscape values are not simply aggregates of individual values but rather, that individuals give shape, detail and variation to how these landscapes come to have value and significance.

Brady (2003, p53) on the other hand, argues that the world does exist independently of human perception and culture and so it is not, at least not entirely, a socio-cultural construction. This debate is important epistemologically as it enables an appreciation that the world which we see and benefit from, is not necessarily shared by others even if they inhabit the same space at the same time. This has political implications for managing landscapes for plural realities that shape the landscape and give meaning to it. How for example, can multiple realities be taken into account when they can never definitively be 'known' and how can the benefits of nature be fully understood from a wide range of perspectives?

The following section discusses how these questions are important in the context of tourism and how the relationship between nature and eudaimonic well-being has been explored most recently, within the framework of cultural ecosystem services.

2.10 Cultural Ecosystem Services, Eudaimonic Well-Being and Tourism

Valuing natural resources takes on an even greater imperative if the relationship between nature and eudaimonic well-being can be revealed more clearly. Understanding and measuring this relationship is however, far from a simple undertaking as the review of the previous literature attests to. The concept of cultural ecosystem services as put forward by the MEA, seems to incorporate much of what this relationship is actually about as it appears to reflect a great deal of what has been described as components of psychological well-being. As noted above, they are defined by the MEA as 'the non-material benefits that people obtain through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experience'. Similarly, Atkinson et al. (2012) define them as 'the experiences that

people enjoy as a result of interactions with nature (e.g. recreation), as well as more intangible pleasures arising from knowledge about the existence of nature or its spiritual values' (p25). Understanding these values is therefore, by definition, not an easy undertaking but it is important that proper account is taken of these intangible benefits of nature so that land-use decisions can be made from a more knowledgeable and informed vantage point. As Lockwood states (1999, p381) 'a rational process for assessment of environmental policy options should be based on an appreciation of how humans value nature' but how humans value nature is complex and includes individual and group assessments of what is meaningful and significant in nature. A more holistic approach to environmental management is thus needed.

Tourism is an interesting context in which to explore ideas of managing natural resources for diverse realities and for intangible eudaimonic well-being benefits. Nature-based tourism plays a special role in the philosophical understanding of the relationship between people and nature by bringing people back to nature and re-connecting them with oft-forgotten ecosystems and the tangible and intangible benefits of them. Gossling (2002) for example, studied the phenomenon of the growing separation of people from nature in more industrialised settings and concluded that 'lifestyles are no longer dependent on the ability of the local environment to provide resources and people become alienated from their environment' (p551). People may therefore, be less compelled to protect the environment the less they perceive the link between nature and all its benefits. Tourism has an important role to play in closing this gap. By making more transparent the link between nature and the benefits it provides to people, it may be possible to reinvigorate the connection that people feel towards the natural environment and re-ignite a sense of stewardship of it (Putney, 2003). This is vital to any progress towards sustainability, especially in a touristic setting which involves a multitude of stakeholders with varying values of and interests in the landscape.

Much of the tourism literature has characterised tourism development and the environment as an unequal exchange in favour of the former (Shaw and Williams, 2002; Krippendorf, 1987). This is perhaps not surprising given the economic gains afforded by some tourism developments and the seeming unfaltering appetites of

people to travel to new and 'unspoilt' destinations. However, as evidence emerges of the negative impacts of tourism in destinations, a growing concern for the conservation and well-being of the environment has been witnessed and a drive for more sustainable development practices. Critical issues in such thinking include how best to protect the values, biophysical conditions and social meanings that are entrenched in the landscape and which are important to people and may in fact form at least part of the reason for people visiting the landscape in the first place. Understanding these values and the myriad reasons behind those values is a critical step in managing tourism landscapes sustainably.

Ecotourism is perhaps the most widely recognised manifestation of this increased mindfulness of the environmental and socio-cultural impacts of tourism and promoting it has been seen as a very visible attempt at raising the profile of a 'new' attitude towards the impacts of tourism by planners. The premise of ecotourism is that it attracts people who wish to travel in order to interact with the environment to develop their knowledge, awareness and appreciation of it (Honey, 2008). By extension, ecotourism should lead to positive action for the environment by promoting conservation attitudes and behaviours. This of course leads to the paradoxical situation whereby the more popular the product becomes, the more difficult it is to provide. Moreover, ecotourism itself has received criticism for its lack of precise definition and regulation which had led, in some cases, to it being used as a marketing tool with little practical regard for environmental or socio-cultural conservation (Mowforth and Munt, 2009). By revealing what has value in the landscape and why, decisions can be made which more closely reflect the experiences and motivations of tourists which may be bound up with ideas of well-being enhancement.

Value in tourist settings is however, complicated by the myriad stakeholders involved in valuing the landscape, often for competing purposes. How it is valued however, will likely affect behaviours and attitudes towards it and as Urry (1995, p180) notes, 'the romantic tourist gaze in which people seek a personal semi-spiritual relationship with their environment, feeds into attempts to protect the environment and places special value on the environment'. Such value may be intangible but this relationship may be the allure of a destination and a central reason for visiting.

Understanding tourist motivation in this way provides an innovative slant to managing tourism in ways which protect and enhance the sources of these intangible benefits. The type, scale and pace of tourism must therefore, consider impacts on both the ecological and on the socio-cultural environment of the region and planning needs to take into account the value of natural assets which includes not only their economic values but also notions of their contribution and value to eudaimonic well-being for different users which may sustain the tourist product and motivate visitors to return (Staiff, et al., 2013, Moscardo, 2009).

Taking account of the well-being benefits of the landscape and the myriad ways in which it is valued, would also enable the inclusion of local interpretations of landscapes, in terms of heritage and folklore which would enhance the visitors' understanding of the natural environment and thus the tourist product itself. Meyer (2001) for example, focused on some of the intangible benefits that visitors derive from Yellowstone National Park and urged park managers to take these into account in order that 'managers can begin with a solid understanding of the park's sense of place and then base decisions and practices on how to enhance this site-specific experience' (p92). This also feeds into marketing strategies as intangible benefits of nature may also appeal to visitors and contribute to their motivations for visiting an area. Planning through a 'rational approach' (Hughes, 1995) and giving undue weight to economic value, may therefore, miss opportunities to promote and enhance the intangible and the 'poetic, moral, spiritual, intuitive and relational insights' (p53) which may be as much of the tourist experience as the physical landscape. Bringing these intangible values and the ways in which they contribute to tourists' eudaimonic well-being, into tourism decisions requires that the 'wholeness of the qualitative human experience' (Hughes, 1995, p53) is appraised which will involve finding ways to assess the relationship between the tourist, the landscape and the eudaimonic benefits of visiting it.

2.11 Conclusions

Through the literature, it is apparent that thinking around environmental valuation has experienced a shift and as Turner et al. (2003, p508) note, 'research is increasingly pointing to the fact that ecosystem conservation strategies cannot be

fully justified on economic grounds without taking into account a reasonably full complement of functional uses, non-uses and values'. Understanding how landscapes come to have value for diverse actors then includes assessments not only of their monetary worth but also their contribution to human well-being. In this regard, tourism landscapes provide an interesting context in which to study the range of values that different stakeholders hold and what this means for managing that landscape to ensure benefits are maximised.

If the relationship between nature and eudaimonic well-being can be understood through vernacular activities and the ways in which people enjoy nature, such as through tourism, governments and economics can arguably gain a lot from such ordinary practices and an understanding of how people benefit from them. Measuring these benefits and separating out the origins of benefits is a complex issue but one which is gaining attention and methodologies continue to be developed to address the complexity involved. If nature is important to eudaimonic well-being as the literature suggests, then we must take time to supplement economic and monetary values with more nuanced understandings from everyday life. This should include assessments of everyday practices which makes the environment more valuable for people for all sorts of reasons and importantly, of how well-being is influenced by interactions with nature, what this means to people and how these understandings should be taken into account in decision making practices. The concept of eudaimonic well-being appears to be central to these debates and in framing natural resources in terms of why they are meaningful and valuable for people.

Tourism provides an interesting context in which to explore these interactions and how nature and certain landscapes and features within it come to resonate as valuable and significant for people and how this value serves to enhance eudaimonic well-being. The following chapter will explore this relationship in much more detail using the case study of the Jurassic Coast to illustrate points and areas for further exploration. It investigates further the imperative for managing touristic landscapes and particularly, in light of the chosen case study, heritage landscapes, in ways which incorporate these intangible values and the ways in which they serve to influence eudaimonic well-being. It explores what this connection means to visitors

and also to management practices. The implications of these understandings for wider tourism management will also be reviewed.

Chapter 3: Literature Review and Discussion

Exploring the Well-being Benefits of Nature in the Context of Tourism

3.1 Introduction

The previous chapter charted the evolution in thinking around environmental valuation and how monetary approaches to valuing natural resources have been complemented in recent years by a recognition of other ways of measuring what matters to people. A shift in thinking is evident, both in academic and policy circles where a new legitimacy appears to be afforded to values which emphasise the subjective and emotional. The notion that humans are dependent on natural resources for their well-being, most notably brought to wide public consciousness via the Millennium Ecosystem Assessment (MEA, 2005) and subsequent UK National Ecosystem Assessment (UKNEA, 2011) in particular, has raised numerous questions around which resources are important for well-being and what the meaning of well-being actually is. The idea that nature contributes to human well-being but in ways which are often intangible and hard to define, has sparked intense debate as to how they may be captured and taken into account in decisions which affect the environment.

This idea of intangible or non-material benefits of nature has found popular expression in the notion of cultural ecosystem services as put forward in the MEA framework. In this framework, the ultimate state of well-being is defined as 'freedom of choice and action' which is seen as dependent on other components of well-being (security, basic material for a good life, health and good social relations) and cultural services are characterised as weak in terms of their contribution to overall well-being. The evidence throughout the literature on the other hand, suggests that in fact such benefits as encapsulated in the idea of cultural services are in fact central to optimal human functioning and eudaimonic well-being. Benefits from spiritual enrichment and cognitive development may for example, result in meaning and purpose in one's life, supportive and rewarding relationships, competency, optimism, self-esteem and self-acceptance which are proposed as some of the components of psychological well-being (Diener et al., 2009; Ryff and Singer, 2008; Ryan and Deci, 2000). This aspect of well-being which is somewhat neglected in the MEA

framework is important as it influences how we think and feel about ourselves and others and how we interpret events (Seymour, 2003).

In this respect, tourism provides an interesting context to explore these connections. There is for example, a general understanding in our society that 'tourism is a mentally and physically healthy pursuit to follow in our leisure time' (Hobson and Dietrich 1994, p23). Tourists may seek out particular landscapes for example, which contribute to their sense of well-being, and such non-material benefits of nature may provide powerful motivations for visits and repeat visits. The role that nature plays in this encounter and how experiences in nature manifest in eudaimonic well-being may be key to a fuller understanding of tourist decision making and motivations for visiting certain locations over others.

To enable a degree of simplification to these discussions, the distinction between tourism, leisure and recreation and strict categorisations of tourists will be blurred. Whilst the most recognised definitions of tourists involve an overnight stay and 24 hours away from home (Page and Connell, 2009), this exploration is concerned with the relationship between visitors to natural landscapes and eudaimonic well-being, irrespective of the length of time spent away from home.

Understanding what benefits tourists obtain from interactions with different settings and how this contributes to motivations and satisfactions with tourist experiences, is vital to the management of such areas for multiple stakeholders who interact with the landscape in different ways and derive different benefits from doing so. Managing for multiple stakeholders and diverse realities entails a deep understanding of tourist expectations and needs and detailed consideration of how to satisfy those needs or at least to provide the opportunities for needs of different users to be met. Tourism is consequently a complex arena in which to explore these non-material benefits of nature and the connections between these and eudaimonic well-being, since multiple stakeholders use the landscapes in different ways and will have different expectations and levels of benefits and satisfaction from doing so (Moscardo, 2009). Understanding the role that nature and well-being plays in tourist experiences however, is essential if priorities for development and management are to be well-aligned with the expectations and needs of tourists and the balance between

conservation of natural areas and promotion of enjoyment of those areas is to be struck. In short, if well-being benefits from nature are important to tourists, then managers need to know what they are, what the attributes in the landscape are which give rise to them and how changes in the condition of these attributes might alter the benefits derived from them and consequently the satisfaction of tourists.

This chapter will explore the role that nature plays in the tourist experience and in particular, in enhancing eudaimonic well-being amongst the tourist population. It will analyse this from the perspective of the impact of tourism on the tourist and how such benefits contribute to tourist motivations and satisfactions. A conceptual framework for understanding this relationship will also be presented as well as the complexities involved in exploring this in a touristic context. The importance of this understanding for nature-based tourism planning and management will also be highlighted.

3.2 The Role of Nature in Tourist Experiences and Eudaimonic Well-being

To reiterate the main distinction between the two approaches to well-being study, hedonic well-being takes into account measures of happiness and pleasure and the eudaimonic approach focuses on meaning and self-realisation or the actualisation of human potentials and 'defines well-being in terms of the degree to which a person is fully functioning' (Ryan & Deci, 2001, p141). The concept of eudaimonia is an interesting one as it encompasses important aspects of human functioning which have far reaching influences beyond the individual. It is not necessarily simply a mental state of positive thinking but more a process of thinking and acting in ways which are congruent with one's own life goals. The means by which such congruence is achieved and the environments which support or otherwise inhibit this process are diverse and undoubtedly vary between individuals and within individuals such as at different times of life. However, there is a great deal of evidence through the literature to support the positive effects of nature on eudaimonic well-being, which are largely framed in terms of the restorative benefits of nature; these will now be discussed.

Within the large body of literature concerning restoration, two schools of thought appear to dominate the discussions. The first is concerned with restoration through

restored directed attention and increased cognitive abilities (Kaplan and Kaplan, 1989; Kaplan, 1995) and the other talks of the stress reducing properties of contact with nature (Ulrich, 1979; Ulrich and Addoms, 1981). Kaplan & Kaplan (1989) explore the idea that natural environments support human functioning and state that 'aesthetic natural environments give pleasure; they are satisfying to experience and such settings also support human functioning as they provide a context in which people can manage information effectively' (p196). They assert that this happens largely as a result of restored directed attention which they note is a pre-requisite for effective human functioning and includes amongst other characteristics, the ability to focus on important goals or activities and the ability to inhibit distractions. This effect of a restorative environment is explained in terms of 'Attention Restoration Theory' (Kaplan, 1995) which has been taken up by a number of other investigators (Hartig et al., 1996, 1997; Berto, 2005; Korpela et al., 2008) who found that elements of the natural world are effortlessly engaging and enable the fatigued person to recuperate.

Furthermore, Kaplan & Kaplan state that spending time in natural environments leads to four progressive levels of restoration. The first is referred to as a 'cleaning of the head' that allows random thoughts to wander in and out of the head. The second level is restoring capacity for directed attention, which they argue is fundamental to human functioning, but is a resource that easily gets depleted through use and concentration on certain tasks. At the third level, one can hear thoughts in the mind due to reduced 'noise' associated with everyday experiences. The final and deepest level tends to invoke 'reflections on one's life, on one's priorities and possibilities, on one's actions and one's goals' (Kaplan and Kaplan, 1989, p197). Such benefits leading to restoration and renewal appear to be the components of psychological well-being and can therefore usefully be thought of as contributing to a sense of eudaimonic well-being. In a touristic sense therefore, tourists may visit an area because of the destination image and because of an understanding of its cultural importance (San-Martin and del Bosque, 2008), but the ways in which people benefit from being in the landscape, may be greatly enhanced by more personal experiences which contribute to their well-being.

Williams and Patterson (2008) discuss the importance of natural areas for enhancing quality of life, in particular for supporting dimensions of quality of life such as social,

emotional and spiritual dimensions which they state are 'often manifest within the context of leisure and free-time pursuits' (p105). Natural England also note that everyday visits to the coast were associated with higher levels of stress-reducing, positive emotions (e.g calmness, relaxation, revitalisation) than visits to urban parks or open countryside (Natural England, 2011). The qualities of the natural environment which support these dimensions however, appear to be overlooked in much of the literature, feasibly because of the difficulties for individuals to isolate components in the landscape which contribute to greater or lesser extents to their enhancement in well-being. The landscape is arguably most often perceived in its entirety and furthermore, as argued by Porteous (1990), 'mentally or physically we frame the view and our appreciation depends on our frame of mind' (p4). How landscapes are perceived and the well-being benefits received from it appear to be therefore, contingent upon both properties within both the physical landscape and the observer. Some notable exceptions in the literature do attempt to isolate specific components in the landscape which appear to contribute to well-being. Such studies include the restorative potential of aquatic features or 'blue spaces' (Herzog, 1985; White et al., 2010) for primarily providing sensory experiences such as sounds of water and being immersed in it. Wheeler et al. (2012) also specifically researched whether living by the coast improved health and well-being. They concluded that there is an association between this and reports of better health, though the causal links here and the specific attributes in the coastal environment which contribute to this are not entirely clear.

How enhancements in well-being arise from landscapes is important to understand in the context of tourism planning and management as both the bio-physical components of landscapes as well as the more ephemeral meanings and connections that people develop with them are critical to understanding the tourist experience. Williams and Patterson hypothesise that well-being benefits arise from landscapes in two ways which they describe as 'adaptive' and 'utility' paradigms. In the first, they argue that behaviour is motivated by biological needs such as the need for stress reduction and restoration. In the second, well-being is derived from satisfying other needs such as being able to perform certain activities in the environment. They argue that in the latter, people are viewed as rational decision makers whereas in the former, they are simply responding to biological imperatives

(Williams and Patterson, 2008). It may be argued on the contrary however, that if people recognise their needs for stress reduction and psychological restoration, they may well make rational decisions about which places to visit. Specific qualities in landscapes may then form at least part of tourists' motivations for visiting certain areas. Urry (2002) also argued this point and stated that even where seemingly mundane or everyday activities are undertaken, if they are done so against a backcloth of scenery that is out of the ordinary and a contrast to everyday life, the experience takes on particular significance.

In either case, it can be seen that well-being arises from a transactional process between the landscape and the visitor to that landscape. Hartig (1993, p17) also discusses a 'transactional character of nature experience' and gives a sense that significance and value in the landscape is co-produced between the landscape and the visitor to it, rather than residing inherently in the landscape itself. The exact nature of this transaction may be difficult to grasp fully however, as it will be contingent upon the observer and thus people may derive different well-being benefits from the same landscape. Abraham et al. (2010) conclude that this is because landscapes are linked to 'meaning, identity, attachment, belonging, memory and history' and refer to these individual ways of seeing landscape as 'pathways of perception of the environment' (p59). This means that whilst it is not straightforward, both the needs of the visitor and the ability of the environment to satisfy those needs are important to consider in planning for an optimum tourist experience. The following section will consider some of the implications of these transactions with the landscape upon the tourist.

3.3 The Impact of Tourism on Tourists

This section will focus on the well-being benefits of tourism in natural areas and how this influences the overall quality of life of tourists. Such a focus on how tourism impacts tourists appears to be a somewhat under-researched area in the literature as much attention is given to the impacts of tourism on destination areas (Moscardo, 2009). However, as evidenced in the previous discussion, the benefits of tourism in natural areas can be significant for the tourist themselves and can contribute to decisions about where to go and what to do. Even where nature is not the main focus for the tourism, Tisdell and Wilson (2012) argue that 'nature is often a

significant contributor to the amount of enjoyment obtained from tourism' (p3). If that enjoyment results in enhancements in well-being, this could have significant impacts for both the individual and for wider society and also for ensuring that tourism management recognise and plan for how tourists use natural sites. Whether the impacts for tourists are in terms of enhancements in hedonic or eudaimonic well-being is however, a matter for discussion. Hedonic well-being is associated with transient pleasures and the temporary satisfaction of basic needs whereas, eudaimonic well-being is associated with the production of meaning and self-realisation. The prevailing view through the literature is that a sense of enduring well-being and thus quality of life are more closely linked to eudaimonic experiences than hedonic ones (Seligman and Csikszentmihalyi, 2000; Ryan and Deci, 2001). Planning for both dimensions of well-being may be important in certain tourist destinations, but the focus here is on eudaimonic well-being and how tourism can support this important dimension.

Moscardo (2009) pointed to some of these wider benefits of tourism which she argued contribute to enhancements in quality of life. Whilst not necessarily related specifically to tourism in natural areas, such findings do have implications for understanding the importance of tourism in a wider sense to eudaimonic well-being. From her study, she concludes that tourism might contribute to the quality of life of tourists through health benefits, improved human capital from the gaining of skills contributing to new and better work opportunities, improved self esteem through greater knowledge, competence and confidence and increased awareness of natural capital and support for environmental conservation. Similarly, Dolnicar et al. (2012) conclude that social interaction, personal development and individual identity formation are some of the ways in which tourist trips are seen to contribute to quality of life.

In addition, tourist experiences have been explored through the literature in terms of their contribution to 'peak' (Maslow 1968) and 'flow' (Csikszentmihalyi and Csikszentmihalyi, 1988) experiences. The central elements of peak-flow experiences include the following seven aspects: 'a centring of attention; transitoriness; richer perception; forgetting oneself and becoming totally involved in the activity at hand; disorientation in time and space; enjoyment; and momentary

loss of anxiety and constraint' (Mannell and Iso-Ahola, 1987, p325). Such domains can clearly be seen to resonate with ideas of eudaimonic well-being and a strong sense of the connection with tourist experiences and eudaimonic well-being is gained from these studies. Hinds and Sparks (2011) contribute to this understanding through their study of the affective quality of natural environments, in which they asked participants to rate different environments in terms of experiential feeling states which they mapped onto states of eudaimonia and apprehension. They found that more natural environments and in particular waterscapes elicited higher eudaimonia. This work contributes to the growing body of evidence suggesting that experiences in the natural environment contribute to psychological or eudaimonic well-being. Whether such associations are recognised and contribute to tourists' motivations for visiting certain landscapes will be discussed in the following section.

3.4 Tourist Motivations and Eudaimonic Well-Being

The impact of tourism on the tourist in terms of quality of life and eudaimonic well-being gives rise to the possibility of connecting these constructs with tourist motivation. If tourists are aware of these psychological benefits of nature, they may consciously seek them out in touristic experiences. Interestingly, this may involve some level of decision making with regards to which environments could satisfy psychological needs and provide the well-being benefits they seek. Motivations for tourism have been researched extensively through the literature and some dimensions of eudaimonic well-being do appear to be important in these assessments.

Moutinho (1987, p16) for example, argued that 'motivation is a state of need, a condition that exerts a push on the individual towards certain types of action that are seen as likely to bring satisfaction'. This emphasises the requirement to satisfy needs through actions, and tourist decisions could be made on this basis. Maslow's work on motivation has widely been applied to tourism studies and this provides interesting insights into the psychology of tourist decisions and how seeking out well-being from tourism experiences is broadly acknowledged and even a conscious decision by some tourists. He suggested that motivations are based on the requirement to fulfil five categories of human needs, starting from lower order physiological needs and moving through to higher order self-actualisation needs.

Pearce (1993) built on this framework and developed the Travel Career Ladder which describes how tourists move from the lower levels of the hierarchy (such as relaxation needs) to higher levels of fulfilment needs. Broadly, the framework suggests that people move upwards through the levels as they accumulate travel experiences. Thus, travellers' motivations may influence what they seek from a tourist experience and the destination they choose, based on which needs they wish to satisfy.

Pearce and Lee (2005) later tested this framework through interviews with tourists to understand their motivations. They concluded that motivations can be charted in order of importance. These are: novelty, escape/relaxation, strengthening relationships, autonomy, being close to nature, self-development, stimulation, self-actualisation, isolation, nostalgia, romance and recognition (p230). Interestingly, they show that tourists with more travel experience place greater emphasis on higher order motivations such as self development and being close to nature. This is a pertinent point as not all dimensions of well-being will be important to all tourists and people will make unique choices based on individual needs which may change over the course of their life-time. Understanding tourism to natural sites as a psychological phenomenon however, does provides an interesting lens through which to explore motivations to visit a site and behaviours at that site which may have important implications for destination management. Urry (1995) for example, in his concern for the relationship between the social and physical environment and the consumption of places, asserts that there is a widespread development of the 'romantic tourist gaze' as more and more people seek, in their visual consumption, solitude, privacy and a personal, semi-spiritual relationship with their environment. Managing destinations to meet such needs and expectations may not be an easy undertaking but may be necessary for the provision of optimal tourist experiences which enhance eudaimonic well-being.

Holden (2006) similarly talks about drive-reduction theory which emphasises that motivations are created by the drive to fulfil needs. If for example, an individual is stressed or fatigued, they may strive to achieve 'a state of psychological equilibrium' (p64) which may well be through some touristic encounter or experience. Through an understanding of how and why different landscapes have value for people and

how that value is created by virtue of the benefits which arise from it, appropriate decisions can be made about using and managing those landscapes. These insights for example can be beneficial in marketing certain settings for their restorative potential, in understanding tourists' motivations for visiting certain settings and their behaviours in those settings. Using human needs as a way to interpret motivations and responses to landscapes can provide important clues for how the degradation of the functions and processes underlying settings could play out in terms of losses of the benefits of nature and how that could affect individuals, society and the tourism industry.

Related to this is the evidence of tourist motivation being strongly associated with escaping from the pressures of modern day life. Sharpley (2006, p34) for example raises a salient point that 'a paradox of modern society is that not only has it provided the opportunity for travel and tourism but also it has created the need for tourism as an escape, albeit temporarily from modern society'. Destination choices may then be made on the basis of those which appear to be furthest removed from those of the everyday and familiar. Mannell and Iso-Ahola (1987) also argue that motivation for tourism is derived from the interplay of two forces; escaping of routine and stressful environments and seeking recreational opportunities for psychological rewards. It may be concluded that both of these motivational forces will contribute to a sense of eudaimonic well-being in enabling those needs to be fulfilled and whether consciously or unconsciously, tourists do appear to be motivated by a sense of enhancing well-being and eudaimonic well-being does appear to result from tourism experiences to varying degrees. Understanding tourist motivations and why certain destinations and landscapes are important and valuable to certain people is crucial in managing those landscapes for diverse users seeking to satisfy diverse needs. The next section will present a conceptual framework for understanding this relationship.

3.5 Understanding the Relationship between Landscape, Tourism and Eudaimonic Well-being

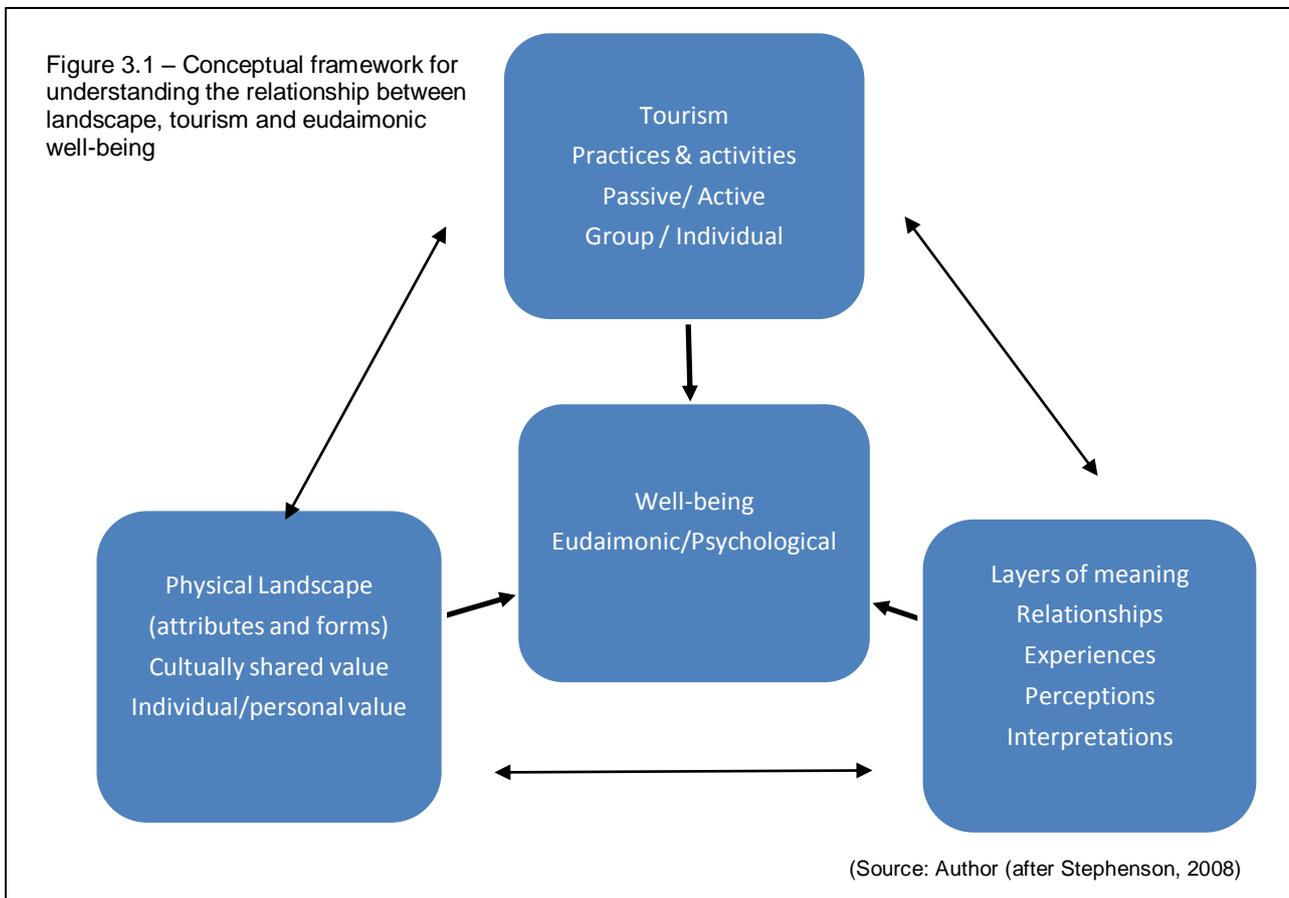
The ways in which landscapes come to have meaning or significance for visitors are evidently complex and may not necessarily be the result of expected and 'organised

industrial tourism' (Staiff et al., 2013 p9). In other words, they may not be the result of why the landscape may be culturally valued in the first place. This chapter has explored the notion that value may arise for visitors as a result of landscape interactions which result in eudaimonic well-being benefits. Understanding the relationship between landscape, tourism and eudaimonic well-being is then clearly important in a wider appreciation of the value of touristic landscapes. Stephenson (2008), in her study of how cultural identity is associated with landscape interactions, noted the importance of these nuanced understandings in landscape decision-making. She developed the cultural values model to analyse the range of values which might be present within a landscape. This research was conducted at two case study landscapes in the South Island of New Zealand where communities were asked 'what is important to you about this landscape?' (p132). Frequently, interviewees referred to the physical, aesthetic qualities of the landscape and the physical processes taking place on the landscape such as the gradual regeneration of native forest. Interestingly, much of what people spoke about had little to do with aesthetics and in fact were more about sensory experiences in the landscape and stories and legends which had grown up around it.

Stephenson concluded that value in the landscape can be thought of as clustering around three components. The first is the physical, tangible aspects of the landscape, including forms which may have been shaped through human intervention. The second is about relationships or meanings, significance and interpretations of the landscape which are generated by people-people interactions and by people-landscape interactions. The final component, Stephenson describes as 'practices' which includes both human practices and natural processes (p134).

Discussions so far have highlighted that eudaimonic well-being appears to result from tourism and in particular tourism in natural areas in a number of ways which can be seen to fit within the ideas of the cultural values model put forward by Stephenson. Well-being appears to arise from complex interactions between tourists, the physical landscape that tourists visit, the things that people do in the landscape and the meanings they take away from their experiences. This model thus appears to offer a way of understanding the relationship between landscape,

how it is used and the benefits or values arising. Figure 3.1 provides a way of conceptualising this relationship within the context of tourism.



3.5.1 Exploring the Framework

The above framework provides a basis for understanding the relationship between landscapes, tourism and eudaimonic well-being. It presents this relationship as a dynamic one in which the activities and practices involved in tourism, the physical landscape in which they occur and the meanings and significance of the activities in the landscape all contribute to an overall sense of eudaimonic well-being. Whilst it may not be possible empirically, to separate out the individual components of this relationship which contribute to eudaimonic well-being, it is possible to analyse each in detail for the purposes of assessing the different components.

The physical landscape provides the setting for touristic encounters, the backdrop to activities and the focus for ‘the tourist gaze’ (Urry, 2002). Cultural understandings of

the value of landscapes are inherent in shared notions of what is valuable and significant and these are often recognised in designations such as World Heritage or national park status. It is argued through the literature however, that within these cultural understandings, individuals 'read' and 'interpret' the landscape in different ways and the landscape is thus textured through myriad interpretations of it (Knudsen et al., 2008; Soper, 1995). The Landscape may thus take on different, more personal meanings for different individuals as it is shaped through different personal influences. The same landscape and attributes within it may thus be valuable for a number of reasons. Take a mountain peak as an example, this may provide the means by which to undertake certain physical activities whilst also providing a focal point for memories of a cherished holiday destination or a sense of attachment or belonging.

The tourism practices and activities which take place in the landscape also shape the way that the landscape comes to have certain meanings and significance for people. Certain visitors may, as discussed, wish to 'consume' the landscape for whatever heritage or otherwise significant features it possesses. Others may wish to engage in active pursuits for which the features of the landscape are important considerations for choosing one site over another. This may also be important in visitor satisfaction at the site; if the landscape is congruent with the intentions of the visitor, higher satisfaction is likely. Others may simply wish to engage in passive activities and use the landscape as a backdrop for doing so.

Perceptions of landscapes, it has been argued, are both culturally understood and shared but also textured and differentiated by individuals, both of which 'confer meaning on nature and the environment by humans' (Greider and Garkovich, 1994 p1). These meanings and interpretations of landscapes then are likely to be a product of both shared and individual influences and the benefits which arise from landscapes are also likely to be subject to individual interpretation and filtered through social, cultural and psychological layers of meaning.

The three components of the framework have a distinct and overlapping place in this dynamic relationship so that the physical attributes of the landscape for example will shape how the landscape is used and in turn this will shape how it is perceived.

Similarly, the relationship an individual has with a particular landscape and the meaning and significance attributed to it may shape how the landscape is used and the kinds of activities that the individual undertakes in the landscape. The contribution of these overlapping components to eudaimonic well-being will undoubtedly vary amongst the visitor population as people will have different experiences, expectations and perceptions of the landscape. However, the conceptual framework does demonstrate how each component provides the opportunities for benefits to arise such as recreation, aesthetic appreciation and spiritual enrichment which may lead to aspects of psychological well-being such as meaning and purpose, competency, self esteem and self development which are proposed as being central to optimum human functioning or eudaimonic well-being (Diener et al., 2009; Ryff and Singer, 2008; Ryan and Deci, 2000). The next section will discuss the significance of understanding this relationship in the context of tourism planning and management.

3.6 Eudaimonic Well-being in Tourism Planning and Management

Using the above framework, it becomes possible to conceptualise tourism as an amalgamated experience involving not only activities and pursuits in a landscape but also as a 'psychological experience' and 'a state of mind', (Mannell and Iso-Ahola, 1987, p315). This highlights the imperative for managing landscapes both for cultural as well as individual values, experiences and motivations. Through an understanding of what matters in the landscape, to whom and why, and a greater appreciation that destinations may be chosen for the psychological benefits they may afford, management can take steps to ensure that opportunities are provided to access and enjoy the benefits of a setting. As Sirgy et al. (2011) insightfully note; 'tourists who experience a greater sense of wellbeing from a tourist trip are likely to seriously consider and choose the same tourist operators in making future leisure travel plans. The same tourists are also likely to recommend the same tourist operators to their associates, friends, and family members. Enhancing tourists' sense of well-being does pay' (p274). Taking account of values beyond those expressed and captured through markets then makes business sense in terms of ensuring tourist satisfaction.

Understanding how different tourists are motivated by the benefits of nature may also help in marketing and interpretation of the landscape. Moscardo (2009) for example, argues that the benefits sought by tourists is a useful means by which to segment markets. In this way, certain segments of the tourist market who seek psychological well-being benefits such as restoration or spiritual experiences in the landscape can be catered for in different ways to those who seek other benefits such as participating in active recreation pursuits. The aim of managers is to maximise satisfaction of tourists' needs and understanding those needs is thus crucial to this endeavour.

The heritage landscape of the Jurassic Coast, Dorset is an interesting landscape to consider in terms of the benefits that visitors gain from being there. This landscape is a designated World Heritage Site (WHS) due to its geological significance in providing an almost complete record through the Triassic, Jurassic and Cretaceous periods of geological time, recording 185 million years of the Earth's history. It is therefore, valued enormously as an economic asset in terms of attracting tourism and investment. It also has a significant cultural value attributed to it by virtue of its designation and the destination image the landscape has taken on since designation in particular. The WHS designation has for example, sparked a significant amount of activity around promoting it and 'building on the positive impacts of the designation'³ (ERA Ltd, 2008, p2). It thus resonates as valuable and significant in a number of ways; economically, socially and culturally. The biggest impact according to the 2008 study has been in the emergence of a clear identity for this stretch of coastline which is understood and shared by the global as well as the local community. This has had wide ranging effects in a number of areas. The WHS stakeholder survey (ERA Ltd, 2008) for example, revealed that the designation has created 'a stronger sense of pride and identity' (p6) within the local community. Furthermore, there is a strong perception that the Jurassic coast is better able to compete in world tourism markets as a result of its new identity (ERA Ltd, 2008).

In terms of motivations for visits to the site, Jewell & Crofts (2002) purport that tourists to heritage landscapes can be organised along a continuum from general

³ An Economic, Social and Cultural Impact Study of the Jurassic Coast (2008) ERA Ltd.

leisure travellers to heritage tourists. From their study of visitor motivations, they concluded that a segment of visitors were seeking a relaxing leisure experience supported by the heritage background whilst others were interested in gaining knowledge from the past and can be thought of as heritage tourism specialists. Poria et al. (2003) similarly argue against an assumed heterogeneity of tourists at heritage sites. Instead, their research focused on the relationships between the visitor and the site and the motivations for visiting. They conclude that there is a distinction between 'heritage tourists' and 'tourists at heritage sites'. Furthermore, they note that this distinction may be even more important for tourists who feel a connection between the site and their own heritage and this may result in difference in behaviours at the site. For some, they suggest, the visit is an emotional experience that people come to 'feel' rather than to 'gaze' (p249). In the context of the Jurassic coast, the landscape may be meaningful to visitors for many different reasons. For some, it may be about the heritage and a specific desire to seek out and understand the past and the evolution of nature whilst for others, it may be that the landscape provides a unique backcloth to otherwise everyday experiences (picnicking, swimming etc) and still for others, it may simply be a convenient place to relax, with no thought given to the heritage significance.

Tourist landscapes thus carry meaning at a number of levels and the tourist relationship with the landscape and the benefits derived from it are complex. For those who consider the Jurassic coast to be a special place for whatever reason, travelling to this landscape can be a deeply meaningful experience and give rise to numerous benefits. Staiff et al. (2013) for example, note that such engagements are 'semiotically charged' and they produce benefits: 'spiritual, aesthetic, educative, a sense of mental health or personal wellness' (p2). The meaning and fascination of the Jurassic coast for many may be built up around shared and culturally accepted notions of specialness. What is interesting is that around such 'performed sites of tourism' (Staiff et al., 2013) whereby, the significance of the site is laid bare and packaged into the tourist experience, visitors may construct their own perceptions and interact with the site in ways which may reflect more personal relationships with the landscape. Whilst people may arrive at the Jurassic coast then with a cultural understanding of the value of it, this understanding may be textured as a result of more personal interactions there which may produce a differentiated sense of value

or significance. If people experience a personal connection with the landscape and specific well-being benefits as a result, their perception of the landscape is likely to be enhanced from the one packaged into a tourist product and motivations for repeat visits may be linked to an expectation of the enhancement of personal well-being.

Understanding and managing tourism sites for diverse values and benefits is clearly a challenge for tourism managers but one worthy of focus since tourists may have diverse motivations for visiting and benefit from visits in a whole variety of ways, beyond what might be imagined. Benefits including enhancements in eudaimonic well-being may fit in here as both a motivator to visit and a benefit of visiting. Managing for well-being may play an important role in sustaining tourist interest through ensuring both the quality of the landscape which gives rise to such benefits is maintained and also that access to it is adequate and appropriate. Staats and Hartig (2004) for example, propose that 'hypothetically, the possibilities for attention restoration will guide the environmental preferences of people who are attentionally fatigued' (p199). The possibilities for using these insights in the context of land use planning and tourism development for instance, are evident in that certain settings may be conserved and designed to incorporate opportunities for restoration.

Understanding the relationship between landscape and eudaimonic well-being presents certain challenges however, particularly in the context of tourism. Scale for example, may be difficult to understand as 'the landscape' is not a distinct unit of measurement when it comes to understanding how people derive well-being benefits. Landscape itself, as an analytical term is also difficult to define. According to the Landscape Convention (2000) landscapes develop through the interaction of humans and nature so even when people speak of landscape or nature, these terms are difficult to interpret. It is challenging therefore, to identify which landscapes and what it is in those landscapes which gives rise to certain benefits. Furthermore, the benefits for tourists of certain landscapes may arise at different geographical and temporal scales. The tourist may for example derive well-being benefits long after the tourist experience has ended and geographically far from the source of those benefits. Trying to untangle then the nature and extent of well-being benefits for tourists of certain landscapes is evidently problematic.

Understanding tourists' needs and motivations for visiting certain landscapes also presents a challenge since tourists do not always articulate their motivations for visiting because they either are not (fully) conscious of them or they find them difficult to reveal (Page and Connell, 2009). In addition, these motivations and needs may vary considerably for different users who have different preferences and expectations from their visit. The imperative for tourism managers then is to develop techniques to reveal these needs and motivations so that they are able to ensure satisfying and meaningful experiences for the tourist. The following section will outline some of the methods used to reveal how landscapes have value and significance for people which may be developed for the purposes of understanding the significance of tourist landscapes.

3.7 Problems and Prospects for Revealing the Well-being Benefits of Landscapes

By specifically recognising the value of landscapes for the psychological benefits they provide, a richer, more contextual understanding of what motivates tourists to visit may arise. It may also provide clues as to which settings provide benefits and how behaviour is shaped by these benefits. Harmon (2003) for example, suggests that intangible values may provide 'the ultimate motivation for caring' (p13) about a landscape or destination and thus tourists will likely behave differently in places they care about. Developing methods to generate such rich data is however, not straightforward as discussed in the previous section. One of the main challenges of integrating a diverse array of human values into decision making is that 'many key sources of social, economic and environmental data are not designed to examine aspects of cultural services' (Church et al., 2011, p638). This means that intangible aspects such as aesthetic and spiritual benefits are not generally or systematically captured in existing data sets. Approaches which have been utilised to capture such benefits have largely focused on the recreation benefit of a landscape and the value of this has been captured through a number of techniques designed to infer the monetary value of this recreation (Farber et al., 2005; Costanza et al., 1997). Techniques used include both revealed and stated preference methods. Revealed methods involve calculating the monetary value actually spent, most notably for tourism and recreation, this involves the travel-cost method which determines the costs incurred by individuals to use an environmental good. This takes into account

the amount spent on travelling to a destination, as well as other associated costs such as entrance fees.

Stated preference methods on the other hand ask the respondent how much they would be willing to pay to conserve a landscape or destination area or how much they would be willing to accept in compensation for its loss. There is however, considerable criticism of such techniques as they assume an ability to convert deep felt values and the meaning and significance of a destination into monetary values. This is not only cognitively demanding for the respondent but also methodologically challenging for the researcher. It is also questionable whether elicited values from such techniques can be taken as a true reflection of people's values. Costanza et al (1997) for example, argue that even if an 'environmental enhancement was actually valued at \$100, those using the site may only state that they would be willing to pay \$20' (p257). This may be due to considerations such as affordability and accounting for other users' contributions.

A touristic encounter in an environmental setting may provide multiple benefits and be considered valuable for a number of reasons from physical health benefits, aesthetic pleasures, inspiration and spiritual enrichment which may have differing worth for different perceivers. Capturing such a range of values then involves a more interpretive approach and 'qualitative expressions of value' (Fish et al., 2011c, p1184). It is likely therefore, that methods which reveal these diverse values by asking people what is important in the landscape and why, will yield richer data. Accounting for such individual experiences may then provide a solid basis for more effective decisions which take account of how individuals benefit from different landscapes. Asking people how they feel in different settings also provides novel opportunities for decision-makers to engage with stakeholders and to co-create techniques to measure and articulate values in ways which are mutually understandable, innovative and which take into account a more holistic understanding of landscapes and what matters to people. Understanding diverse values can also help to develop tourism management options which enhance well-being benefits and take into account changing landscape scenarios which could impact negatively on how tourists experience and perceive the landscape.

Techniques which give weight to qualitative assessments of what is valuable to people have been variously explored through the literature and advocated in policy such as in the UK by Defra (Fish et al., 2011b). They provide a suite of participatory and deliberative techniques to inform valuation processes which can be used to provide monetary or non-monetary outcomes. Qualitative approaches to valuation are often approached with caution by policy makers who are held accountable for decisions regarding public spending, so justifications on the basis of monetary assessments often make most sense. However, including assessments of the stories behind the numbers appears to be gaining currency and legitimacy in decision making circles (Eftec, 2006; NEF, 2011). Continuing to develop techniques to explore values from a variety of viewpoints is likely to be an important part of the process of an expanded understanding of the multiple benefits of landscapes.

These benefits have been explored through the idea of 'services' to people such as put forward by the MEA in their assessment of 'ecosystem services'. Such terminology has added a sense of confusion for many as to what is being provided and for whom. The idea that nature provides 'services' for people assumes an anthropocentric stance on nature which prioritises use values of nature over non-use values. Fisher et al. (2009) clarify the distinction between ecosystem services and benefits by viewing ecosystem services as the link between ecosystems and things that humans benefit from, not the benefits themselves. In their assessment of cultural ecosystem services, the UK NEA build upon this definition and conclude with their own definition that 'cultural services are environmental settings which provide the sites for human interactions with nature and others' (Church et al., 2011). This definition is useful in delineating settings or units of landscape that can be analysed for ecosystem services accounting (in either monetary or non-monetary ways).

Alternative views see cultural services or psychological well-being benefits as arising from the benefits as felt by people who experience nature. O'Brien (2005, 2004) for example provides compelling evidence for examining values at the level of the individual and for understanding the benefits of woodlands through techniques designed to ask individuals about their own personal experiences of the landscape. This approach emphasises that the processes and functions of ecosystems only become services if there are humans that (directly or indirectly) benefit from them

(Luisetti et al., 2004 p5). Measuring ecosystem services at the level of the beneficiary thus makes intuitive sense if values are determined by perceptions of users of the landscape. Moreover, incorporating these values in land-use decisions and making subsequent trade-offs will be more effective after rigorous interrogation of individual and group values as decisions will need to be meaningful and appealing to a receptive public. The relationship between landscapes and well-being benefits may be thought of as a dynamic one, since benefits may alter in light of changing environmental conditions, and benefits may well fluctuate in time and space. They are therefore, arguably not simply there to be counted at a given location, but are the result of a complex interplay of human perceptions and experiences in nature which can only be understood and captured by asking people to share their experiences.

Whilst such approaches may yield important insights, communicating them into language and metrics which can be utilised by decision makers is challenging. Fish (2011) notes for example, that 'there is a paucity of viable metrics for systematically gauging what these cultural services are and how they may be changing' (p674). There appears to be a lack of empirical work conducted in this area, largely due, no doubt to the underlying complexities involved in trying to measure the intangible. There are however, some notable attempts. Gee and Burkhard (2010) for example sought to advance theoretical and practical understanding of cultural services through interviewing respondents around the development of an offshore wind farm. Whilst some rich contextual data was gathered regarding what resonated as valuable to people, they noted the inherent challenge of relating cultural services to distinct ecosystem functions. Attempts to overcome this challenge have been made by mapping cultural services, using visual indicators of different intangible values (Raymond et al., 2009; Brown, 2006).

Such techniques require development and adopting into mainstream thinking so that assessments of intangible values in decision making becomes the norm rather the exception. There is a growing body of literature concerned with developing such techniques and whilst this may be difficult territory, considerable progress is being made. Understanding that benefits from nature will be felt in myriad ways by myriad stakeholders is important in developing techniques to take account of dynamic values; as Potschin and Haines-Young (2011, p578) note, 'different groups may

value gains in different ways at different times and indeed in different places'. Pursuing these endeavours will enable more integrated socio-ecological models to emerge and better decisions to be made.

Since a connection between nature and psychological well-being has been evidenced through the literature (Ashbullby et al., 2011; Hartig et al., 2001; Kaplan and Kaplan, 1989; Ulrich, 1979), and various experimental techniques have been developed to test this connection, building on these works could prove fruitful in assessing what these intangible benefits in nature actually are and how they influence this dimension of well-being. Psychometric scales can for example, be utilised to test the degree to which different environmental settings can influence well-being. There are some obvious limitations to this approach however, in that the ways in which these benefits are felt may be highly subjective and will likely be context, spatially and temporally specific. However, they may prove useful not only in providing insights into how landscapes influence eudaimonic well-being and for whom, but they may also provide metrics which can be compared with other landscapes and also be incorporated in decision making processes.

3.8 Conclusions

The relationship between nature and well-being in the context of tourism has been shown to be both dynamic and complex. As Fisher & Turner (2008, p1169) point out, 'simple linear relationships do not exist in ecosystems and therefore, the same service can generate multiple benefits'. Understanding these benefits from the multiple perspectives of diverse users of the landscape is thus important in a more comprehensive appreciation of what in the landscape is valuable and why. This is particularly salient in a tourism context where the landscape and the well-being benefits it provides may constitute a great deal of the motivation for visiting, although such intangible values are not readily captured in economic assessments of the value of tourism.

An innovative approach to managing landscapes for the best possible tourist experience can be found in the idea of understanding the value of tourism for the tourist. Assessments of how touristic encounters with the natural environment serve

to influence eudaimonic well-being is central to this. A greater appreciation of this relationship would greatly help decision makers in planning for optimal tourist experiences by ensuring both the provision of quality landscapes and access to those landscapes which are known to produce such benefits.

Jordan et al. (2009, p1534) commented that 'to account for well-being in environmental decisions, we need to venture beyond natural sciences and economics, into the psychological and sociological realms'. In this way, tourism management can be expanded to explicitly recognise the psychologically deep connections that people have with nature and the central role that it plays in people's lives and in decision making processes as tourists. This offers exciting opportunities for tourism research and practice to be based much more around what matters to people as opposed to economic considerations and environmental impacts which have traditionally dominated tourism discussions. It also presents unique opportunities to understand much more how individuals make decisions about and respond to tourism and leisure experiences. If the link can be established more firmly between tourism experiences in natural environments and eudaimonic well-being, this provides a powerful conceptual tool to be mobilised in an array of tourism management situations, from market segmentation to marketing and interpretation.

In the spirit of moving forward these discussions, the following chapter presents a methodology for assessing the links between the Jurassic Coast and the eudaimonic well-being of visitors.

Chapter 4: Methodology

Methods to Reveal the Eudaimonic Well-being Benefits of Visits to the Jurassic Coast

4.1 Introduction

The previous chapter explored the relationship between landscape, tourism and eudaimonic well-being. It concluded that this relationship was a dynamic and complex one but one worthy of thorough investigation, in particular in a tourism context where motivations and satisfactions of tourist encounters with the landscape may be bound up with the well-being benefits afforded by the landscape. Moreover, if this connection is made clear, it provides important clues for managing the tourism environment in ways which enhance these benefits and provide tourists with the opportunities for accessing and enjoying these benefits, thus ensuring an overall positive tourist experience.

Such information can complement data already collected such as that concerned with the economic impacts of tourism to certain landscapes. It can for example, provide landscape managers with more differentiated information concerning visitor motivations and satisfactions. The Jurassic Coast, Dorset is a valued landscape as its world heritage designation is testament to. This imbues upon it a certain shared cultural value by virtue of its geological significance and this alone provides considerable reason for visiting the site. The Jurassic Coast WHS Stakeholder Survey for example, noted that 93% of respondents from the museums and heritage sector felt that the identity afforded by WHS designation influenced tourism footfall to some extent to the Jurassic Coast (ERA-Ltd., 2008). Whilst value in this landscape may be a product of this shared understanding, what people care about in this landscape may also be shaped by much more personal experiences and ways of seeing the landscape, and individuals thus add colour and texture to this shared cultural value. Visitors to this landscape thus provide a unique opportunity to understand the motivations and benefits of visits to this landscape and they can reveal something about the way in which this landscape is actually valued by those who visit. In trying to unravel the relationship between this landscape and the psychological well-being benefits which potentially lead to eudaimonia in visitors,

methodologies need to be developed which capture how this dynamic relationship plays out in practice.

Whilst there is a growing amount of literature and empirical studies on the connections between nature and human well-being, many of these have used slides or other images as proxies for real-world experiences (Van-den-Berg et al., 2003; Herzog et al., 2003; Hartig et al., 1996; Hartig and Staats, 2006 for example). This study builds on these methodologies and advances them by researching *in-situ* how being physically present at the Jurassic Coast influences how people think and feel about their lives. To do this, established theories of the restorative effects of natural environments are drawn upon (Kaplan and Kaplan, 1989, 2001a, 1995; Ulrich and Addoms, 1981; Hartig et al., 1997, 1991, 2001, 2006; Berto, 2005; Ulrich, 1979, 1993) and the psychological well-being effects of contact with nature (Ryff and Keyes, 1995; Ryff and Singer, 2008; Diener et al., 2009, 2010; Ryan and Deci, 2001) which each propose various causes and indicators of positive psychological well-being which can usefully be thought of as indicators of eudaimonic well-being.

A human needs approach is used to explore this relationship as it is proposed that the satisfaction of human needs equates to a state of psychological well-being which in turn influences positive human functioning or eudaimonic well-being. This approach integrates aspects of both environmental restoration and psychological well-being in one framework. By using established measures of both constructs and amalgamating these with other typologies of human needs, a more definitive and robust list of psychological human needs was developed. The resultant framework was developed into a psychometric scale with items measuring each need which was in turn built into a questionnaire.

The resultant quantitative data was complemented by qualitative data which allowed for an iterative process to the analysis of data and a reflexive interpretation of it. Whilst there is no one or right way to gather and interpret data, as Field (2010, p345) notes, 'there are many different ways of modelling and presenting data, and each one is both an abstraction of the real world (a construct of the person doing the modelling) and a simplification of reality', this approach allows for a fuller

understanding of how people interpret their surroundings and how this coastal landscape influences how people think and feel about their lives.

This chapter will discuss in more detail the methodological approach and the methods used through this research. Detailed discussion will focus on the human needs approach adopted, how the questionnaire was developed and the qualitative methods chosen alongside this to investigate the research questions. The following section will firstly outline the rationale for this mixed methods approach.

4.2 Methodological Approach

The use of a mixed methods approach, using both quantitative (questionnaire) and qualitative (interview) data allows for a triangulation of results and an exploration of emerging themes from multiple perspectives which should ensure a greater reliability of results. Using quantitative techniques has the advantage of being able to quantify responses, which for the purposes of this study was considered important in communicating responses and for more easily incorporating non-monetary values into decision-making processes. The qualitative data was considered equally important however, in obtaining rich contextual material about the experiences of visitors to the Jurassic Coast. By using the powerful analytical tools of both SPSS⁴ and NVivo⁵, the data collected can be manipulated and explored in various ways. One justification of such an approach comes from Baxter and Eyles (1997, p514) who state 'triangulation is one of the most powerful techniques for strengthening credibility. It is based on convergence: when multiple sources provide similar findings their credibility is considerably strengthened'.

There are various conceptualisations of mixed methods and what this actually means in social science research. Johnson et al. (2007, p112) argue that mixed methods research is one of the three major 'research paradigms' (quantitative research, qualitative research, and mixed methods research), suggesting it is somewhat separate from the purely quantitative or qualitative. In this study, an innovative attempt is made at revealing and quantifying how human needs are

⁴ IBM Statistical Package for the Social Sciences now often referred to as PASW Statistics (version 18)

⁵ Qualitative data analysis software produced by QSR International

satisfied at the Jurassic Coast and the questionnaire makes considerable headway in this endeavour. The qualitative data complement this by adding rich contextual material about the experiences and perceptions of participants which also provides a deeper understanding of why respondents answered the questionnaire in the way they did. Using this mixed methodology allows for an exploration into the nuanced ways in which participants experience the landscape and how being there influences their psychological well-being.

The issue of how methods should be mixed and at what stage is one with no definitive answer. Johnson et al. (2007) highlight this complexity in their study which involved asking numerous methodologists for their definitions of mixed methods research. They found that there was no clear consensus as to the stage at which mixing methodologies or results takes place. For some it was in the design state and for others at the level of analysis. They conclude with a broad definition: 'mixed methods research is an intellectual and practical synthesis based on qualitative and quantitative research' (p29). In this study of the Jurassic Coast, the methodological design meant that the survey was conducted first and respondents opted to be included at the interview stage. The survey results did not however, inform the interview schedule and both sets of data were then analysed in an iterative process, with one set of data leading into exploration of the other to verify results and to test hypotheses. This process was repeated three times as primary data was collected at three times through 2011 in order to account for variations in season. This approach is similar to that described by Morse (1991) as 'simultaneous triangulation' in which 'there is limited interaction between the two sources of data during the data collection stage, but the findings complement one another at the data interpretation stage' (cited by Johnson et al., 2007). This also allows for an integration of data through the writing of the results which serves to give a fuller picture to the reader of the influences of being in the case study landscape on well-being.

Throughout the literature, different approaches are evident in explorations of the benefits of being in nature, but dominating these studies appears to be quantitative studies, conducted in laboratory experiments involving photographs to understand how people rate various landscapes in terms of subjective preference (eg Herzog, 1985; Hartig et al., 1996; Herzog et al., 2003; Han, 2003; Berto, 2005). Others have

combined these types of experiments with qualitative insights so that respondents can add their own analysis in their own words to the pre-defined scales and values set by the researcher (eg Williams and Harvey, 2001; Berman et al., 2008; Kjellgren and Buhrkall, 2010). This study combines both elements by using a psychometric scale to quantify the level of agreement with human needs satisfaction in the case study locations together with qualitative methods including interviews, diary entries and solicited photographs. In this way, rich insights are gathered into the ways in which encounters with the Jurassic Coast manifest as psychological well-being benefits. Analysis brings these two strands together as they are mutually reinforcing and serve to paint a more complete picture of the relationship between this natural coastal landscape and eudaimonic well-being.

Conducting the surveys in-situ was also considered important to capture the experiences and feelings in the landscape as they happened without having to rely on remembered accounts. English & Lee (2003) insightfully state; 'the landscape is the book in which the values are written and being on and in the land is far more likely to elicit intangible values through experiences, reminiscence and storytelling' (p53). Furthermore, this study makes use of other innovative methodologies in the pursuit of some faithful recollections of experiences and reminiscences. By using a combination of questionnaires, solicited photography, diary entries and interviews to capture the rich text about people's experiences at the Jurassic Coast, important insights are gained into the conscious and sub-conscious worlds of visitors. The following section outlines the methods used through this research and details the rationale for and development of the quantitative and qualitative instruments used.

4.3 Methods Used

The methods used in this study were designed to capture experiences in the landscape as they took place. Discussions about those experiences with participants did occur a few days after the event but in all methods, detailed account of the experience was captured in-situ. This approach is largely missing from previous research, primarily it is assumed due to the logistical challenges of conducting research on site. It was felt however, that a much more faithful representation of how people experienced the benefits of being in the landscape would be gained from

asking people physically present at the Jurassic Coast. This differs from other approaches in the literature which rely on eliciting responses by asking people to 'imagine you are in this environment' (Han, 2003; Herzog et al., 2003; Staats and Hartig, 2004 amongst others). Where responses were sought after the visit (such as in follow-up interviews), the timing was deliberately short between visit and interview and questions were formed around the specific visit rather than an imagined visit.

Questionnaires offer a useful tool for gaining insights in standardised ways into the benefits of being in a particular landscape. One important drawback however, as noted by Gee & Burkhard (2010, p356) is that surveys can only offer a snapshot in time and space and perceptions may well change over time and across locations. The mixing of methods thus plays an important role in capturing a fuller picture of people's experiences and perceptions of being in the case study locations than might otherwise be possible. An additional benefit of a questionnaire is that a lot of information can be obtained fairly quickly. In this study, the tick-box format used required minimal cognitive input and respondents were thus more motivated to complete the questionnaire and more able to do so in a short amount of time, which was important as all participants were enjoying leisure time.

Data were collected from two case study sites at three phases spanning the tourist season in 2011, in June, August and October. This strategy was chosen to ensure the maximum number of visitors could be captured and also to allow for comparisons to be made between responses at different times of the year. Questionnaires were carried out over three days in each phase, over a Friday, Saturday and Sunday. The weather during these periods was fair to good during June and August and significantly colder and rainier in October when there were noticeably fewer visitors and filling the quota of questionnaires (this was set at 150 during each survey phase purely for manageability) took longer. The questionnaire was piloted with 20 respondents at one case study site (Durdle Door) in early June before the main questionnaire phase began. The purpose of the pilot was to test the comprehensibility of the questionnaire and the length of time it took to complete. Only minor adjustments were made in terms of wording as a result of this pilot. The

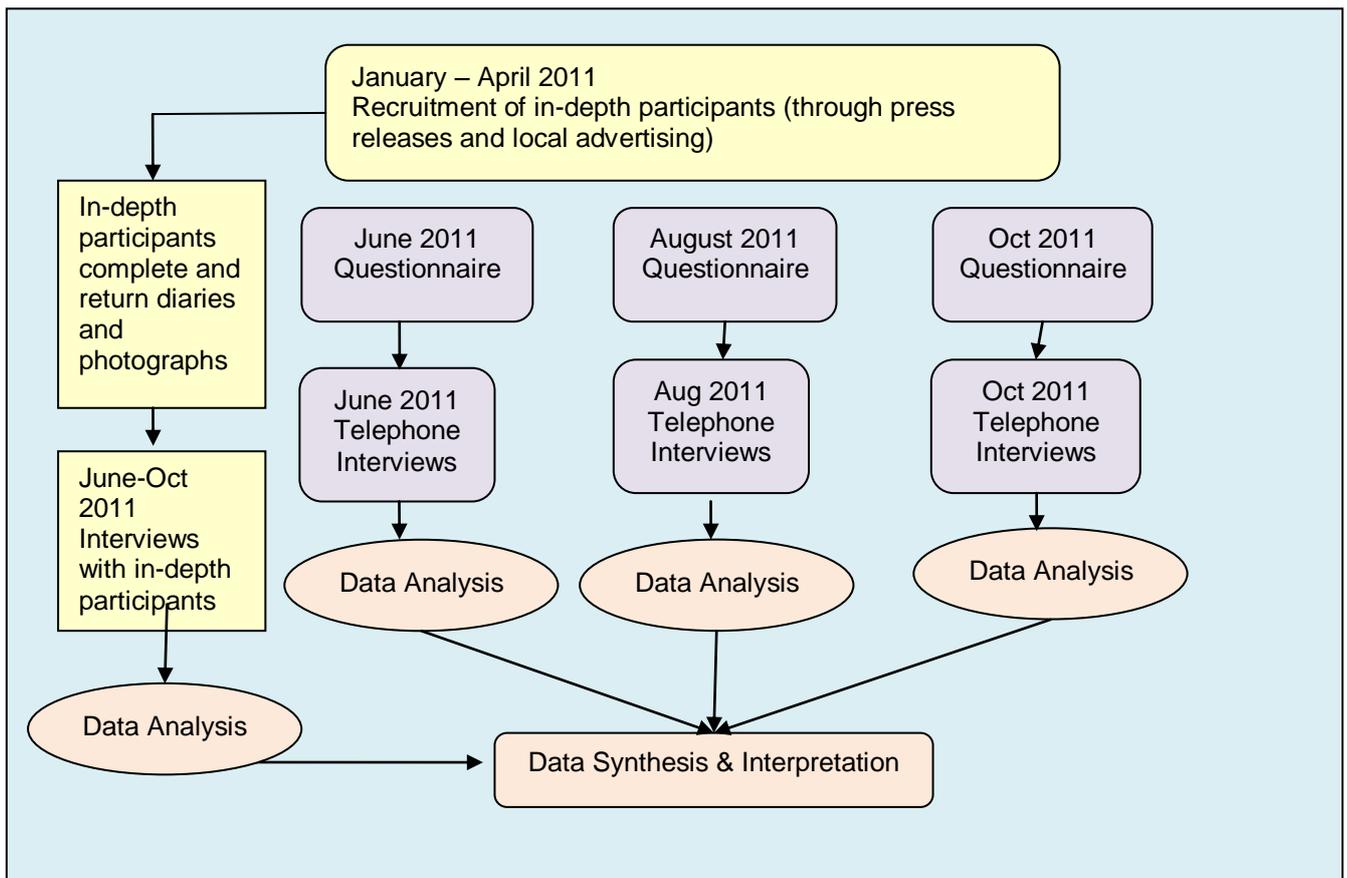
questionnaire used is given at appendix 1. An incentive of a prize draw to win a hamper worth £50 of locally produced foods and wines was offered for participation.

Respondents were also given the opportunity to take part in a longer telephone interview to discuss their experiences and perceptions of the case study landscape. The telephone interviews lasted approximately 20 minutes and were recorded and then transcribed into NVivo 9. The telephone interview schedule is at appendix 2. As the interviews took place at different times, due to the three phases of fieldwork, the conceptual terms used to code data to or 'nodes' (Edlund, 2011, p155) emerged through a process of digesting and analysing the data as the research progressed. The human needs concepts for example, were used as 'parent nodes' and were explored through the interviews in terms of how people used the language associated with these needs through their own narratives. This led to an exploration of the associations of these needs with well-being and with the landscape and the practices in the landscape. Influences on these needs were also explored and 'child nodes' emerged such as internal and external influences. The parent and child nodes used to explore the data can be seen at appendix 3. Descriptive statistics such as the frequency of words were also computed in NVivo to explore any useful insights into the types of words used and the frequency of those words (or related words) which helped also to form nodes for exploring themes.

In-depth work was also carried out with a small group of participants who were recruited via media advertisements. This group were selected on the basis that they intended to visit the Jurassic coast at some point during 2011. They were briefed before their visit about the three requirements of their participation. The first of these was to complete a questionnaire once at the Jurassic Coast. This questionnaire was identical to the one used for the other participant cohort, with minor adjustments made to the introduction (such as omitting the prize draw and interview invitations). Secondly, participants were asked to complete a landscape diary during a visit to the Jurassic Coast and thirdly to take photographs of whatever they considered to be meaningful to them in the landscape. This group also agreed to attend an individual face-to-face interview which lasted approximately 40 minutes. This interview schedule can be found at appendix 4. The interviews took place when the participant returned from their trip to Dorset so these were therefore, conducted at times and

locations to suit each individual and took place throughout June–October 2011. Twenty seven research packs were sent out to participants who had volunteered for this part of the research and twelve were actually completed. The reasons mostly given for non-completion were lack of time during their holiday. The components involved in this methodology and the order in which they took place are outlined in figure 4.1 for clarity.

Figure 4.1 – Components and Ordering of Research Methods



4.4 Quantitative Research – A Human Needs Framework

The MEA (2005) defines cultural ecosystem services as ‘non-material benefits’ because of their intangibility and because evidence of them is found primarily in the realms of the subjective, psychological and emotional. Similarly, this study hypothesises that the benefits of interacting with nature which contribute to psychological well-being are equally intangible and hard to define. The human needs approach utilised through this study is an attempt to circumvent the difficulties in asking visitors to identify and articulate the benefits they felt from being at the

Jurassic Coast. By presenting respondents with a pre-defined set of statements which relate to different human needs, visitors are able to respond intuitively without the cognitively demanding task of first having to identify and articulate which needs are being satisfied. This approach was largely borne out of a body of work which suggests that 'underpinning cultural diversity is a relatively small number of fundamental human needs that require satisfaction if well-being is to be achieved' (Church et al., 2011; McGillivray, 2006; Max-Neef, 1992) and a larger body of work concerned with the dimensions of psychological well-being (Diener et al., 2009; Ryan et al., 2008; Ryff and Keyes, 1995). These approaches converge in the understanding that human needs require satisfaction in order for psychological well-being to result. Through psychological well-being, a person is able to function positively and to attain goals, reach potentials and flourish; a state identified as eudaimonic well-being (Ryan and Deci, 2001).

Understanding the psychologically deep meanings of natural areas to humans and their connections to positive human functioning is essential if decision-makers are to better incorporate these ideas into providing opportunities for people to deepen and enrich this relationship. In this study, the constructs of psychological well-being and environmental restoration were assessed for their contribution to understanding the human needs which need to be satisfied in order for a person to function optimally. The components of psychological well-being and positive functioning was based on the understandings from Diener et al who developed the 'flourishing scale' which consists of eight items to measure important aspects of human functioning ranging from positive relationships to feelings of competence and having meaning and purpose in life (Diener et al., 2010, p146). Also included in this assessment were Ryff & Keyes' six dimensions of psychological well-being which are autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance (1995, p719). Ryan & Deci (2000) also contribute to this discussion by proposing the existence of three psychological needs; competence, autonomy and relatedness which when satisfied, yield enhanced self-motivation and mental health and well-being.

Whilst helpful in providing some framing to the measurement of psychological well-being and positive functioning, these scales have not been tested in the literature

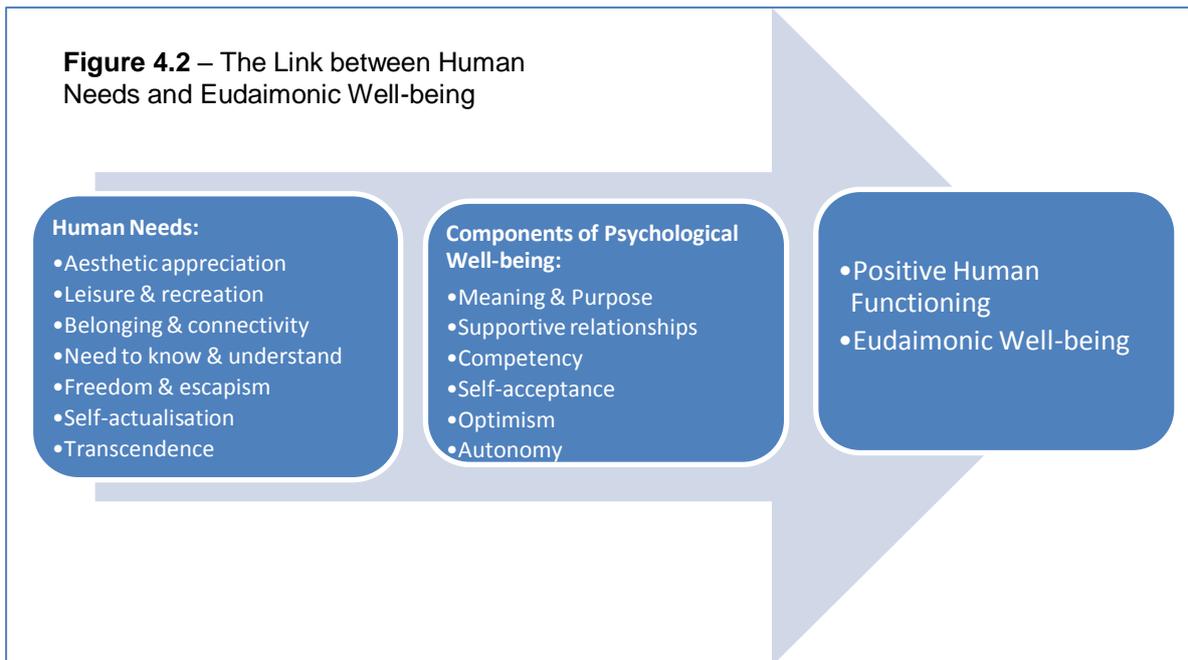
with regards to how particular landscapes serve to influence these dimensions of well-being. The ideas encompassed in psychological restoration in nature were thus explored to more fully grasp how experiences in natural environmental settings could serve to influence psychological well-being. One approach to understanding how natural settings can aid in the renewal of depleted psychological resources has been advanced by Kaplan (1995) who argued that directed attention can be restored through contact or observance of the natural environment. Directed attention, he argued is a key ingredient of psychological well-being and human functioning and thus environments which can restore this component are important to human well-being. He argued that the key facets of such restorative environments are; fascination (nature is well-endowed with fascinating objects), being away (distance from some routine aspects of one's life), extent (an environment must be of sufficient scope to engage the mind) and compatibility (the setting must fit what one is trying to do) (Kaplan, 1995, p173). From this, Hartig et al. (1997) developed the perceived restorativeness scale as a measure of the restorative quality in environments and some items were borrowed from this scale for use in the present study.

In order to test the extent to which the case study location influences restoration and psychological well-being, these constructs were overlaid with typologies of human needs as there appear to be clear overlaps in the set of ingredients which make up positive functioning. Finnis (1997) for example, investigated this idea by analysing whether human motivations can be boiled down to a discrete set of indicators. From this, he developed a non-hierarchical list of 'reasons for actions' from which people seek 'wholeness' or 'wellbeing'. These included: health and safety considerations, knowledge and aesthetic experience, work and play, friendship, self-integration, self-expression and religion (or attempts to gain or improve harmony with some more-than-human source of meaning) (Alkire, 2002, p186). The idea of an underlying set of human needs which can be satisfied in various ways is an intriguing one as it suggests that environments can be manipulated with positive or negative results on human functioning. This is particularly useful in tourism management where considerations include enhancing, conserving and showcasing not only the bio-physical components of the landscape but also the intangible associations and meanings that people ascribe to the landscape. Tourism settings can then be

managed to enhance the intangible psychological benefits that people derive from certain landscapes.

The various attempts through the literature to develop similar lists of human needs have clear overlaps with those given above (Maslow, 1943; Doyal and Gough, 1991; Max-Neef, 1992; Ryff and Keyes, 1995; Costanza et al., 2007) and whilst some are ordered hierarchically, others are not. Max-Neef for example, intended for his list to be exhaustive and to indicate all dimensions of human need that are universal. He stated that that 'fundamental human needs are finite, few and classifiable' (Max-Neef, 1992, p199). He categorised needs into the following; subsistence, protection, affection, understanding, participation, leisure, creation, identity and freedom. Maslow on the other hand, arranged his typology of human needs as a hierarchy, asserting that 'basic' needs or 'physiological' needs must be satisfied first before 'higher needs' can be satisfied (Maslow, 1943, p6). Maslow states however, that not all needs are required to be completely satisfied in order for a person to attempt to satisfy the next order need.

In order to test the extent to which tourist engagement and interactions with the Jurassic Coast satisfied human needs and resulted in psychological and eudaimonic well-being, a seven need typology was created by amalgamating those previously developed to take account of overlaps. The resulting seven needs appear to be a good representation of the spectrum of needs which require satisfaction in order for psychological well-being to result. Figure 4.2 outlines how this relationship is conceptualised for the purposes of this study.



It is hypothesised that the satisfaction of human needs leads to psychological well-being and thus to eudaimonic well-being or positive and optimal functioning and flourishing. To test the extent to which interactions with the Jurassic Coast served to satisfy the human needs of visitors, a scale was created, using the existing literature to develop and check items and category definitions. This approach is potentially a powerful analytic tool in that it provides the opportunity to measure how different human needs are satisfied by being in different landscapes which could be used to model how satisfaction might alter in light of future changes in that landscape. The human needs categories identified will be discussed in greater detail in the following section.

4.5 Developing the Human Needs Scale

For each human need identified as important to the components of psychological well-being, a set of indicators was generated and a psychometric scale was developed which was built into a questionnaire. The scales were intended to measure the extent to which each human need was satisfied in the case study location. The final survey consisted of thirty one items grouped under the seven human needs categories, with instructions given to respondents:

I am interested in your experience of this place and how being here makes you think and feel. Please think about how you feel right now and then indicate the extent to which you agree or disagree with each of the following statements. Please answer intuitively without thinking too deeply about each answer.

Items were all phrased in a positive direction and respondents were required to indicate on a 5-point likert scale the extent to which they agreed with each statement ranging from 1 'strongly agree' to 5 'strongly disagree'. A neutral position was offered of 'neither agree nor disagree'. The number of items under each human need category varied from 3 to 6 and the means of responses in each category were calculated which allowed for comparisons between the level of satisfaction of different human needs categories.

One advantage of this methodology is that it is a quick response scale that is not time consuming for respondents who are of course enjoying their leisure time. It was also considered that lengthier questions which were more cognitively demanding, such as those identified in previous studies, could potentially limit the number of respondents who would be willing to take part. As an example of this, Herzog et al. (2003), in their exploration of *attention restoration theory* (Kaplan and Kaplan, 1989) asked respondents questions such as:

Sometimes even a small setting can feel like a whole world of its own. It can seem like there is enough room to get completely involved in the setting and not even think about anything else. How much does this setting seem like such a 'whole other world'? (Herzog et al., 2003 p162).

As a result of researching previous scales, the items used here were deliberately kept very short and they were designed to elicit quick responses as respondents could simply tick the box corresponding to the extent to which they agreed with the statement.

The literatures associated with human needs, restoration and well-being were examined to fully understand the construct of each human need identified as important to psychological well-being. From this understanding, the items which could be used as indicators of the human needs were developed into the

questionnaire (appendix 1). The theoretical basis for using each of these human needs categories is detailed below and the items used to measure each category is given in table 4.1.

Belonging and Connectivity

This category aims to capture a sense of place and identity in the environment and a connection with nature. This idea has been explored through the literature in terms of a fundamental connectivity that humans have with nature. Dutcher et al. (2007, p489) for example, concluded that 'connectivity is not only about seeing the environment as part of ourselves but also about seeing ourselves as part of the environment'. Connectivity with nature has also been described by Kellert & Wilson (1993) as a fundamental human need, and a 'deep dependence' and 'human craving' for nature interactions (p20). This human need is important as Mayer et al. (2008) purports that connectedness to nature leads to increases in positive emotions and the ability to reflect on life's problems.

Need to Know and Understand

This category is concerned with an inquisitiveness about the environment and a desire to know and understand what is around us. Maslow refers to this need as 'acquiring knowledge and systematizing the universe' (1943, p11). He goes onto expand this category as including elements of curiosity, exploration, learning, philosophising and experimenting. This interpretation reveals the wide range of ways in which people seek to understand the world around them and also peoples' motivations for visiting an area which may be bound up with learning and understanding nature. Similarly, Max-Neef used this category of understanding in his human needs typology, using words such as receptiveness, curiosity, education and analysis (Max-Neef, 1992, p206).

Aesthetic Appreciation

This category refers to a human appreciation of nature which appears to be an inbuilt human response. This has been explored through ideas of 'fascinations' (Kaplan, 1995) that nature holds for people such as afforded by patterns in clouds, leaves, snowflakes and sunsets. Kaplan argued that these hold the attention effortlessly which contributes to the restorativeness of certain environments. Kellert & Wilson

similarly argue that 'nature exerts a powerful aesthetic impact on most people, often accompanied by a sense of awe at the extraordinary physical appeal and beauty of the natural world' (1993, p49). Aesthetic appreciation was also included in Maslow's pyramid of human needs and it was also referred to as a cultural ecosystem service or 'non material benefit' of nature by the Millennium Ecosystem Assessment (MEA, 2005).

Leisure and Recreation

This category refers to the need to enjoy time in diametrical opposition to 'work' time. It is about engaging in activities which one enjoys and is about a sense of relaxation. Max-Neef, identified 'leisure' as a fundamental human need for which he used adjectives such as 'play', 'day-dream', 'relax', 'have fun' and 'free time'. Natural England (2009) also used 'leisure and activities' in their examination of cultural services. The literature concerning the influence of tourism on psychological well-being and quality of life is important here since the significant positive effects of leisure and recreation render it an important human need to be satisfied. These positive effects include; social interaction, personal development, individual identity formation, gaining of skills, improved self esteem, competence and confidence (Dolnicar et al., 2012; Moscardo, 2009). Importantly, Ulrich & Addoms also state that 'recreational experiences make possible the attainment of a number of goal objectives and need satisfactions' (1981, p45). The links between this human need category and eudaimonic well-being are evident throughout this literature.

Freedom & Escapism

This category refers to the need to escape from constraints whether they are physical or psychological. Max-Neef (1992) identified 'freedom' as a fundamental human need and he described this as 'temporal and spatial plasticity' (p207) highlighting the need to get away from constraints even though they may need to be returned to at some point. This escape may even be a means to cope with constraints.

This is closely linked to Kaplan's (1995) idea of 'being away' as a component of a restorative environment. He states that in order for directed attention to be restored, being away is necessary but that a change of physical location 'whilst potentially

helpful, is not essential. A change in the direction of one's gaze or even an old environment viewed in a new way can provide the necessary conceptual shift' (p173).

Self-Actualisation

Maslow (1970) argued that self-actualisation is a concept closely related to eudaimonia. He defined the self-actualising person as someone who is fully functioning and who lives an enriching life. Shostrom (1964) also asserted that 'the self-actualised person appears to live in the here and now more fully and is able to tie the past and the future to the present in meaningful continuity'. He goes on to list adjectives which could be used to describe the self-actualised person which include energetic, motivated, involved, optimistic and confident (p212). The idea of positive relations is also included in this category and this is reflected in the work of Ryff & Keyes who discussed the 'possession of quality relations' as one component of being able to live and flourish in the present, essential to psychological wellbeing (1995). Similarly, Diener (2009) used 'rewarding relationships' in his assessment of psychological wellbeing which later became the flourishing scale.

Transcendence

Maslow placed transcendence at the pinnacle of his pyramid of human needs and the concept has captured the imaginations of a number of researchers since. A range of positive human experiences have been characterised as transcendent including mysticism (Hood, 1975) and optimal experiences (Delle-Fave and Massimini, 2005). Interest in such experiences may be motivated by the belief that these experiences are psychologically beneficial.

Attempts to define transcendence include for some, aspects of religiosity, although more frequently, ideas of spirituality and a connection with a higher power and an understanding of the meaning of life and the human place within it are associated with this human need. Koltko-Rivera (2006) for example, says of transcendence, 'individuals seek a benefit beyond the purely personal and seek communion with the transcendent, perhaps through mystical or transpersonal experiences, they come to identify with something other than the purely personal self' (p306). It is also

described by Ventegodt et al. (2003, p1055) as 'being present in such a way that we forget ourselves and melt away into the world that surrounds us'.

Williams & Harvey (2001, p249) in their investigation of transcendent experiences in forests also describe the phenomenon as 'a moment of extreme happiness, a feeling of light-headedness and freedom, a sense of harmony with the whole world, moments which are totally absorbing and which feel important'. These definitions also resonate with the notions of 'peak' (Maslow 1968) and 'flow' (Csikszentmihalyi and Csikszentmihalyi, 1988) experiences. The central elements of peak-flow experiences include the following seven aspects: 'a centring of attention; transitoriness; richer perception; forgetting oneself and becoming totally involved in the activity at hand; disorientation in time and space; enjoyment; and momentary loss of anxiety and constraint' (Mannell and Iso-Ahola, 1987, p325).

It should be noted that these categories of human needs are not fixed and there is considerable overlap conceptually between the categories. The items used to measure each category similarly are not mutually exclusive and could fit into a number of categories. For example, in 'belonging and connectivity', the idea of a deep connectivity with nature could equally be thought of as a spiritual or transcendent experience. So, whilst these categories provide a useful conceptual framework for examining the ways in which the natural environment impacts upon human wellbeing, they must be thought of as dynamic and fluid.

Table 4.1: Items for Measuring Human Needs

Human Need	Items used to measure category
Belonging & Connectivity	<ul style="list-style-type: none"> • I feel a sense of attachment to this place • Being here gives me a sense of belonging • I feel a sense of connection with nature • I feel like I am part of the life of this place
Need to know & Understand	<ul style="list-style-type: none"> • Appreciating the history/culture of this place is important to me • My attention is drawn to many interesting things here • Being here gives me a sense of understanding nature • Being here enables me to really appreciate the geological importance of this place
Aesthetic Appreciation	<ul style="list-style-type: none"> • Being here gives me time to appreciate the wonder of nature • I feel a sense of being uplifted emotionally by being here • Being here makes me happy • I find this place fascinating
Leisure & Recreation	<ul style="list-style-type: none"> • I feel there is enough space here to relax and enjoy the landscape • I am able to participate in activities here which I enjoy • Coming here is a great way to spend my leisure time • I don't find this place chaotic
Freedom & Escapism	<ul style="list-style-type: none"> • I feel I have the freedom here to do what makes me happy • There are all the facilities here that I need to enjoy my visit • Being here makes me feel like I am away from my day to day worries
Self-Actualisation	<ul style="list-style-type: none"> • I feel a sense of accomplishment from walking or undertaking other activities in this area • Being here gives me time and space to reflect on my life • I feel inspired by being here • I feel a sense of vigour or vitality from being here • Being here makes me feel enthusiastic and full of energy • I feel like I am spending some quality time here with friends/family
Transcendence	<ul style="list-style-type: none"> • Being here enables me to experience a sense of inner peace and tranquillity • Being here makes me feel good about myself • Being here helps me to think about my life • Being here helps me to restore a sense of balance in my life • I feel very lucky to have experienced this place • I feel calm and relaxed in this place

4.5.1 Internal Consistency of Scales

Prior to carrying out the questionnaire, the items measuring each human need category were analysed to ensure that each scale was measuring the same underlying construct. The internal consistency of a scale refers to 'the degree to which the items that make up the scale 'hang together' (Pallant 2010, p97). Each scale making up a human need category was therefore, checked for internal consistency using the Cronbach Alpha Coefficient. This is one of the most commonly used indicators of internal constancy (Pallant, 2010). Ideally, the Cronbach Alpha Coefficient should be above 0.7 (Devellis 2003, cited by Pallant, 2010, p97). This analysis revealed that all scales had good internal consistency with Cronbach alpha scores of between 0.717 and 0.902 as per table 1. The lowest alpha value was found in the category 'Leisure and Recreation' and the item 'I don't find this place chaotic' was the item influencing this lower score of 0.668. The effect of removing this item from this scale was explored and the item was then removed from analysis to give a higher internal consistency for this category (0.730).

Table 4.2 – Internal Consistency of Human Need Scales

Human Needs Category	Cronbach Alpha Coefficient
Belonging & Connectivity	0.836
Need to know & Understand	0.802
Aesthetic Needs	0.834
Leisure & Recreation	0.730 (with item removed)
Freedom & Escapism	0.717
Self-actualisation	0.840
Transcendence	0.902

4.6 Influences on Eudaimonic Well-being at the Jurassic Coast

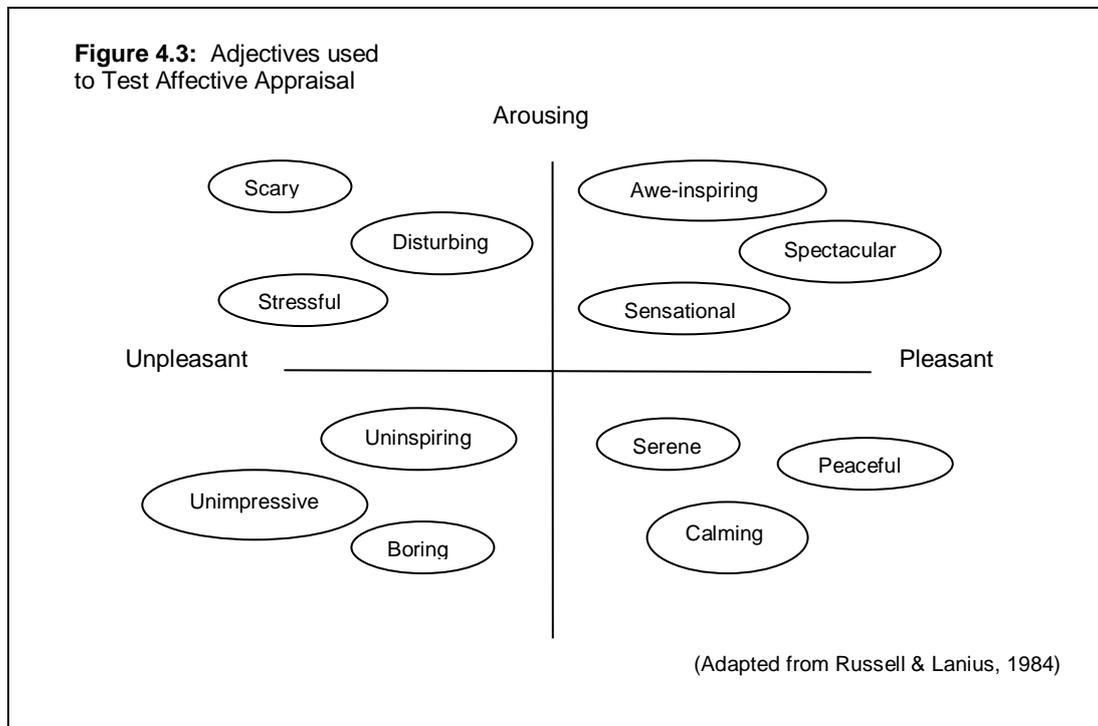
Chapter 3 presented a conceptual framework for understanding the relationship between tourism, landscape and eudaimonic well-being. This suggested that the relationship was dynamic and that it is shaped by a variety of factors. Overall, it was hypothesised that meaning and significance in the landscape is clustered around the physical landscape itself, the activities people engage in, and the meanings and

interpretations that people ascribe to the landscape. In order to test this relationship and to explore any correlations between satisfaction levels of human needs at the Jurassic Coast and other variables, additional questions were included in the questionnaire such as what activities people were undertaking. This was explored using a tick-box choice list and respondents were asked to indicate all activities they were participating in. The choices given were; walking, climbing, swimming, bird/wildlife watching, sunbathing, picnicking, eating/drinking in local pub/restaurant, fossil collecting, dog walking, fishing and others (respondents were also asked to specify which other activities they were undertaking).

The forms and attributes in the landscape were not directly questioned in the survey as respondents were asked to think about their answers with reference to the landscape as a whole. Aspects of the landscape which people particularly liked or disliked were however, explored more fully through the telephone and the in-depth interviews.

To understand the interpretations and perceptions of the landscape, section three of the survey focused on the 'affective appraisal' as an evaluation of how the landscape made people feel to be there. This idea is based on the model by Russell and Lanius (1984) which looked at the ability of a place to alter emotions and feelings. They suggested that 'a person's affective appraisal of a place plays a key role in the person's choice of where to go and in guiding his or her behaviour once in a place' (p132). They therefore, assessed the affective appraisal of different settings by using adjectives to situate a setting along a continuum of arousing-not arousing and pleasant-not pleasant. In this model, forty 'categorical affective descriptors' (Russell and Lanius, 1984, p121) are used. In the interest of keeping to a short tick-box questionnaire format, twelve of these were chosen to be included, which seemed to effectively represent the spectrum of affective descriptors. Thus, six positive adjectives were chosen and six negative, giving three as indicators for each of the four quadrants (arousing-pleasant; not-arousing-pleasant; arousing-unpleasant; not-arousing-unpleasant) as per figure 4.3. Respondents were asked to indicate the extent to which they agreed with the given adjectives to describe the setting using the same 5-point likert scale as for the rest of the questionnaire. They were also asked to note down any other words which they would use to describe the

landscape. Frequency counts were run through SPSS to determine the strength of agreement for each adjective.



To determine if any other factors had an influence on the satisfaction levels of individuals, further information was collected on socio-demographics. This included age, gender, postcode (to determine distance travelled), occupation and ethnic grouping. The distance that respondents had travelled to reach the case study site was determined by asking for the first part of the post code of their normal residence. A distance calculator was used to calculate the distance travelled (www.postcode-info.co.uk). The first half of each respondent's post code was entered and the distance was calculated to each case study site. For Durdle Door, the post code used was BH20 and for Charmouth DT6. This site calculates the distance "as the crow flies", i.e. the distance between the two postcodes in a straight line, not driving distance and the metric used is miles. Once calculated, respondents were categorised into 1 of 7 categories from 1 (0-10 miles) to 7 (201+ miles). Driving distance was not used in this instance as route planners can differ in their estimates of driving time and asking respondents to estimate their driving time to reach the

case study site could open the way for vagaries such as route preference and traffic conditions to be included. An “as the crow flies” measurement was thus judged to be more systematic and enabling of fair comparisons to be made between distances travelled.

The questionnaire also asked whether respondents had visited the area previously and if so, how often they visit and also when they were last at the case study site. From these scores, a ‘total familiarity’ score was calculated which is used to determine whether this variable has any influence on human need satisfaction. Respondents were categorised into ‘no familiarity’, those who had never visited the area before, ‘low familiarity’ for those who had visited at least once previously, ‘medium familiarity’ for those who had visited several times and ‘high familiarity’ for those who visited often.

Finally, the questionnaire asked about other people the respondents were visiting the case study with at the time of being questioned. This was designed to determine how many people were travelling in an organised group, alone or with family or friends as this may also have a bearing on how human needs are satisfied. In a study about the influence of social context on restoration for example, Staats & Hartig (2004) concluded that ‘overall, company enables recovery and reflection as it increases the experience of safety in the natural environment. However, where safety is assured, being alone is considered more beneficial to restoration than being in company’ (p207). These are interesting points to consider in the context of this study.

During the course of developing the questionnaire, certain judgements were required about what to include and importantly, what not to include. Questions about duration of stay at the case study sites for example, were not included and the reason for this was two-fold. Firstly, methodologically, this would have proved difficult for the respondent to answer since the questionnaire was carried out along the entire case study sites as opposed to at the main point of entry (i.e. the car parks at both sites). This means that respondents had only vague ideas about how long they were going to stay at the site and asking this question would not have provided any meaningful data. Secondly, it is intellectually questionable whether duration at a site provides a

useful understanding of benefits gained. The 'dose' metaphor has been used to describe the effects of certain time periods spent in nature (Barton and Pretty, 2010) but this may risk trivialising the deep effects of nature if we start thinking about them in terms of 'exposure time' required for people to feel the benefits. This study was about understanding from a broad perspective, people's experiences and perceptions of the landscape, irrespective of time spent there.

Another important omission is the distinction between tourists and residents at the case study sites. Whilst data on residence (post code) was gathered and some assessments can therefore, be made between respondents who could be considered 'local' and those who had travelled from further afield to reach the site, the intention to understand views from the broad perspective of 'visitors' to the sites, meant that this question was un-necessary. The question of disability also was not included as no theoretical evidence was found to suggest that human needs would be satisfied in any way differently for disabled visitors as able-bodied visitors. However, given the physical constraints apparent at Durdle Door for example (steep steps leading to the beach) and the restricted opportunities for accessing the landscape, disability is an issue which deserves future research attention.

The following sections will detail the qualitative research methods used to provide a richer picture of how people interact with and experience the Jurassic Coast.

4.7 Qualitative Research- Stories Behind the Numbers

This research made use of a number of qualitative techniques to gain insights into how visitors interact with and perceive the Jurassic Coast and how being there made them think and feel about their lives. Telephone interviews were conducted with visitors who had indicated via the questionnaire that they would like to take part. Interviewing people about their experiences at the Jurassic Coast provides rich insights into how people perceive the landscape and what in the landscape is significant and valuable to them and why. The insights into the sensory and emotional responses to the landscape are an important element in this picture which was not captured in their entirety through the questionnaire. As Bijoux and Myers (2006) note 'the emphasis when employing qualitative methodologies is to

understand lived experience and to reflect on and interpret the understandings and shared meanings of people's everyday social worlds and realities' (p47). Using semi-structured questions enabled the researcher to focus on specific aspects of the experience whilst allowing the respondent a certain free reign to explore different aspects of the experience that they wished to. One question asked during the telephone interviews for example is 'what stands out most in your mind from this visit?' (Interview schedule is given at appendix 2). Interviewing also offers the opportunity for research participants to expand upon not only how they perceive the landscape but the reasons behind those perceptions which are not fully captured in quantitative analyses.

Diverse methods exist to analyse qualitative data and this is largely determined by researcher preference. One method is by using software such as NVivo which is designed to enable the researcher to code interviews and to begin to identify and develop relationships in the data. Some argue that using software for data analysis renders the researcher too distant from the data, however, as (Bazeley, 2007) argues, 'whilst researchers do need closeness and familiarity with data in order to extract meaning and understand threads running through the data, they also need a sense of distance from it for abstraction and synthesis' (p20). NVivo does allow for both perspectives and it therefore, is an effective method for this kind of data analysis.

Analysing the interviews entails subjectivity and reflexivity is required in interpreting what the respondent has said. This is important as interpretation may be at least partly shaped by the interviewer's own interpretive lens. Care must also be taken to be mindful of the power relations which may be present in the interviewer/interviewee situation. Consideration is thus given here as to whether the types of questions asked actually frame in some way the responses given by people. For example, questions such as 'how did it make you *feel* to be in this place?' clearly intonate that an emotional response is required and forces the interviewee to consider his experience from this point of view which may or may not have originally been apparent to him. The extent to which narratives are constructed rather than revealed, by either the interviewer, the interviewee or the culmination of the relation between both is therefore open to interpretation but should be reflected upon during

analysis. Being open to different ways of interpreting data and remaining reflexive throughout the research process is therefore, essential in maintaining a balance between situating data within research frameworks and representing the views of participants in a way that remains faithful to their original intention.

Solicited Photographs

The twelve participants who were recruited to take part in this research prior to their visit to the Jurassic Coast were asked, in addition to completing the questionnaire and taking part in an extended face-to-face interview, to take photographs of the landscape. The process of asking participants to take photographs of what they like, dislike or find meaningful in the landscape serves the purpose of both giving focus to their thoughts on the landscape and presenting them with a tangible task in which they are forced to think about the landscape in a different way to perhaps how they might otherwise have thought about it. Often, in daily life, images bombard the senses and we make choices (conscious and unconscious) about what to concentrate on. In this way, some images will take centre stage in our focus and appreciation whilst others might simply wash over us. Using this methodology, people are forced to take notice of those images and their reactions to them which might otherwise have passed them by. Participants taking part in the in-depth part of this work were given instructions are below (also at appendix 5):

I am interested in what you notice about the Jurassic Coast, what is meaningful to you and how you feel when you are in this landscape. Please take photographs of anything in the landscape that interests you and which you find meaningful. This could be a single thing like a tree or part of the whole landscape or a whole view.

In particular, you could look for:

- *Things which you find attractive*
- *Things which you find unattractive*
- *Things which inspire you*
- *Things which elicit an emotional response from you (positive or negative)*
- *Things which are meaningful or valuable for you*
- *Things which you find distinctive of the Jurassic Coast*
- *Things which give you a sense of history or culture*

Each participant was given a 27 exposure single-use camera and asked to take as many photos as they wished. The intention of the researcher to keep up to ten of the photographs and return the rest to the participant was made clear. The photographs kept by the researcher were those most meaningful to the participant or those which

most represented the visit and how the participant felt during the visit. These were decided on by the participant. The photographs were scanned and kept as digital images, with the permission given by the photographer for the images to be used for the purpose of this research.

One of the first to argue for the use of photographs alongside interviews was John Collier who claimed that 'photographs are precise records of material reality' (cited by Rose, 2007, p238). Material reality however, is arguably subjective and one person's reality may not reflect another's. This leaves room for the interpretation of images which also reveals much about the originator of the image as well as the specific context in geography, time and culture in which the image is produced. Furthermore, the process of interpretation of the image reveals a great deal about its audience and care must be taken by the researcher to be open to the process of reflective interpretation, being mindful not simply to take from the photographs shreds of evidence in support of the research question at hand. As Bartram (2010, p133) asserts 'it is important to bear in mind that interpreting visual imagery carries with it the weight of extensive philosophical debate'. This includes debate about the subject of the image, the originator of that image and what they intended in capturing the image and of course how the image is interpreted.

Rose (2007) states that photographs are generally used in research methodologies in two ways, firstly to support and encourage interview talk where 'the photos and the talk are interpreted by the researcher' (p239). The second use, she refers to as 'supplemental' in which the 'specific qualities of the photos are allowed to display themselves rather more on their own terms'. This study allowed the research participants the opportunity to use their own photographs as a way of accessing memories about their visit to the coast and to reflect upon the reasons why they took the photo. Collier (1967, p49) commented that 'It is only through interviewing that the information carried by a photo can be accessed by the researcher' (cited by Rose, 2007, p240). It was therefore, left to the participants in this study to explain their own photographs and they were used as a basis for discussion.

Photographs are arguably produced with a particular purpose and audience in mind. In the case of this research, participants were given clear guidelines as to what to

photograph, although these instructions were broad enough to allow for individual expression. However, the point made by Crang (1997) that each photographer frames a place in a particular way to meet both their own needs and those of their intended audiences. He discusses this point with reference to holiday snaps which he says are used to make sense of and then, often with a particular audience in mind, communicate particular versions of 'truths' about places (cited by Waitt, 2010, p228). This gives rise to questions about whether the same photographs would have been taken by the same respondents in different circumstances, such as if they were taken as holiday memories. Waitt (2010) also comments on this by saying that 'making vacation snapshots is not value free but reflects particular ideologies and sets of ideas contained in tourist brochures and guidebooks' (p228). The use of solicited photographs arguably therefore, sets up an artificial situation whereby participants are 'forced' to produce images as per the project brief and a consideration must be given to the extent to which these images are 'authentic' representations of what the participant actually valued and found meaningful in the landscape or whether they are artificially constructed to appease the researcher and to fulfil the project instructions.

In the case of this research, the photographs proved a useful and insightful tool which allowed participants to access memories of their visit and to unlock the reasons behind the images and why they were valuable or meaningful to them. They were particularly useful where there was a gap between the participant's visit and their interview. The longest period of time between the two was three weeks and the photographs in this instance, proved invaluable in unlocking memories and feelings of being in the landscape. Simply by talking through the images and describing what they were about, participants were often reminded of additional details which lead on to explore other related themes. The role of the researcher in such situations was to simply listen, record and prompt for clarification where necessary. It is interesting to consider whether the camera technology limited the photographs which were taken as the single-use cameras did not allow for additional functionality such as zooming. Whilst it is conceivable that more focus could have been given to subject areas (such as the rubbish on the pavement next to the beach taken by participant no.4) with such functionality, it did not detract from

communicating the point of the photograph and the associated feelings of the photographer.

Landscape Diaries

These same twelve participants were also asked to keep 'landscape diaries'. These were intended to aid understanding about the nature of people's experiences in the coastal landscape and the particular social and temporal contexts within which these experiences occur without being 'beholden to the capriciousness of memory' (Latham, 2010, p191). Participants were asked to write, or otherwise be as creative as they wished, in the expression of their experiences and their thoughts and feelings during their experience at the coast. This method was also used in Natural England's Commissioned report NECR024 (2009) which aimed to capture the cultural services and experiential qualities of landscapes which yielded some interesting results and provided a useful method to replicate in this research. The instructions given to participants were as follows (also at appendix 6):

Please use the space below and overleaf to keep a record of a visit to the Jurassic Coast. Please complete this either on-site or shortly afterwards so that you can capture all your thoughts and feelings. While you are there, look around you and keep a record of anything special for example:

- *Aspects of the landscape you particularly like*
- *How you feel during your visit*
- *Anything you don't like*

Please feel free to be creative in this diary entry by using poetry, drawings, lists of adjectives or any other way you would like to express yourself.

Whilst this method can yield some interesting insights which benefit from the immediacy of the recollections of the experience, it could also be argued that by asking people to record their thoughts and feelings in this way may again set up an artificial situation. Respondents may feel the need to construct responses as much as record them, in order to fulfil the project brief. On the other hand, this method could in fact elicit far more from people than even they would have thought possible by asking them to concentrate on aspects of their visit that may otherwise have been ignored, such as what they liked or disliked and what was meaningful to them. As Latham (2010) notes for example, 'in a manner that few other research techniques

can match, diaries can provide respondents with a chance to reflect upon their lives in a systematic and sustained way' (p191). The benefit therefore, is that respondents are given what may be a unique opportunity to reflect upon their experiences, the meaning of those experiences and their feelings about them through the use of a landscape diary.

Whilst all participants did write something about their experiences and feelings in the landscape, most wrote only a few sentences. One drew a picture of what was meaningful to him (participant no.11) which emphasised the rocks and fossils at Lyme Regis. Another however, wrote two pages of prose (participant no. 12) and was clearly articulate and well versed in capturing her thoughts in writing. This technique then can produce some insightful results but its main value, in this research, was in providing the opportunity for participants to focus on the landscape and to take notice of their thoughts and feelings, even if they were unable to adequately capture these in writing. Talking through the diaries at interview also provided a useful prompt for recollections of thoughts and feelings. Future research could refine this methodology to include sentences which the participant could complete; this would at least provide some prompts to guide the participant and encourage further elaboration of experiences in the landscape.

4.8 Visitor Sampling

The choice of sampling method is an important consideration in social research because 'who responds can have a significant impact on the results' (Clifford et al., 2010 p54). In this case, it was decided to take a wide and inclusive sampling approach for the questionnaire and to include the whole spectrum of the visitor population to the two case study sites. In this way, each visitor had an equal chance of being asked to take part in the questionnaire without prejudice to socio-economic status, length of stay or distance travelled. Furthermore, it was decided that this was a far fairer method of including the responses of as wide a section of the visitor population as possible rather than targeting respondents by any distinction such as resident and tourist which would have involved subjective considerations as to who is a tourist and who is a resident. Members of the same family and/or the same group were equally invited to take part as the survey was designed to elicit very personal responses from each individual which would unlikely be the same as other

members of the family or group. Whilst no lower age limit was set, children were not invited to take part in the research, though young people in family groups were included if they were deemed to be at an appropriate age to understand and to complete the questionnaire and if their parents/guardians were present and in agreement. This occurred in 23 cases throughout the research, though no participants under the age of 20 took part in either the telephone interviews or the in-depth work.

Telephone Interview Sample

During the questionnaire phases, respondents were given the opportunity to provide their contact details if they wished to be included in a follow-up telephone interview. These interviews lasted approximately 20 minutes and an honorarium voucher payment was offered. Approximately 10-15 participants were needed from each survey phase for this part of the research in order that a sufficiently large data set was generated (between 30-45 interviews). In each survey phase, approximately 30 respondents offered to take part in a follow up telephone interview and participants were firstly selected to represent a broad sample of ages and genders. In cases where respondents did not reply to initial contact or no longer wished to take part, another respondent was chosen in place. For all phases, a good mix of ages and genders were included in the interviews. In total, 39 interviews were conducted, 15 of which were male participants and 24 were female.

In-Depth Research Participants Sample

This phase of the research sought to engage people prior to their visit to the Jurassic coast so that they could be given instructions regarding their required participation. Participants for this phase of research were recruited mainly via press releases which went out in local papers calling for people to take part in the research if they intended to visit the Dorset coast at some point during 2011. An honorarium voucher was offered to compensate for people's time.

Participants in this group were also self-selected on the basis that they had some connection to Dorset or else were intending to visit the Jurassic Coast during the data collection phase of this project and had some interest in taking part in the

research and something to say about their experiences on the Jurassic Coast. Consideration must be given to whether this distorts the results of this research to any degree given that those who took part almost unanimously had a positive outlook on the landscape and/or an emotional attachment to it. This sample arguably brings therefore, a note of bias into the research and it might have been interesting, if it were possible, to interview those who chose not to take part to determine whether their abstinence was to do with a lack of emotional connection to the landscape or some other influencing factors.

4.9 Case Study Sites

Using case studies in research is a way to explore in-depth nuances of a phenomenon. This method is therefore, well-suited to this research which is interested in the relationship between the Jurassic Coast and the eudaimonic well-being of visitors to it. The Jurassic Coast (officially the Dorset and East Devon Coast World Heritage Site) is an interesting site to explore in this context since it has a certain cultural value imbued upon it by virtue of its designation as a World Heritage Site. This was granted in 2001, owing to its unique insight into the Earth's geology. The Jurassic coast covers 95 miles from East Devon to Dorset, extending from Exmouth in East Devon to Studland Bay in Dorset. The cliffs and foreshore along this stretch contain an almost complete record through the Triassic, Jurassic and Cretaceous periods of geological time, recording 185 million years of the Earth's history⁶. As a result of this, visitors arguably arrive with a pre-determined sense of value and meaning of the landscape (San Martin and del Bosque, 2008) and it is interesting to explore the wider meanings and significance associated with this landscape which contribute to a sense of human well-being. Such values may not be connected in any way with the heritage value of the site but may be more deeply engrained within the individual and the ways in which humans connect with nature. This theme will be returned to in chapter seven which will present a deeper assessment of the ways in which understandings of how the Jurassic Coast is valued are upheld or challenged by the findings of this study.

⁶ Dorset and East Devon Coast WHS Management Plan 2009-2014 & <http://jurassiccoast.org/>

Two case study sites were chosen along this stretch of coast which enabled a sufficient amount of data to be collected since they are both popular tourist sites. It also enabled data to be collected in a more systematic way, rather than at random spots along the coast, and allowed for comparisons to be made between sites and the opportunity to delve into the differences in landscape forms and attributes to explain differences where they occur. The two case study sites chosen were Charmouth Beach and Durdle Door. The reason for these choices is largely the result of observations that each is located at a sufficient distance from tourist facilities so that it can be reasonably deduced that the benefits and satisfaction that visitors felt were a result of the landscape rather than of attractions often found at other coastal tourist destinations. These sites are marked on the map in figure 4.4.

Figure 4.4: Map of the Jurassic Coast



(Map produced by University of Exeter CLES Drawing Office)

Charmouth Beach is a short walk from the West Dorset village of Charmouth and is renowned worldwide for its fossil beaches. Fossil hunting and connections with the heritage and geological value of the landscape is very much apparent at this site. Tours are organised for example to showcase the significance of the landscape, fossil hammers are available to hire to aid visitors in fossil hunting and a heritage centre on the beach provides explanations of the local geology and fossils most

likely to be found. The value of this destination then is very much laid bare in terms of its heritage and cultural significance.

Charmouth beach is accessed via a bridge and a flat path from the car park. The only other facilities in addition to the heritage centre are toilets and an ice cream van located close to the car park. These features may be important in terms of how the provision of facilities affects how people feel and perceive the landscape. Photograph 4.1 gives an impression of the scene at Charmouth beach.

Durdle Door on the other hand is accessed via a steep path from the car park. The lack of railings along this path makes for a difficult journey to the cliff edge for people with mobility problems. Furthermore, access to the beach is via very steep steps, again making the descent only really possible for the agile.

Durdle Door is best known for its iconic arch (photograph 4.2), which has been the subject of innumerable photographs and paintings and depicted in Scenes from the 1967 film of Thomas Hardy's novel 'Far From the Madding Crowd' and in 1997 parts of the film 'Wilde' directed by Brian Gilbert were also shot here. According to the World Heritage Coast (www.worldheritagecoast.net), more than 200.000 walkers use the footpath between Lulworth Cove and Durdle Door each year, making it the busiest stretch in the south west. This site also then arguably has a sense of shared cultural value and determining whether the geology or the aesthetics of the area is the main reason that visitors value this area or whether it holds some more rather personal meanings for visitors is interesting to explore.

Photograph 4.1 – Charmouth beach



Photograph 4.2 – Durdle Door



There are some limitations to choosing case study sites however, which should be noted. Most obviously, all respondents (at least in the questionnaire and telephone interview phases) were visiting the same sites. This could mean that the research may already be subtly influenced to a certain extent by the choice of the study sites which are both similar in character in that they are what can be described as 'natural' and not overly influenced by tourist developments as well as both being geologically significant. In addition, they both hold some notion of a shared cultural value of which visitors will likely be aware prior to visiting the site, which may be their motivation for visiting. It could therefore be argued that visitors to these areas may be of a similar mind-set and disposition and with similar intentions.

The in-depth participants on the other hand, were not limited to the two case study sites and the research captured their responses to different points along the Jurassic Coast. This group could nonetheless share similar values and motivations for visiting and this should be considered in analysis of responses. In any case, the two case study sites do provide an interesting context to explore how visitors find meaning and significance in the landscape which may or may not be tied up with the culturally accepted ideas of why these sites are significant. The in-depth participants provide an interesting group to compare with these case study sites and give an indication as to whether human needs are satisfied in similar ways at different locations along the coast.

4.10 Limitations of Methodology

The development of this methodology, based on exploring how human needs are satisfied through contact with the natural environment and how this influences eudaimonic wellbeing, is a complex and experimental one underpinned by nebulous concepts that are hard-to-define and measure. As Miles (1992, p286) notes: 'expressing things in money terms has one great advantage: the scale of measurement is a straightforward one, where we can add and subtract units without any concerns as to whether we are mixing up apples and oranges'. Subjective indicators on the other hand are more complex and in this case involve asking people how they feel in a particular place at a particular time.

The ways in which respondents answer these questions, rate items on the questionnaire, take photographs or write landscape diaries is also subject to the vagaries of the respondent and their mood, which of course fluctuate in time and with the particular conditions under which they respond. The weather for example may influence how people respond as well as the company they are with. If, for example, looking after children is a priority at the time of response, less attention may be given to the questions or task in hand than on another occasion. In addition, Miles (1992) also notes that 'people are less prepared to confess dissatisfaction about things that are 'close to home' (p288) which may include for example, stating a sense of being content and at peace because private expectations of being on holiday dictate internally that they should respond in this way.

Perhaps the most serious challenge in this research, given its aims, is in determining how feelings, perceptions and notions of well-being relate to the landscape itself. Human feelings and needs are inevitably bound up with myriad facets which are difficult to unravel and as Diener et al. (2009, p269) state 'we usually do not know whether the correlates we discover of well-being are causes of well-being, results of well-being or that they both result from some common third variable such as personality'. Steps taken in this research to try to ensure that what was being recorded was as much a result of the setting as possible include asking explicitly for people to consider their answers in light of their surroundings and to pin-point feelings to the current moment.

4.11 Ethics and Rigour in Research

Ensuing rigour in qualitative research analysis is a process of 'satisfying the conventional criteria of validity, reliability and objectivity' (Baxter and Eyles, 1997 p506). This study aims to satisfy these criteria through its explicit elaboration on the methods used and their purpose in the research process and by analysing and reporting findings in ways which both remain faithful to the original intentions of the research participants and also add to their explanatory power using the analytical tools and existing literature available.

In terms of adherence to ethical standards, this research gave high priority to all aspects of the research ethics framework developed by the Economic and Social

Research Council (ESRC) (www.esrc.ac.uk). The responsibility to uphold ethics in research cannot be overstated, not only in the context of this research project but also in the wider context of social research. It is vital to ensure that trust is maintained within research communities as well as with the general public so that they do not lose faith in researchers' ability to conduct ethical research which upholds standards of quality and integrity and produces results which are respected if not necessarily agreed with.

During the recruitment process for all stages of this research, participants were given an explanation as to the purpose and intentions of the research, the funding bodies involved, assurances of confidentiality for all participation and also contact details of the researcher if any further information about the study was required. The right of all participants to not take part was also respected. In cases of in-depth telephone and face to face interviews, which were recorded, each participant was informed that they were being recorded but that the recording would only be used by the researcher for the purposes of this study. The researcher gained agreement from each participant that they understood and consented to the recording of the interview and also that images and quotations could be reproduced for purposes relating to this study. Whilst young people were included in the questionnaire phase of the research, this only occurred where parents/guardians confirmed they were able to understand and respond to the questionnaire effectively and only where they were present.

In addition to adhering to the ethical standards given above, it has been proposed that collaborative research in which researchers do research 'with' participants as opposed to 'on' them, is also a strategy for ethical research (Rose, 2007, p251). Solicited photography whereby the research participant is able to guide the production of data, as used in this study can be seen as a collaborative research technique. Similarly the landscape diary is an opportunity for participants to put their thoughts, feelings and experiences into their own words, without the manipulation of the researcher's own interpretation. The use of such techniques thus lends the study a certain amount of credibility in terms of validity, objectivity and reliability.

Moreover, in order to maintain objectivity in the research, respondents were approached without prior knowledge of the involvement of Dorset County Council (DCC). This was explicitly agreed with partners at DCC as it was felt that a more objective and faithful representation of experiences and feelings in the landscape would be captured by avoiding any political discussions that may have otherwise emerged.

The following chapter will present an analysis of data collected and begin to unravel some the ways in which the case study landscape has significance and meaning for respondents and how human needs which lead to eudaimonic well-being are satisfied at the two case study areas.

Chapter 5: Data Analysis

The Satisfaction of Human Needs at the Jurassic Coast

5.1 Introduction

This research is concerned with understanding the ways in which visitor interactions with the Jurassic Coast can satisfy human needs and lead to eudaimonic well-being. The conceptual framework presented in chapter three hypothesised the relationship between the landscape, tourism and eudaimonic well-being as being a complex and dynamic one. It was explored in terms of three distinct but overlapping elements around which meaning and significance appear to cluster (the physical landscape, the activities undertaken in the landscape and the meanings and interpretations of it). Through the dynamic interplay of these elements, it is conceptualised that certain human needs may be satisfied which leads to psychological well-being and thus to eudaimonic well-being.

This chapter, together with chapter six answer the research objective relating to how a greater understanding can be achieved of the relationship between the landscape, human needs satisfaction and eudaimonic well-being (research question no.4). This relationship is inherently complex not least because of the subjectivity involved in asking questions of human needs and eudaimonic well-being. Chapter four however, presented an innovative methodology and a scale for revealing the extent to which human needs are satisfied. This scale was developed into a questionnaire which was carried out at the Jurassic Coast to ascertain how this landscape satisfied human needs. Qualitative methods were also employed to reveal a richer and more contextualised insight of how visits to and interactions with the Jurassic Coast served to satisfy human needs and how this resulted in psychological well-being benefits.

The analysis of these data is divided into two chapters to enable a more logical sequencing through the conceptual framework. Chapter five thus interrogates the data in terms of which human needs were satisfied at each case study site and some of the causes of this satisfaction. It also begins to look at the ways in which different respondents rated the satisfaction of human needs and whether, for example, any

differences can be detected between genders and age groups. Chapter six develops this line of enquiry and delves deeper into how the satisfaction of human needs manifests itself in this group of respondents into eudaimonic well-being. It uses statistical methods to reveal patterns and relationships in the data and analyses the qualitative data to understand what the satisfaction of human needs means to people in this sample. Throughout these chapters, both quantitative and qualitative data are analysed simultaneously to build up a holistic understanding of the data and of the relationship between the landscape, human needs and eudaimonic well-being.

Chapter five begins with an overview of participant characteristics followed by an exploration of the extent to which human needs were satisfied at each case study site. It then explores what the data reveals about the causes of this satisfaction and what this adds to the explanatory power of the conceptual model. The data are then analysed to investigate the differential experiences of visitors to the Jurassic Coast and to determine if differences in satisfaction levels can be explained by socio-demographic variables.

5.2 Overview of Participant Characteristics

The questionnaire was carried out at two case study sites along the Jurassic Coast and captured the responses of 550 visitors. An overview of the characteristics of this sample is given in table 5.1.

Table 5.1: Questionnaire Participant Characteristics

		Total	Durdle Door	Charmouth
Number of participants		550	284	266
Gender of respondent	Male	251	134	117
	Female	297	148	149
	Total	548	282	266
	Missing	2	2	0
Age of respondent	<=15	23	10	13
	16-24	36	22	14
	25-34	87	56	31
	35-44	135	65	70
	45-54	137	75	62
	55-64	79	41	38
	65+	47	11	36
	Total	544	280	264
	Missing	6	4	2
Distance travelled (miles)	0-10	19	5	14
	11-30	53	27	26
	31-60	81	46	35
	61-100	128	76	52
	101-150	170	71	99
	151-200	41	20	21
	201+	21	14	7
	Total	513	259	254
	Missing	37	25	12
Occupation	Professional	173	103	70
	Managerial	89	50	39
	Skilled non-manual	87	53	34
	Skilled manual	47	22	25
	Unskilled manual	4	1	3
	Student	47	23	24
	Retired	68	19	49
	Home maker/carers	24	6	18
	Not working	7	5	2
	Total	546	282	264
	Missing	4	2	2
Familiarity with Site	No familiarity	148	95	53
	Low familiarity	87	53	34
	Medium familiarity	244	114	130
	High familiarity	64	18	46
	Total	543	280	263
	Missing	7	4	3

Table 5.1 provides a snapshot of the sample. It shows that the majority of respondents at each site were aged between 35 and 54. Only 3% could be considered 'local' as they had travelled ten miles or less to reach the site, whilst 54% had travelled between 61 and 150 miles. In terms of profession, 31% considered themselves to be 'professional' whilst 18% were not working outside of the house (retired, home-maker/not working). The majority of respondents at both sites were classified into 'medium familiarity' with the site which meant that they had visited several times before, at least within the last five years.

When dealing with human samples, it is frequently the case that some questions will be left unanswered, either because of hastiness in responding or because of an unwillingness to answer certain questions. Table 5.1 shows clearly where this has occurred and missing values are recorded. Pallant (2010) demonstrates that there are several ways to deal with missing values in statistical analysis with SPSS (Statistical Package for the Social Sciences, version 18) although she advocates the use of 'exclude cases pairwise' as a preferred option. This option ensures that the case is excluded only if the data which is required for the specific test is missing; they will still be included in any analyses where the necessary data is given. This option was therefore, chosen in all subsequent analysis of data. The following section will detail how respondents answered questions relating to human needs satisfaction at each case study site.

5.3 Human Needs Satisfaction at the Case Study Sites

To explore the relationship between the case study locations and human needs satisfaction, respondents were asked to rate the extent to which they agreed with positively worded items under each of the human needs categories on a scale of 1 (strongly agree) to 5 (strongly disagree). In total, 550 surveys were completed, 284 in Durdle Door and 266 at Charmouth beach. The individual item responses were then analysed under each human need category in terms of item response frequencies, means and standard deviations (breakdown at appendix 7).

The raw scores of each item were summed for each case and a mean score calculated for each human need category in SPSS. This enabled descriptive

statistics to be collected for each human need category and an assessment to be made of the extent to which each human need was satisfied (as inferred from the strength of agreement with each statement) at the time of being in the case study site. The mean scores relate to the likert scale used, so a mean close to 1 implies a high satisfaction with this need. The descriptive statistics for each human need category across both case study sites are detailed in table 5.2 and are ranked in descending order of satisfaction level (according to the mean score).

Table 5.2 – Descriptive Statistics for each Human Need Category

Human Need	Mean	Standard Deviation	Mode
Aesthetic appreciation	1.75	0.61	1
Leisure & recreation	1.76	0.57	2
Need to know & understand	1.96	0.63	2
Freedom & escapism	1.97	0.63	2
Self-actualisation	1.99	0.59	2
Transcendence	2.09	0.66	2
Belonging & connectivity	2.41	0.73	2

The above table demonstrates a high level of satisfaction of each human need category expressed by respondents, with the category belonging and connectivity showing the lowest satisfaction (mean=2.41) which is still relatively high and only just edging towards a neutral position (choice 3 on the likert scale). This could be explained however, as this category is largely about place attachment and connections with the area which as a tourist destination, may not be the case for many respondents for whom it may have been their first visit to the area.

For purposes of comparisons between case study sites, tables 5.3 and 5.4 set out the same descriptive statistics for each site.

Table 5.3 – Human Needs Satisfaction at Charmouth

Human Need	Mean	Standard Deviation	Mode
Leisure & recreation	1.80	0.59	2
Aesthetic appreciation	1.87	0.59	2
Need to know & understand	1.94	0.60	2
Freedom & escapism	1.94	0.60	2
Self-actualisation	2.06	0.54	2
Transcendence	2.17	0.65	2
Belonging & connectivity	2.43	0.73	2

Table 5.4 – Human Needs Satisfaction at Durdle Door

Human Need	Mean	Standard Deviation	Mode
Aesthetic appreciation	1.63	0.59	1
Leisure & recreation	1.71	0.56	2
Need to know & understand	1.89	0.65	2
Self-actualisation	1.92	0.62	1
Freedom & escapism	2.01	0.65	2
Transcendence	2.02	0.67	1
Belonging & connectivity	2.39	0.73	2

From these tables of ranked human needs satisfaction levels (according to the means of each), some subtle differences can be distinguished. Aesthetic appreciation is the most satisfied of the human needs at Durdle Door whereas, in Charmouth, it is leisure and recreation. The means for each human need are also higher (closer to 1 and thus more satisfied) at Durdle Door than in Charmouth. In addition, whilst each human need had a mode score of 2 at Charmouth, three human needs had a mode of 1 at Durdle Door. These are; aesthetic appreciation, self-actualisation and transcendence.

To test these differences between case study sites more fully, it was first necessary to analyse whether ratings in the human needs categories were distributed normally. A one sample Kolmogorov-Smirnov test for each human need category showed that for each category, there was a significant difference between this data set and a

normal distribution which means that non-parametric tests are used in further explorations of these categories.

To test whether these apparent differences in human needs ratings are statistically different between the case study sites, a Mann-Whitney U test was carried out. This test is used to test for differences between two independent samples on non-parametric data. The test showed that a significant difference exists between how respondents reported human need satisfaction between case study locations in the categories of aesthetic appreciation (test statistic = 27545.000, $p < 0.05$), self-actualisation (29886.000, $p < 0.05$) and transcendence (31080.000, $p < 0.05$). The mean ranks for each of these human need categories demonstrate a lower rank (closer to 1) at Durdle Door which equates to a higher agreement on the scale used (1=strongly agree) providing evidence for a higher level of satisfaction of these needs in Durdle Door. This is explored more fully in the next section using the qualitative data gathered through interviews to understand more fully how these human needs were articulated, experienced and satisfied at the Jurassic Coast and how differences are revealed through the interviews from each case study site.

5.3.1 Aesthetic Appreciation, Self-actualisation and Transcendence at the Case Study Sites

The human need for aesthetic appreciation is concerned with an appreciation of nature and the physical appeal of the natural world. This was referred to through interviews using words such as 'beautiful', 'amazing', 'rugged', 'spectacular', 'stunning', 'distinctive' and 'dramatic'. One respondent commented for example 'that stretch of coastline is amazing all the way along, it is just so dramatic' (female, Charmouth, August).

To a large extent, the visual stimulation of the landscape appeared to be a catalyst for the satisfaction of other human needs and a driver for how people responded emotionally to being in the landscape. One female at Durdle Door noted 'I think it is quite interesting, when you see rocks that are shaped really weirdly or you see strata of rocks that are sticking out and you think why is it like that? So I would like to learn more about it all'. The need for knowing and understanding can thus be seen to arise from the aesthetic appeal of the landscape which captures the imagination of the

perceiver. For others, the landscape provided the backdrop to positive experiences as the following quote demonstrates 'for me, it's more about the scenery and the aesthetics of it really and it provides a good opportunity to sort of get away and relax a bit' (Male, Durdle Door, Oct). This provides some evidence for the relationship between the physical appeal of the landscape and the human emotional response to it.

For many respondents, the relationship appeared to exist because of the 'naturalness' of the scenery and the separation between this and the man-made which appears to induce feelings of relaxation. One respondent commented 'what I like about Charmouth is that it is very natural and very undisturbed in a way' (female, Charmouth, Aug). This perception may come from the limited amenities on the beach which means a clearer focus is given to the landscape itself which induces a sense of calm and relaxation and being away from the 'everyday'.

Whilst these comments were to some extent common to both case study sites, some differences are evident in how people spoke about the aesthetic appeal of each. In Charmouth, the appeal of the beach appeared to be largely for the recreation opportunities it afforded such as for fossil collecting; 'the beach and the rocks are so unique, they've got that dark colouring and you can always look around and see fossils in the rock or see people tapping away' (female, Charmouth, October). Also, for other activities such as rock-pooling; 'the children did rock-pooling which was brilliant, as the tide goes out all the rock-pools are exposed which is great and they went round with their little net' (female, Charmouth, August). Equally, people spoke passionately about how walking along the beach and along the coastal paths were made even more exhilarating because of the dramatic scenery; 'I had just been walking up on the cliffs there, on the coastal path and just had been blow away by the views and everything so you know it really left us thinking, this is just amazing' (female, Charmouth, June).

At Durdle Door, the aesthetic appeal appears to be much more focussed on the rock formations and the dramatic scenery which seem to induce emotional responses in some as the following quote illustrates; 'I don't think any of us anticipated seeing anything that dramatic. It's hard to verbalise that feeling, it was unexpected awe I

think, it was just sublimely beautiful and grand, quite grand really' (female, Durdle Door, August). The physical appeal of the scenery itself at Durdle Door seems to be the primary attraction for many to this site; 'the view from the cliffs down to Durdle Door and to the beach on the other side. That view really draws you in and makes you want to go down' (male, Durdle Door, August). Also, the geological and heritage significance of the site plays a large role in how people appreciate the site and how it serves to induce feelings of awe and wonder such as in the following quote; 'I just think it is amazing. It's just incredible how over thousands or millions of years we still have these things and how nature does things really' (female, Durdle Door, October).

Such quotes illustrate how this coastline appears to have a unique character which fascinates and captivates visitors to it. This attraction and fascination is vocalised most often by respondents in emotional language which can be thought of as resonating with the human needs of self-actualisation and transcendence. The most frequently referred to feelings while being in the case study landscape were concerned with the apparently dichotomous feelings of being energised and invigorated and feeling simultaneously relaxed, calm and peaceful. One respondent for example stated 'it makes you feel a bit more energised and the relaxed state of mind comes with it because you're working out what tensions you've had in you' (male, Charmouth, Aug). These feelings have been associated with the self-actualised person as identified by Shostrom (1964) who lists adjectives to describe this state which include; sensual, energetic, motivated, involved, optimistic and confident (p212). Such feelings appeared to be important at both case study sites. One male at Durdle Door for example, noted 'I get a combination of feelings there. If I want to relax, I can relax much easier by the sea than in other places. If I want to go running around, up and down the footpaths, then I find I've easily got tonnes of energy to do that'. Another participant spoke about the '*pure* sort of energy' that comes from being near the sea at Charmouth. She describes how this helps to energise and give her strength in her daily life.

Feelings of calm and tranquillity are also associated with self-actualisation and these feelings were also cited as important for many respondents at the case study sites. For some, these feelings came about as a direct result of the setting as in the following quote; 'I always like to go to the beach when something is troubling me

because the sea just goes in and goes out and then it goes out again, the sea is a great leveller as far as I'm concerned and just watching the sea makes me much calmer' (female, Charmouth). Whether it is particularly the beach at Charmouth which induces such feelings is unclear. However, for another respondent, the location does appear to be important in her emotional responses to it; 'Charmouth is a place that's always engenders a feeling of just being completely with no stress, no stress at all, no matter how busy it is down there, it always feels the same' (female, Charmouth). Similar feelings are apparent for visitors to Durdle Door and whilst a sense of being energised and invigorated by walking along or viewing the dramatic scenery are important, so too is the sense of calm and relaxation that also is apparent, such as for a female respondent at Durdle Door who stated; 'if I am quite stressed at work or if I can't sleep at night, that is where I put myself, I put myself back on that cliff at Durdle Door and that makes me relaxed a bit more'.

Through the interviews, the human need of self actualisation does appear to be important and evident at both case study sites and for much the same reasons. The differences detected through the statistical analysis showed slightly higher ratings being given for this need category at Durdle Door than at Charmouth but interview participants at Charmouth clearly also had positive experiences to share and instances and examples of this human need being satisfied.

Similarly for transcendence, respondents spoke with passion and emotion about their experiences at both case study sites. Williams and Harvey (2001) characterise transcendent experiences from their study of encounters in forest environments as 'a moment of extreme happiness, a feeling of lightness and freedom, a sense of harmony with the whole world, moments which are totally absorbing and which feel important' (p249). Such experiences they state are often triggered by some experiences in nature. These sentiments resonate through the interviews and words such as 'energetic', 'alive' and 'closer to nature' give a flavour of some of the thoughts and feelings which can be related to this human need category. One female respondent for example, commented at Durdle Door; 'it's when I see the rugged coastline in Dorset that I start to feel brilliant, my heart expands and I just feel much more peaceful'. Similarly, a male respondent at Charmouth commented about how his experiences at the beach gave him a 'feeling of attachment to nature'. This

sense of feeling connected and closer to nature or something 'other than the purely personal self' (Koltko-Rivera, 2006, p306) is also associated with transcendence. Such experiences are evidenced through the interview data at both case study sites.

For some, these feelings were identifiable with spiritual experiences, whether or not born out of religiosity. One respondent remarked for example; 'I suppose I'd sum this place up as it's good for the soul' (female, Durdle Door). For another respondent, this deep connection with the landscape seemed to provide some comfort for her as she describes Charmouth beach as 'a timeless landscape and with the shape of it, with the high cliffs, you just feel sort of protected almost, like a couple of arms around you'. A male respondent, directly attributing the physical landscape at Durdle Door to a higher power stated 'I am able to appreciate God's creation'. For others, it was more about connecting with something else, something away from the everyday and as one male at Charmouth put it 'being there really gives you a sense that there's a real world out there'.

This connection with something greater than the purely personal, to a higher power perhaps, appears to manifest in feelings of being humbled by the grandeur of nature and the relative small-scale of humanity in it. It engenders feelings of being only one small part in the grand scheme of the universe. One female respondent commented for example, that 'when you are up at the top (of the cliffs at Charmouth) and you can look out at the sea for miles and that gives you one sense of belonging and that you are just a small part of the universe'. Interactions with the case study landscapes in particular do seem to have these specific impacts on visitors. A female respondent at Charmouth for example, commented that it was the process of finding fossils along the beach which triggered thoughts about their origin and the power and timelessness of nature which she found 'quite humbling really in many ways'. Such experiences and interpretations of the landscape appear to facilitate a sense of perspective amongst visitors to these locations. One female respondent at Charmouth for example, commented; 'to me it was amazing. Just looking at the coastline and trying to put things into perspective, it just made you think a bit more, or it did me. It made me think and reflect a bit more on life really'. For some, such feelings are also stimulated by the realisation of the power of nature and that such dramatic scenery can occur without any interference by humans. One respondent

commented; 'you have that great feeling of this has always been here, this will always be here. There are some things that humanity can't control and I think that pulls you back down again'.

This sense of 'grounding' or of putting things into perspective and re-connecting with what is important, is one which is shared amongst respondents at both case study sites and this is a sense which seems to provide the most enduring memories and feelings associated with visits to both Durdle Door and Charmouth beach. Whilst some subtle differences can be detected through the interviews at each case study site, particularly with regards to how aesthetic appreciation comes into narratives, for the most part, feelings which pertain to self-actualisation and transcendence seem to be equally felt at both locations. The following section considers how the other human needs were satisfied at both the case study sites and also at other sites along the Jurassic Coast as evidenced by the in-depth participants.

5.3.2 Further Explorations of the Satisfaction of Human Needs along the Jurassic Coast

In order to explore whether any differences existed between how survey respondents at the two case study locations rated the items relating to human needs compared with the twelve in-depth participants (who completed the same questionnaire but at different locations along the Jurassic Coast), the means for this group were calculated as shown in table 5.5. The human needs are ordered from most satisfied (ie closer to a mean of 1) to least satisfied. This allows for easier comparisons with how respondents rated items at Charmouth and Durdle Door (tables 5.3 and 5.4). This section will explore some of the reasons and feelings behind these numbers as discussed through in-depth interviews. A summary portrait of each in-depth interview is given at appendix 8.

Table 5.5 – Human Need Satisfaction for the 12 In-depth Participants

Human Need	Mean	Standard Deviation	Mode
Aesthetic appreciation	1.42	0.30	1
Leisure & recreation	1.42	0.29	1
Need to know & understand	1.55	0.25	1
Belonging & connectivity	1.77	0.43	1
Self-actualisation	1.80	0.26	2
Transcendence	1.82	0.48	2
Freedom & escapism	1.91	0.59	2

Interestingly, this group rated all human need categories higher than questionnaire respondents at both Charmouth and Durdle Door. Whilst aesthetic appreciation and leisure and recreation appear to be the most satisfied at each location and also for this group of participants, scores for this group were higher than those for Charmouth and Durdle Door. The lowest level of satisfaction at the case study sites was with belonging and connectivity but the in-depth group rated this need significantly higher than questionnaire respondents. This could be explained since all participants who were recruited for this part of the study had some sort of connection with the area and all had visited previously, in fact, all but two answered that they visited the area either ‘quite regularly’ (a few times a year) or ‘very regularly’ (weekly or monthly). This would explain the greater sense of attachment or identity with the Jurassic coast which the human need of belonging & connectivity is associated with.

For a number of these participants, it should be noted that belonging and connectivity was not necessarily associated with the Jurassic Coast in particular but with the beach or the sea in general such as one male respondent illustrates; ‘I always find being by the sea fairly homely and peaceful. I’ve always lived by the sea and being away from it, I find quite confusing’. This human need is also about feelings of being connected to nature and to the wider universe and for many respondents, this was a notable feeling which many did associate with their visits to the Jurassic Coast.

Aside from belonging and connectivity, this group indicated that they 'strongly agreed' most often with items relating to three other human needs; aesthetic appreciation, leisure and recreation and need to know and understand. Aesthetic appreciation was most often spoken about with a sense of awe and a profound recognition of the specialness of the Jurassic Coast. For many, this was associated with its geological significance and the feelings that inspired of being in 'the middle of these two massive forces' of the sea and the cliffs (participant no. 1). For others, appreciation was largely concerned with how the Jurassic Coast as a backdrop, enhanced the significance of activities; 'we scattered his ashes over dancing ledge and the scenery was just perfect, it was stunning, just like a film set' (participant no.8).

The human need for leisure and recreation is largely concerned with the need for time diametrically opposed to work time, to having fun and relaxing. It has strong elements of Kaplan's components for restorative landscapes which is about 'being away' from physical, structural and emotional constraints and of taking time out to relax (Kaplan, 1985). These ideas were vocalised with regularity through the interviews which is unsurprising given that most respondents were on holiday or at least enjoying some leisure time. For some however, it was a deeper felt emotion than simply being on holiday. One respondent commented 'being here represents freedom for me and it has a positive impact on the soul' (participant no.4). This sense of freedom can be seen in both physical and mental terms and it is about being free of constraints. This came through clearly in interviews as respondents talked about their experiences being 'calming' and 'de-stressing' and 'a release from the pressures of everyday work' (participant no.6).

The human need to know and understand is concerned with an inquisitiveness about the environment, a curiosity and a desire to know more and to explore further. Comments around this need were largely focused around the geological significance of the cliffs and a fascination with fossils. One female respondent noted for example, 'you can just be walking along the beach and you can find a fossil and that inspires my imagination' (participant no. 5). This sense of connection with the past is a thread which appears important to many and which seems to underpin this human need to know and understand. Another respondent for example, commented 'the

coast makes you feel that the continuity hasn't been completely lost, there was something, a sense of time and it adds something' (participant no.8). The following section will explore in more detail the causes of human needs satisfaction at the Jurassic Coast.

5.4 Causes of Human Need Satisfaction along the Jurassic Coast

The satisfaction of human needs can be thought of as contributing to a sense of psychological and eudaimonic well-being and the empirical findings (both quantitative and qualitative) from the Jurassic Coast suggest that human needs are highly satisfied in this landscape. Chapter three presented a conceptual framework for thinking about the relationship between tourism, landscape and eudaimonic well-being and this framework will be elaborated in this section with reference to how visitors identified the causes of this satisfaction. The conceptual framework revolved around three dimensions at which meaning and significance appear to cluster. These are the physical landscape, the activities which take place in the landscape and the meanings and interpretations which visitors take away from their experiences. The causes of the satisfaction of human needs at the Jurassic coast will thus be discussed with reference to these focal points, using evidence from both the participants at the two case study sites as well as from the in-depth participants.

5.4.1 Physical Landscape

Interviewees spoke passionately about the physical landscape at the Jurassic Coast and how it evoked different emotional responses. Respondents for example, talked about how the landscape enabled a sense of reflection on their own lives and an ability to put things into perspective. This reflection is, for some, inspired by the surrounding cliffs which serve to highlight the timelessness of nature compared with the brevity of human existence; a reminder which is quite literally engrained in the landscape. One respondent for example, stated that 'in times of my life when I have problems, I always come here to clear my head and it makes me think that the little things you get worked up about aren't that important. Being here somehow does that. No-where else does that' (male, West Bay). Similarly, a participant describing her experiences at Burton Bradstock observed that seeing the beach in Dorset 'it gives you a sense of perspective and I feel in touch with things and you realise how very small we are and how very magical everything is'.

Having the space and time to reflect on life appears to be a significant benefit of being in the case study location. It could be argued that this benefit could come from being away in any location but the frequency of references to the 'specialness' of the area points to something quite unique about this location. Participants also talked about a sense of inspiration from being in this setting and this manifested in thoughts both about respondents' own worlds, their goals and aspirations and also being inspired to think about the heritage of the landscape, to the power of nature and the evolution of time. These feelings are mostly engendered through the physical and unique qualities of the Jurassic coast landscape as illustrated in the following quote; 'the Dorset coast of course has a special character which is unique and full of history'. (female, Worbarrow Bay). The sense that this location has of being 'untouched' and 'natural' also serves to inspire the imagination and arguably these same sensations would not be experienced in the same way at other seaside locations. One male respondent for example stated 'here feels more awe-inspiring because you feel quite cut off from the rest of the world' (male, Charmouth, Oct). Other similar sentiments were expressed such as 'I don't get the same feelings at all when we walk along the beach in Blackpool' (female, Durdle Door, October) and 'the beach in Bournemouth doesn't compare at all to this' (male, Bridport). This gives a sense of how the case study site resonates as especially significant for these respondents.

The physical landscape and the forms and features within it, does appear to be important in respondents' recollections of emotional responses to the case study locations. The following remark demonstrates for example, the power of the sea to evoke such feelings; 'I just find the sea to be more calming, there is more rhythm to it, the waves coming in are just calming I find' (male, Durdle Door June). There are two distinct characteristics of the case study landscape that people refer to most often which unsurprisingly, given the coastal location of the case study sites are the sea and the cliffs. Both appear to evoke certain responses within people which amount to an overall feeling of being uplifted emotionally, of a sense of the ineffable and of putting things into perspective. This seems to be both in a personal sense, to do with clearing one's own head and escaping from daily pressures and worries and also on a more universal level, of having a sense of one's place or humanity's place

in the world and of connecting with something other than the purely personal. These responses serve to enhance feelings of well-being, in particular in terms of feeling more fortified spiritually and feeling calm and with a sense of inner peace that appears to come from this contemplation (which may or may not be conscious) of the coastal landscape and the human place and experience in it. Whilst the two aspects of this landscape, the sea and the cliffs or the dramatic coastline in particular, appear to work together on the individual to evoke these changes in cognition, perception and emotion, they do appear to play distinct roles in this experience. The sea for example, seems largely to evoke feelings of calm and peacefulness whereas the dramatic coastline, characteristic of the Jurassic coast, serves to emphasise the timelessness and power of nature and evoke feelings such as awe and inspiration.

The calming influence of the sea appears largely to be verbalised in terms of sensory experiences, incorporating the sounds of the tide ebbing and flowing and the water crashing against the rocks as the following quote illustrates; 'it's quite calming looking at the waves and hearing the sound of the sea and the waves coming to the shore and the crashing on the beach and the pebbles rolling up and down (male, Durdle Door, October). Similarly, the light on the water and the smells of the sea appear to play an important role in evoking emotional responses to being there. The following quote for example highlights how special these sensory experiences appear to be 'it was just so stunning looking out to Durdle Door, with the sun and the colour of the sea, you can see the difference in the colours, the aqua and the blue and everything and it was just magical' (female, Durdle Door, June).

The geological features of the coastline on the other hand seem to play a different role in visitor responses and it is from these references that evidence can be gleaned about the significance and value of this particular setting as compared with any other coastal location. This dramatic setting gives rise to thoughts about the power of nature and the Jurassic Coast is arguably better able than other coastal locations to evoke such thoughts as the dramatic coastline and the geological heritage, the 'walk through time'⁷ serves as a reminder of the brevity of human life compared to nature

⁷ www.jurassiccoast.com

and the universe itself. The following quote illustrates this point well; 'I think it is a wider sense of belonging to the earth that you get here because you sort of feel that you are just one very small part of it and that it's all been there for millions of years and it leaves you humbled' (female, Charmouth, June). The dramatic scenery in addition, seems to add something to the experience of simply walking around the area, both for the physical exertion necessary and also for the reward of stunning views and of feeling energised. The following quote from a male respondent at Charmouth illustrates this well; 'it's just the ruggedness of it, I'm not a great lover of a flat, long walk, I like to work up a sweat and that helps to work out the tensions you've had in you'. Similarly, a female at Durdle Door commented on the long walk from Lulworth Cove to Durdle Door that although it was a challenging walk, that 'sometimes, when you've got to make a bit of an effort to get somewhere, it just makes it a bit more special' so for her, the walk and the rugged terrain added to her experience of being there.

The space between the cliffs and the sea appears also to be important in the meaning and significance of the landscape. This space appears to be important in contemplations of the vastness of the seascape and the incomprehensibility of that vastness. One female respondent at Charmouth stated that these contemplations gave rise to a feeling that 'anything is possible'. Another described her interpretation of this space as 'being on the edge, just looking out to just see nothing much else, it gives you a sense of, how can I describe it, a sense of not being tamed or hemmed in at all' (female, Durdle Door June). The meaning of this space appears to be bound up with human needs of freedom and belonging, as another respondent commented 'when you look out to sea for miles it gives you a sense of belonging and that you are just one small part of the universe' (female, Charmouth, June). Both belonging and a sense of knowing one's place in the world are evident in this quote which is illustrative of several human needs being satisfied at once. The importance of this space between land and sea was also discussed by White et al. (2010) in their explorations of the importance of 'blue space' to health and well-being. This study found that aquatic only scenes were rated lower in preference than green-aquatic scenes which may suggest the optimal environmental is the 'interface between land and large bodies of water which may make evolutionary sense given physiological

adaptations to both terrestrial and aquatic habitats’ (p490). Experiencing and spending time at this interface then could be important for well-being benefits.

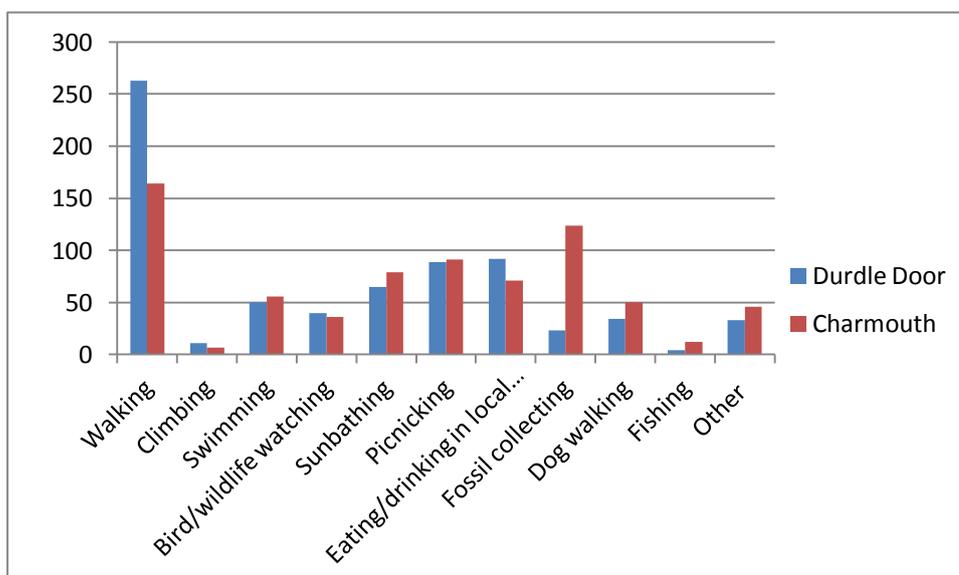
The following section will explore whether and how activities in the landscape contribute to the significance of the landscape and the experiences and perceptions of it.

5.4.2 Activities at the Jurassic Coast

Activities at the Jurassic Coast vary from passive to active and are described by some as the primary motivator for visits to the area, for example, ‘we were there because my friend has a boat and we launched it off the beach which was brilliant’ (male, Charmouth, June). For others, the activities they undertook in the area hardly featured in recollections of experiences there. This point was also noted by Williams & Harvey (2001) in their exploration of the connection between forests and transcendent experiences. They state that ‘it is noteworthy that episodes were rarely attributed to activity in the forest, the majority of respondents attributing their experiences to qualities of the physical environment’ (p256). To further investigate this point, the activities engaged in by questionnaire respondents will be analysed.

The questionnaire asked respondents to indicate which activities they were engaging in at the case study sites. Ten different activities were offered and space was provided for respondents to indicate any other activities which were not included. Figure 5.1 shows the responses broken down by case study site.

Figure 5.1 – Activities Undertaken at Each Case Study Site



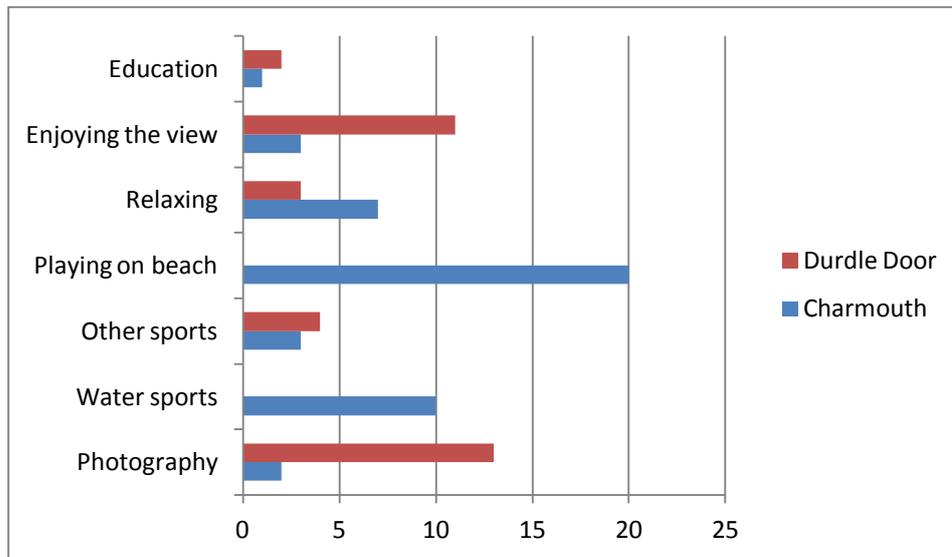
Walking is clearly the most popular activity undertaken at each site, with 93% of respondents at Durdle Door and 62% at Charmouth indicating walking as an activity they did or intended to do at the site.. Fossil hunting is another activity which features prominently for the respondents at Charmouth beach with 47% of respondents indicating this activity on the questionnaire compared with 8% at Durdle Door. This is perhaps not surprising given Charmouth's reputation as one of the best places to find fossils as the following extract from *discoverfossils.co.uk* highlights; 'the area around Charmouth is well suited to amateur and experienced fossil hunters alike; throughout the year visitors flock in their masses to scour the beach'.

Within the 'other activities' category, the most popular responses at Durdle Door were enjoying the view and photography. At Charmouth however, these were playing on the beach, water sports and relaxing as figure 5.2 shows.

Each site appears then to offer different opportunities for activities so that patterns can be detected and generalisations made at each site. Charmouth for example, presumably by virtue of its flat beach offers more opportunities for beach games and for water sports, particularly those which involve launching boats as this would be restricted at Durdle Door because of the steep climb down to the beach. Several respondents also commented that Charmouth was deliberately chosen as a venue for dog walking as the following quote illustrates; 'we chose Charmouth beach because of the long coastal path and that we could walk the dog there, it was our first holiday with the dog so it is a whole new thing for us to have to think about a holiday with the dog'.

At Durdle Door, the aesthetic appeal again is indicated in the types of activities people like to engage in which include enjoying and taking photographs of the scenery. Within the category 'education' this was largely concerned with identifying rocks and learning about the geological significance of the area.

Figure 5.2 – ‘Other Activities’ Undertaken at Each Case Study Site



To explore further whether any patterns exist in terms of activities and the satisfaction of human needs, a correlation analysis was run through SPSS using a Spearman Rank Order Correlation to determine the strength and direction of any relationship. The strength of relationship was interpreted using Cohen’s (1988) guidelines (small=0.10, medium=0.30 and large=0.50 (cited in Pallant, 2010, p134)). This test showed a small negative relationship between swimming and leisure and recreation ($r=-0.103$, $p<0.05$, $n=540$) which means as one variable increases, the other decreases. In this case, swimming slightly increases the instance of agreeing with the items making up the leisure and recreation category. A similar relationship was found with fossil hunting and the human need to know and understand ($r=-.111$, $p<0.05$, $n=536$), meaning that fossil hunting slightly increases the instance of agreeing with this human need. No other significant correlation was found with either active or passive activities which may mean as previously mentioned that activities undertaken in the landscape are not a major contributor to human needs satisfaction.

Interview narratives on the other hand do highlight the importance of particular activities in memories and positive associations with their experiences at the Jurassic Coast. Such activities appear to highlight the physical landscape as the backdrop to activities which heightened experiences and made them more

meaningful. One female respondent for example, spoke about how she enjoyed swimming at Durdle Door in June and how this compares to the everyday act of swimming in a pool;

I don't like swimming in swimming pools, I find that quite boring because it's just up and down, whereas, swimming at Durdle Door, whichever way you face, you've got something really nice to look at. You can look out to sea and maybe see boats and you've got lovely coastline and you've got people on the beach, so there's lots to keep your eyes busy. In the pool, it's swimming for exercise sake rather than swimming for the pleasure of being in the water.

Similarly, passive activities such as simply sitting, picnicking and spending time with friends and family were interpreted positively at the Jurassic Coast. This was largely attributed to the pleasurable surroundings which enabled relaxation and the strengthening of personal bonds. One female respondent at Durdle Door for example, commented that sitting on the beach 'was just a really calming experience' which enabled and facilitated lengthy conversations 'about our lives and our relationship and what we wanted to achieve'. Another commented that she had good memories of spending time with friends at Durdle Door which 'perhaps makes me have more affection for that area'. Even walking alone, having time to think and reflect were noted as significant and memorable activities at the case study locations, as one male respondent at Charmouth commented 'if you're walking generally, that's good for reflection but also, in such an environment, it tends to give a more positive vibe. I think it's very useful to have those times to reflect'.

Activities undertaken in the landscape do appear to play a role in how visitors to the Jurassic Coast perceive and experience the landscape, although this role does not appear to be a major part of the experience. More significant is the landscape as a backdrop to activities which on their own, may not be important or significant but set within the Jurassic Coast landscape, these activities do seem to take on more meaning and value. The meanings and interpretations of the landscape are further explored in the following section.

5.4.3 Meanings and Interpretations of the Landscape

The third dimension around which landscape significance appears to cluster, as set out in the conceptual framework, is through the 'layers of meaning' and interpretations of the landscape which shapes how people perceive and value it. To begin to explore this dimension, a word frequency count was first conducted (by software package NVivo 9) of the 39 telephone interviews. This query was run for the top 50 words, including stemmed words and synonyms used through the interviews, with a minimum word length of 3 letters. The top 10 words used are listed in table 5.6 and it can be seen from this that 'feel' and 'think' are the top words used, followed closely by words associated with the landscape itself such as 'beach', 'coast', 'sea' and 'landscape'. This seems to be a recurring theme through the interview data as people talked largely about their emotions and feelings and how these were influenced by being in the landscape.

Table 5.6: Word count - top 10 words used through interviews

Word	Count
Feel	849
Think	649
Place	420
Beach	410
Love	320
Walk	295
Time	258
Sea	253
Coast	240
Landscape	212

To determine the affective appraisal of the landscape, or how it made visitors feel to be at each case study location, the adjectives presented in the questionnaire (as per the Russel & Lanius model, 1984, figure 4.3) were analysed. Since these were rated on a 5 point likert scale, the means and modes for each could be calculated to assess the extent to which respondents agreed with the adjectives as descriptors of the landscape, with responses closest to 1 being the most strongly agreed with adjectives. The results of this are presented in table 5.7. The results of this show that without exception for each of the 'unpleasant' categories, the mode recorded for

both sites was 5 which demonstrates that the majority of respondents feel strongly that these adjectives do not represent how they view either site.

Table 5.7: Affective Appraisal Scores for Each Case Study Site

Adjective	Mean	Mode	Mean	Mode
	Durdle Door		Charmouth	
Pleasant-arousing				
Spectacular	1.43	1	1.96	2
Awe-inspiring	1.65	1	2.13	2
Sensational	1.78	1	2.37	2
Total category mean	1.62		2.15	
Pleasant -not-arousing				
Calming	1.86	2	1.86	2
Peaceful	1.86	2	1.89	2
Serene	1.95	2	2.05	2
Total category mean	1.89		1.93	
Unpleasant-arousing				
Scary	3.88	5	4.36	5
Disturbing	4.56	5	4.52	5
Stressful	4.59	5	4.54	5
Total category mean	4.34		4.47	
Unpleasant – not-arousing				
Uninspiring	4.46	5	4.33	5
Unimpressive	4.69	5	4.45	5
Boring	4.66	5	4.47	5
Total category mean	4.60		4.42	

For Durdle Door, the highest agreement was with the adjectives in the pleasant-arousing category. Respondents during interviews also spoke specifically about a sense of ‘unexpected awe’ and ‘awe and wonder’ at seeing Durdle Door. This site is also described as special for its ‘*spectacular scenery*’. Charmouth also is described using these adjectives during telephone interviews. One respondent at Charmouth for example commented; ‘I would say it is very beautiful, the coastline I think is spectacular with the cliffs and the sea’.

Respondents at Charmouth rated items in the pleasant and non-arousing category most highly (closest mean to 1). This may seem surprising since the popular activities recorded at Charmouth beach included water sports, swimming, walking

and fossil collecting which appear to be more 'arousing' by definition. This discrepancy is arguably a function of how they viewed the setting itself rather than taking account of the activities which are possible in the landscape. Exploring this category further, thirteen of the telephone interview participants at Charmouth spoke about perceiving the landscape as calming. This adjective was used however for both case study sites, largely to describe the feeling of being at the beach and hearing the sounds of the sea which seems to induce a state of calm. One respondent at Durdle Door for example, stated; 'it's quite calming looking at the waves and hearing the sound of the sea and the waves coming to the shore and crashing on the beach'. Another at Charmouth echoed these sentiments in referring to the 'calming sounds of the sea'.

Related to this perception of the landscape is the sense of peacefulness which was also related to both case study sites. One respondent for example, commented that Charmouth beach 'is still relatively peaceful' despite, she goes onto say, the noise of the hammers in the incessant hunt for fossils or 'the chink, chink, chink in the background all day'. Similarly, another respondent noted that she also felt this sense of peace despite the many people on the beach; 'it is just exceptionally peaceful, even though there's probably lots and lots of people there'. One respondent at Durdle Door commented that she felt a sense of inner peace and a sense of achievement having made the long climb from Lulworth; 'I felt total peace and a sense of achievement that I had actually found it and got there – a sense of awe and wonder I think'. This gives a sense of how internal influences shape the ways in which the landscape is perceived and give rise to the sentiments and meanings which people attach to it. Whilst a shared appreciation is apparent of the value and significance of the Jurassic Coast, individual meanings and interpretations appear to be co-created in the landscape, resulting in personal experiences and relationships with the landscape and these will be further explored in the following section.

5.5 Individual Meanings and Interpretations of the Jurassic Coast

The literature concerning the social construction of nature explores the idea of the physical landscape as having shared or cultural value within which individuals add texture and variation to how the landscape comes to have meaning and significance. Gee & Burkhard (2010) for example, note that the landscape is a 'bedrock of

perception and intangible value is assigned by adding cognitive and imaginative overlays to this environment' (p351). Such overlays are likely to be the product of a variety of factors within the individual as well as those which are external to the individual, but which play an important role in shaping how the landscape is perceived and the relationships that people have with it. This section will explore these internal and external influences in relation to how respondents spoke about their experiences at the Jurassic Coast.

Internal influences – memories and attachment

Internal influences include memories and people spoke during interviews about how their happy memories of being at the Jurassic Coast shaped their thoughts about it. One respondent for example, stated 'I have good memories of spending times with friends at Durdle Door which perhaps makes me have more affection for that area'. Another, speaking about her affinity with Charmouth beach spoke with pleasure about taking her daughter to the beach since she was a baby. Personal expectations can also shape how landscapes are perceived. One female respondent for example, having never visited Durdle Door previously, had no idea what to expect and she thus describes her experience as 'really emotional. It exceeds your expectations, I don't think any of us anticipated seeing anything that dramatic'. By contrast, another spoke about how her daughter was disappointment at visiting Durdle Door and seeing the crowds of people which did not live up to her childhood memories of being there; 'she had very fond memories of the place, I guess she was about eleven when she went last time and it wasn't how she remembered it, she was a bit gutted'.

Attachment to the Jurassic Coast, also shapes how this landscape is perceived. This is the result both of specific memories and familiarity with the landscape and also of a wider connection with the beach and the sea. For one couple, their second home in Dorset gave them 'a bit more of a sense of belonging'. For another female respondent, her frequent visits to the Jurassic Coast over many years meant that she felt a certain bond with the landscape; 'when we go there, it just feels like coming home. It's strange'. For others, simply being by the sea resulted in feelings of being emotionally uplifted and more '*grounded*' (male respondent at Charmouth). Again, this may come from pleasant memories of being at the beach or from a sense

of escaping the everyday, especially for those who live ordinarily far from the beach, as one male at Charmouth for example commented; 'we live about as inland as you can get and I grew up by the sea so I really enjoy it which is why we spent so much time in the sea at Charmouth and it really reminded me of childhood'.

Other more deeply engrained influences such as personality are also likely to play an important role in how landscapes are interpreted. Reid and Hunter (2011, p6) for example, note that 'those with certain personality types (open to experience, agreeable and conscientious) may have more of an emotional connection with nature than others'. Personality factors may influence how people connect with the landscape and also how they subsequently recollect and describe their experiences. Some for example, speak in very emotional language, for example, a female at Durdle Door commented 'it just does something to me, it's just really special' whilst others relate much more to the activities they undertook or the reasons behind their visit.

External influences – weather, other visitors and facilities

External influences which shape the ways that the Jurassic Coast is perceived include the weather, which is uncontrollable but still has a major influence on how visitors perceive the landscape. For some, bad weather is a positive and is much more likely to inspire them to visit and to provide for good memories. To analyse this a little more, a statistical test was run in SPSS to detect whether any differences existed in satisfaction levels of human needs at different time of the year as the survey was carried out in June (n=176), August (n=203) and October (n=171). A Kruskal Wallis test (the most appropriate test for differences in three or more samples using non-parametric data) showed that there was no statistically significant difference between how respondents rated each human need category and the time of year. That respondents feel equally satisfied despite the time of year is also evidenced by 11 out of the 39 telephone interview participants who stated explicitly that they much prefer to visit the coast during 'bad' weather or out of season, putting this down to both the reduced numbers of people there so that they felt it was more of a special and private experience, as this quote illustrates; 'I think to be honest, the more tourists that are there, the less it feels it feels kind of special' (male, Durdle Door, June). Also, people spoke of their heightened feelings of being in the area in

stormy weather, one respondent stating 'you feel a bit more energetic and a bit more alive, like you're in the elements, I guess you feel a bit more human' (male, Durdle Door, October).

Another external influence which is interesting to consider is the effect of other visitors on visitor experiences and perceptions of the Jurassic Coast. Respondents frequently commented on the number of other people around at the time of their visit. For some, this was a definite downside to their visit which detracted somewhat from them experiencing the landscape as they had hoped they might. One female at Charmouth for example stated 'other people being there does take away a bit from the experience'. For many, such feelings were not necessarily borne out of any inconvenience posed by other visitors, but more a sense of wanting to experience the 'magic of the place' (female, Durdle Door) 'with just your little group and to be selfish about it'. On the other hand, it is interesting to note that most respondents did recognise their own place in this picture, since they are also visitors to the landscape. Many also spoke about their pleasure at seeing so many other people enjoying the landscape and relaxing in it, 'it was like seeing a different type of lifestyle there' is one comment from Durdle Door in August. Another respondent in the same location similarly stated 'there was something really lovely about everybody sharing almost the same experience because I didn't see any unhappy faces'. For most then, the presence of other visitors did not detract from the feelings they derived and the positive perceptions of the Jurassic Coast.

The presence of visitor infrastructure was also noted to influence experiences of the Jurassic Coast, some positively and some negatively. Many respondents for example, spoke about the lack of facilities at both sites as a positive aspect of it, as one male respondent stated; 'I prefer Charmouth as there's not very much going on there, in a nice way'. Another, speaking about Durdle Door commented; 'I think the way it is now is nice, it is more kind of serene and more relaxing. So, for example, if you had a café right next to it, it probably would be a bit inappropriate'. For one female and her family however, the lack of refreshments available around the beach at Durdle Door clouded their visit somewhat as it meant they had to cut short the visit; 'there was no-where to get fresh water there and it was a really hot day. We had to leave because we were thirsty'. On the other hand, since there is an ice

cream van stationed half way between the car park and the beach in high season, another responded commented 'I collected a load of litter everywhere from the ice cream van and we just thought oh, what a shame'. Litter was a problem which many respondents commented upon, particularly at Durdle Door. Most seemed incredulous that such a setting, which the majority of survey respondents commented was 'spectacular' and 'awe-inspiring', could be spoiled by thoughtless people leaving their 'BBQ rubbish and cans' at the beach.

The ways in which individuals interpret the landscape and create meaning within it is also revealed through the in-depth qualitative work whereby participants were asked to keep landscape diaries and to take photographs to record significant or meaningful experiences at the Jurassic Coast. These will be examined in the following section.

5.5.1 Revealing Meanings and Interpretations of the Jurassic Coast through Photographs and Diaries

The photographs and diaries were used as a discussion point and a way for participants to access memories of their visits during face to face interviews. All participants stated they enjoyed taking photographs and all took many more than the ten required for the research which they wished to keep for themselves. The diaries on the other hand were useful for the purposes of enabling respondents to take time in the landscape to notice their surroundings and take note of their feelings, these proved less popular with respondents, many of whom felt less able to express themselves in writing. As discussed previously in chapter 4, a future refinement of this technique might include providing respondents with prompts such as sentences to complete to direct responses about the landscape and their thoughts and feelings in it. Summary portraits of each in-depth participant can be found at appendix 8.

All twelve participants took photographs of various beach scenes which is not surprising given the location and the brief. What is interesting is that each took the pictures from different angles and for different reasons and that similar scenes evoked different feelings and stories from the photographer. These differences

appear to be the result of different influences on the individual. For example, some participants preferred photographs of desolate beaches devoid of people such as explained by one participant; 'it was an amazing feeling, that huge expanse of beach and sand with no-body there. It was difficult to walk away'. For others, scenes of people playing and having fun on the beach were more significant and full of meaning. These differences are captured in photographs 5.1 and 5.2.

Photograph 5.1: deserted beach scene (source: male participant no.6)



Photograph 5.2: children playing on the beach (source: female participant no.4) Lyme Regis)



For those who enjoyed being alone on the beach, some recalled that they took pleasure in the feeling of isolation and having time to be alone whilst for others it was more about simply enjoying a scene which is out of the ordinary in today's crowded society, as one participant said of one scene of cliffs and sea; 'there is very little in this that is manmade which I like. I also love the expanse of sky and sea, it's almost that sense of wildness' (male participant no.6). In contrast, beach scenes full of people were embraced by others and celebrated as reminders of childhood and of their own family connections such as vocalised by the following participant 'this reminds me of my childhood when there was nothing to worry about' (male, participant no.11).

Another perceptual difference noted between the in-depth participants related to familiarity with the landscape. Memories of previous visits for example, seemed to be a theme running through many of the photographs with participants reporting capturing scenes which brought back specific memories or which simply evoked feelings of place attachment and belonging due to having visited this landscape

previously. For some this was due to some very specific events; ‘this is the dramatic scenery where we scattered my father’s ashes’ (female, participant no.8) which served to evoke memories and shaped the way that particular scenes was experienced. Whilst for another, the landscape simply reminded them of home and that the sea was the only partition between Jurassic Coast and home; ‘the sea symbolises freedom for me, I feel at any time, I can be home’ (female no. 4).

Sensory experiences of the landscape were also something that is in one way shared, each had stories of how the beach smelled or sounded for example, but what that meant to each individual was unique. One female stated for example about the sounds of the waves ‘it’s so tranquil the sound of the water on the shingles’ (female, no.5). Smells in the landscape also evoked different feelings for participants and these were described through photographs such as for participant no. 6 who described the harbour scene in photograph 5.3 as evoking fond recollections of ‘the smells of fish and chips and fishing boats and the sounds of the seagulls which really enlighten your senses’ (male no.6). On the other hand, another participant spoke about her dislike of the smell of fish and chips and how she found this ‘*disturbing*’ and this clouded her visit to a particular stretch of the beach at Lyme Regis. Her photograph (5.4) therefore, tells a different story to the previous fond recollections of this distinctive seaside smell and is a far more ‘stark’ rather than ‘romantic’ image of a seaside memory.



Photograph 5.3: Harbour scene evoking fond memories of fish & chips (source: male no.6)



Photograph 5.4: ‘Disturbing’ memories of fish & chip smells (source: female no.4)

Sensory experiences of the landscape were also recorded in photographs which attempted to capture the vibrant colours of the sea and the cliffs and also the sounds of the sea crashing onto the beach and dragging the pebbles back out with it. Examples of these are illustrated in photographs 5.5 and 5.6. The senses then appear to play an important part in how the landscape is experienced and perceived. For many, this is primarily about the visual stimulation afforded by the colours and textures in the landscape. Benefits also appear to be gained from hearing the sounds of waves and the pebbles on the beach and also from the smells in the air which one respondent described as 'fresh and invigorating' (participant no.2). White et al. (2010) also found similarly, that sensory experiences from aquatic environments greatly aided restorative experiences and that these were mainly derived from visual properties, restorative sounds and the potential to be immersed in the water.



Photographs 5.5 & 5.6: illustrations of the colours and sounds recorded (source: female no.9 West Bay & male no.6 Bridport)

A sense of freedom also appeared to be important for many participants and this was explained both through experiences which feel 'far from everything, far from work and far from where I live' which makes these experiences seem 'more peaceful' (male no.11). Also, the sense of an escape from the everyday seemed to be important. In a few cases, these feelings were tinged with sadness as the perception for some was that the freedom associated with the Jurassic Coast is under threat for a variety of reasons such as the encroachment of man-made structures and

increased constraints due to health and safety considerations. One participant for example, spoke about a hotel which looked 'out of place' in the coastal landscape. Another spoke about his distaste for caravan parks along the coast which he stated 'ruin the landscape and in the end you destroy what people have come to see'. These perceptions were frequently recounted with a sense of melancholy as individuals recollected the days 'before health and safety went mad when children could be children and climb across rocks' (female participant no.9). Now, signs saying 'keep off rocks' as well as other signs stating 'no pic-nics or BBQs' (photograph 5.7) illustrate the imposition of man-made regulations onto the otherwise natural scene.



Photograph 5.7: man-made regulations in nature (Source: male no.1, Preston Beach)

The diary entries were completed in text by eleven of the participants and in picture form by one. Whilst the diaries were not lengthy explorations of experiences and perceptions at the Jurassic coast, they do provide some insights into people's motivations for visiting and some ideas of how they experienced the landscape. Themes emerging echoed those previously explored such as familiarity and comfort in the landscape and how some things were constant and unchanging. Memories of Dorset were a strong feature in the diary entries which served to trigger some of the benefits of being at the coast. One participant for example, commented 'there is an uncanny draw about the Dorset coast as well as a reminder of an England that used to be, that brings me back year after year (female participant no.12).

Participants also wrote about feelings of being relaxed and unhurried, in contrast to their everyday lives which meant they were able to enjoy things they wouldn't normally have time to such as the following female participant comments on 'it was a

lovely day so we sat on a bench and took in the scenery. I noticed there were some very pretty butterflies flitting around and the different colours in the stones'. Having the time and space to focus on things that hurried lives often miss, was noted as a particular benefit of being relaxed in the setting. It could be argued that a similar perspective may have been recorded in a relaxed state in another environment although specific references to the Jurassic coast and how this setting was particularly special to this group of participants highlights how this landscape has value for them.

These diary recollections and illustrative photographs provide some interesting insights into how different people build up layers of personal meaning which they overlay onto landscapes. This results in very different stories being told about how and why the Jurassic Coast has come to have meaning and significance for these individuals. The following section uses the quantitative survey data to explore how other socio-demographic variables influence how the Jurassic Coast is experienced and perceived

5.6 The Effects of Socio-Demographic Variables on Human Need Satisfaction at the Jurassic Coast

The previous sections have explored the ways in which the Jurassic Coast comes to have significance and meaning for people, such as through the qualities of the physical landscape itself, the activities in the landscape and the interpretations of the landscape. The qualitative data analysed revealed that individuals build up different layers of meaning around the landscape, layers which are in many ways personal to each visitor. This section will explore whether socio-demographic variables, collected in the survey, play any part in how human needs are satisfied at the case study areas. The variables collected will be analysed in turn. Where any differences are revealed, the mean or median scores are reported for the human need categories and these are both interpreted as the closer to 1 (strongly agree on the likert scale), the more the need is satisfied.

5.6.1 Gender

To determine if there were any significant differences in gender in the visitor sample at each case study site, a Chi-square for independence test was carried out. This indicated that there was no significant difference in the gender make up of the sample at each site ($\chi^2 = 0.55$, $p > 0.05$). To explore whether any differences existed in how males and females rated the satisfaction of human needs, a Mann-Whitney U test was carried out. This test is used to test for differences between two independent groups on a continuous measure (Pallant, 2010, p227). This test showed that there was a statistically significant difference in the ways that males and females rated the human needs items in all categories except for 'belonging and connectivity' and 'need to know and understand' in which there was no significant difference detected. In each case, the mean rank for females is lower than for males which means that females rated items more highly in these categories (closer to 1) than males. Table 5.8 illustrates this clearly and also shows that for both males and females, belonging and connectivity was the lowest rated human need in terms of satisfaction (highlighted in blue) whilst for males, the highest level of satisfaction was in the leisure and recreation category and for females, this was aesthetic appreciation (highlighted in pink)

Table 5.8 – Human need satisfaction by gender

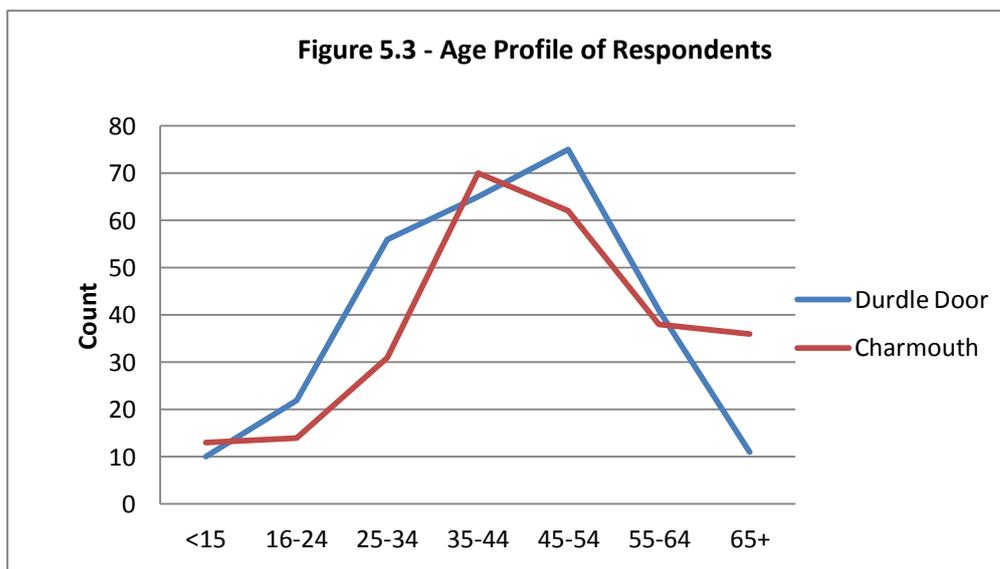
Human Needs Categories	Gender	
	Males n=251	Females n=297
Belonging & connectivity	2.45 (0.70)*	2.38 (0.74)
Need to know & understand	1.98 (0.61)	1.86 (0.64)
Aesthetic appreciation	1.84 (0.61)	1.65 (0.58)
Leisure & recreation	1.82 (0.57)	1.69 (0.57)
Freedom & escapism	2.10 (0.59)	1.88 (0.64)
Self-actualisation	2.06 (0.57)	1.91 (0.58)
Transcendence	2.20 (0.66)	1.99 (0.64)

*Mean scores with standard deviations in parenthesis

5.6.2 Age

The age profiles of respondents was analysed to detect if any differences in how different age groups felt their human needs were satisfied at each case study site. At both Charmouth and Durdle Door, exactly 50% of respondents were aged 35-54 and the age profiles of males and females across both sites was found to be not significantly different (Pearson's Chi-square = 6.47, $p > 0.05$). The age profile of respondents at both sites is shown in figure 5.3.

In terms of the numbers of people who would have been expected at each site if the age profile followed a normal distribution was computed in SPSS using a Chi square test which showed that there was a significant difference in terms of expected and observed values ($\chi^2 = 23.733$, $p < 0.05$). The difference appears to be that there are less respondents of 65+ in Durdle Door (expected count= 24.2, observed count =11) and more respondents in the 25-34 age group than expected (observed count = 56, expected count = 44.8). This is perhaps a result of the relatively less accessible beach at Durdle Door which would prove a challenge to older and less mobile visitors.



For Charmouth, the reverse is true as more older people (65+) were represented in the survey than would have been expected (observed count=36, expected count=22.8). There were also fewer respondents in the survey aged 25-34 than

would have been expected (expected count=42.2, observed count=31). The reasons for these discrepancies are likely to be varied and it must be remembered that this is not intended to be representative of the visitor population at each site, simply a sample of that population, and the sample is dependent on the willingness of respondents to take part.

To determine if there were any significant difference in how respondents in different age groups rated the satisfaction of human needs, a Kruskal-Wallis test was carried out. This test is the most appropriate test for non-parametric data which allows comparison between scores on a continuous variable with three or more categories (in this case the 7 age groups) (Pallant, 2010, p232). This test showed that there was no significant difference in the way that each age group rated items except in the categories of 'belonging and connectivity' ($\chi^2=13.6$, $p<0.05$, $n=524$) and 'need to know and understand' ($\chi^2=14.2$, $p<0.05$, $n=530$). In these two categories, the lowest scores were found in the 16-24 age group. Scores appear to suggest higher satisfaction in these two categories as ages increase. In all other categories, there is no significant difference in how different age groups responded. It is interesting however, to compare mean scores for each human need category for each age group to see which groups rated which needs the highest and lowest.

Table 5.9 shows that for each age group, belonging and connectivity was rated the lowest (highlighted in blue) whereas either aesthetic appreciation or leisure and recreation were rated highest across all age groups (highlighted in pink). Since all groups agreed least with the belonging and connectivity category, the next lowest is also highlighted (in purple). This shows that for all but the youngest age groups, transcendence was rated the lowest. For the 15 and under group, self actualisation was rated lowest and for 16-24 year olds, need to know & understand was rated lowest (behind belonging and connectivity). This is interesting since transcendent experiences or those associated with 'peak-flow experiences' (Mannell and Iso-Ahola, 1987) or 'forgetting oneself and becoming totally involved in the activity at hand' (p325) were clearly important for respondents at the Jurassic Coast as evidenced through the interviews in particular. It is noted however, that the quantitative data also shows that mean scores for these needs across all questionnaire respondents are around 2 which is still 'tend to agree' on the likert

scale so it can be deduced that these needs are still recognised as important, though perhaps not as immediately evident than needs such as aesthetic appreciation and leisure and recreation.

Table 5.9 – Human Need Satisfaction by Age Group (across both case study sites)

Human Needs Categories	Age Categories						
	<=15 n=18	16-24 n=34	25-34 n=81	35-44 n=127	45-54 n=124	55-64 n=65	65+ n=38
Belonging & connectivity	2.35 (0.61)*	2.72 (0.70)	2.43 (0.80)	2.48 (0.67)	2.36 (0.67)	2.40 (0.81)	2.15 (0.74)
Need to know & understand	2.04 (0.64)	2.24 (0.76)	1.97 (0.73)	1.95 (0.53)	1.81 (0.62)	1.85 (0.57)	1.85 (0.58)
Aesthetic appreciation	1.85 (0.66)	1.91 (0.65)	1.72 (0.64)	1.78 (0.56)	1.62 (0.53)	1.75 (0.67)	1.83 (0.69)
Leisure & recreation	1.73 (0.58)	1.89 (0.63)	1.78 (0.61)	1.76 (0.49)	1.66 (0.56)	1.81 (0.57)	1.84 (0.71)
Freedom & escapism	1.99 (0.87)	2.17 (0.61)	2.04 (0.66)	1.98 (0.57)	1.96 (0.58)	1.85 (0.64)	1.90 (0.68)
Self-actualisation	2.09 (0.57)	2.17 (0.64)	2.00 (0.63)	2.01 (0.56)	1.93 (0.53)	1.93 (0.62)	1.94 (0.67)
Transcendence	2.03 (0.61)	2.19 (0.63)	2.08 (0.74)	2.11 (0.63)	2.05 (0.62)	2.10 (0.74)	2.04 (0.72)

*Mean scores with standard deviations in parenthesis

5.6.3 Familiarity with the Jurassic Coast and distance travelled to it

In total, over both sites, 74% of respondents travelled between 60 and 150 miles to reach the site. From these distances, visitors could equally be day-trippers or staying overnight. 3.7% of total respondents could be considered to be 'local' as they travelled 10 miles or less to reach the site. In Durdle Door this figure was 2% (5 respondents out of a total of 259 valid responses) and in Charmouth, this was 5.5% (14 respondents out of 254 valid responses). This higher figure in Charmouth could be accounted for as Charmouth village (with a population of approximately 1,300 according to the 2001 census) is a short distance to the beach and thus it is likely that visitors may live in the village. The beach at Durdle Door on the other hand, is

further from population centres with West Lulworth being the closest with a Parish headcount of just 766 (2001 census).

At the other end of the scale, 4% of respondents (21 of the total of 513) travelled over 200 miles to reach the case study sites. This is further broken down into 14 respondents travelling this distance to get to Durdle Door (5.4% of respondents in this area) and 7 to Charmouth (2.8% of total respondents at this site). To determine whether any differences could be detected between how people felt human needs were satisfied and how far people had travelled to the site, a Kruskal Wallis test was carried out. This showed a statistically significant difference in how people who had travelled different distances rated items in the categories of 'belonging and connectivity', 'need to know and understand' and 'aesthetic appreciation'. In the case of belonging and connectivity, higher scores were recorded amongst those who had travelled smaller distances (0-10 miles). This group could be considered local and would arguably therefore, have more of a connection and attachment with the site (median for this group = 1.5 compared to medians for the other human needs categories of 2.5). During one interview for example, a male participant who had visited Charmouth stated 'I guess it is probably more valuable to people who live locally who can go there everyday if they want to'.

For the human need to 'know and understand', interestingly, the difference was only statistically significant at Charmouth and this difference was that both local people and those who had travelled from greater distances rated this category higher than those who had travelled from the mid-range of 31-150 miles. The median scores for the 0-10 mile group was 1.75 compared to 2.00 for the mid-range and then 1.75 again for distances over 150 miles. It could be that local people understand and appreciate the geological significance of the area and also that people who have travelled greater distances may also be aware of the heritage value of the landscape and the opportunities for fossil hunting and this may form part of their motivation for visiting the area.

Although satisfaction levels for aesthetic appreciation were high across all groups, the highest was recorded in the local group (0-10 miles travelled). The median for this group was 1.00 compared with 2.00 for those who had travelled 31-60 miles and

1.75 for those travelling over 150 miles to reach the site. For those who are local to the Jurassic Coast then, the aesthetic value of it may be important to them in their choice to live in the area, although this was not tested for in the questionnaire.

Familiarity with the Jurassic Coast may also have a bearing on how human needs are satisfied and this was tested for again using the Kruskal Wallis test. Firstly respondents were categorised into four categories; 'no familiarity' (those who had never before visited the site), low familiarity (those who had visited once or maybe twice some time ago), 'medium familiarity' (those who had visited perhaps a few times previously and within the last five years) and 'high familiarity' (those who visit regularly). For both sites, the category with the most counts was 'medium familiarity' (40% of respondents in Durdle Door and 49% in Charmouth). This is followed by 'no familiarity' (34% in Durdle Door) and 20% in Charmouth). The Kruskal Wallis test showed that a significant difference exists in how people rated human needs items in the categories of 'belonging and connectivity', 'leisure and recreation', 'freedom and escapism', 'self-actualisation' and 'transcendence'. In each case, the highest satisfaction of these needs is within the 'high familiarity' group and the lowest satisfaction is amongst those with no or low familiarity with the Jurassic Coast. This suggests that high satisfaction of these needs results from having made previous visits which presumably were positive experiences and resulted in greater motivation for repeat visits.

5.6.4 Company

For both locations, the majority of respondents were visiting as part of a family group (66.4%) and 'with friends' was the next most popular response (31.3%). This trend was replicated at each survey site. Three respondents were alone at Durdle Door and nine at Charmouth. This may be explained by the proximity of Charmouth beach to the village which gives residents the opportunity to walk to the beach alone, as one individual commented: 'I don't have any doubts about wandering off to the beach, I feel very safe here' (female, Charmouth, Oct). A Kruskal Wallis test showed that a significant difference exists in how people answered the satisfaction of the human need 'freedom & escapism' and who they were with at the time of the visit. This difference appears to be that people who stated they were part of an organised tour, rated this human need lower in satisfaction (median =

2.67) than those who were alone or part of a family group (median for both = 2.00). No other significant differences were found for any other human need and company.

5.6.5 Ethnicity & Occupation

Of the total respondents at both sites, 87% were 'white British', this is broken down into 84% at Durdle Door and 93% at Charmouth. A Kruskal Wallis test revealed that the only statistically significant difference in how people rated human need items was in the category of 'freedom & escapism'. Interestingly, in this category, the strongest satisfaction of this need was in the ethnic group 'Indian' (median = 1.3 compared to 2.0 for white British). Respondents in this category accounted for 1.3% of the total respondents (5 individuals at Durdle Door and 2 at Charmouth) and this group appeared to find higher satisfaction with freedom and escapism than other ethnic groups. The reasons for this are elusive as no representative from this group was included in the interview stage.

In terms of occupation, the largest proportion of respondents were in the 'professional' and 'managerial' categories (48% of total respondents). On the other hand, 8.5% were students and 12.3% were retired. A Kruskal Wallis test revealed a significant difference in the way that different occupational groups rated the satisfaction of human needs in the categories of 'need to know & understand' and 'aesthetic appreciation'. For need to know & understand, the highest satisfaction was found in the categories of skilled, non-manual workers and also for home-makers/carers (medians for both = 1.75). For aesthetic appreciation, the highest satisfaction is again with the skilled non-manual group which made up 15.9% of the total sample from both sites (median = 1.75). This compares to the occupation group least satisfied in the need of aesthetic appreciation which are those who are not working (median = 2.00). This group makes up only 1.3% of the total respondent sample. The reasons for these differences are again elusive as interview data did not highlight any specific links between experiences in and benefits from the landscape and profession.

5.7 Conclusions

This chapter revealed that all human needs were highly satisfied at each case study location along the Jurassic Coast. It explored the ways in which these needs were satisfied and hypothesised that this satisfaction and the meaning and significance attributed to the Jurassic Coast comes through three overlapping dimensions in a fluid and dynamic relationship. The dimensions identified are the physical landscape, the activities that people undertake in the landscape and the meanings and interpretations that people ascribe to the landscape. The ways in which needs are satisfied however, is both the result of a shared and cultural understanding of the landscape and through personal overlays which serve to add texture to how the landscape comes to have significance and meaning for the individual.

The influence of some socio-demographic variables was also tested to determine if these variables collected in the questionnaire had any bearing on how human needs were satisfied. The categories of belonging and connectivity, need to know and understand and aesthetic appreciation appear to be the needs which are influenced most by socio-demographic variables such as age, gender and familiarity with the landscape.

The relationship between tourism, the Jurassic Coast and the satisfaction of human needs and subsequent feelings of eudaimonic well-being is thus complex to unravel and involves understanding a variety of factors and how they shape individual experiences in the landscape. However, the evidence presented through this chapter does point to a positive relationship between the Jurassic Coast and the satisfaction of human needs. The following chapter will further explore this relationship and seek to understand how the data collected at the Jurassic Coast can add to the explanatory power of the conceptual framework presented in chapter three. It will also seek to reveal how the satisfaction of human needs manifests in eudaimonic well-being of visitors to this landscape and what this means to them.

Chapter 6: Data Analysis

From the Satisfaction of Human needs to Eudaimonic Well-being for Visitors to the Jurassic Coast

6.1 Introduction

The previous chapter explored the ways in which human needs were satisfied at each case study site along the Jurassic Coast and some of the causes of this satisfaction. It was concluded that satisfaction occurs for visitors in different ways, resulting from the interplay of the perceptions of the physical landscape, the activities undertaken in the landscape and the meanings associated with it as well as other influences acting upon the individual. Some of these influences were socio-demographic and these may play a role for some in how the Jurassic Coast satisfies human needs. This chapter will continue to investigate this relationship, how visitors experience and perceive the Jurassic Coast and how the resultant satisfaction of human needs can lead to a sense of eudaimonic well-being, important for a person to be 'fully functioning' (Ryan and Deci, 2001). Empirical evidence, using both quantitative and qualitative data interchangeably, will be investigated further to determine the ways in which the satisfaction of human needs manifests in eudaimonic well-being for visitors and what this means for them.

This analysis will build upon the body of work concerning restoration in nature (Hartig et al., 1991; Kaplan and Kaplan, 1989; Ulrich, 1979) which purports that natural landscapes exert beneficial influences on the individual resulting in enhancements in well-being. Through a detailed analysis of how nature influences different dimensions of well-being, some conclusions may be drawn as to how eudaimonic well-being specifically is enhanced through experiences and interactions with nature. This body of work will be analysed to determine how understandings of restoration in nature can shed light on the relationship between the Jurassic coast and the eudaimonic well-being of visitors to it.

The following section will look back at some of the empirical data analysed in chapter five and frame it in the context of the conceptual framework introduced in chapter three. This framework presented the relationship between the landscape and

eudaimonic well-being as a dynamic one, involving myriad influences on the individual in terms of how they come to perceive the landscape as significant and valuable. This analysis will add to the framework and develop its explanatory power in light of empirical data.

6.2 The Relationship Between the Jurassic Coast, Human Needs and Eudaimonic Well-being

Chapter three presented a conceptual framework of the relationship between tourism, the landscape and eudaimonic well-being. The empirical evidence from the Jurassic Coast provides additional clues as to how this relationship plays out in this particular landscape. Participants in this research for example, spoke candidly about the properties of the physical landscape and how aspects of it serve to evoke different emotions within them. It has been evidenced in the previous chapter that responses to the landscape are shaped by various influences which determine how the individual constructs and values the landscape for themselves. Such influences are both cultural in that they are shared and in the case of the Jurassic Coast, its universal value and geological significance is widely understood which shapes how it is perceived. In addition, a range of other influences, both internal (such as personal expectations and memories) and external (such as the weather, who visitors are with and facilities available) to the individual have a bearing on how human needs are satisfied in the landscape. The explanatory power of the conceptual framework can thus be augmented by including insights from this empirical evidence, as figure 6.1 shows.

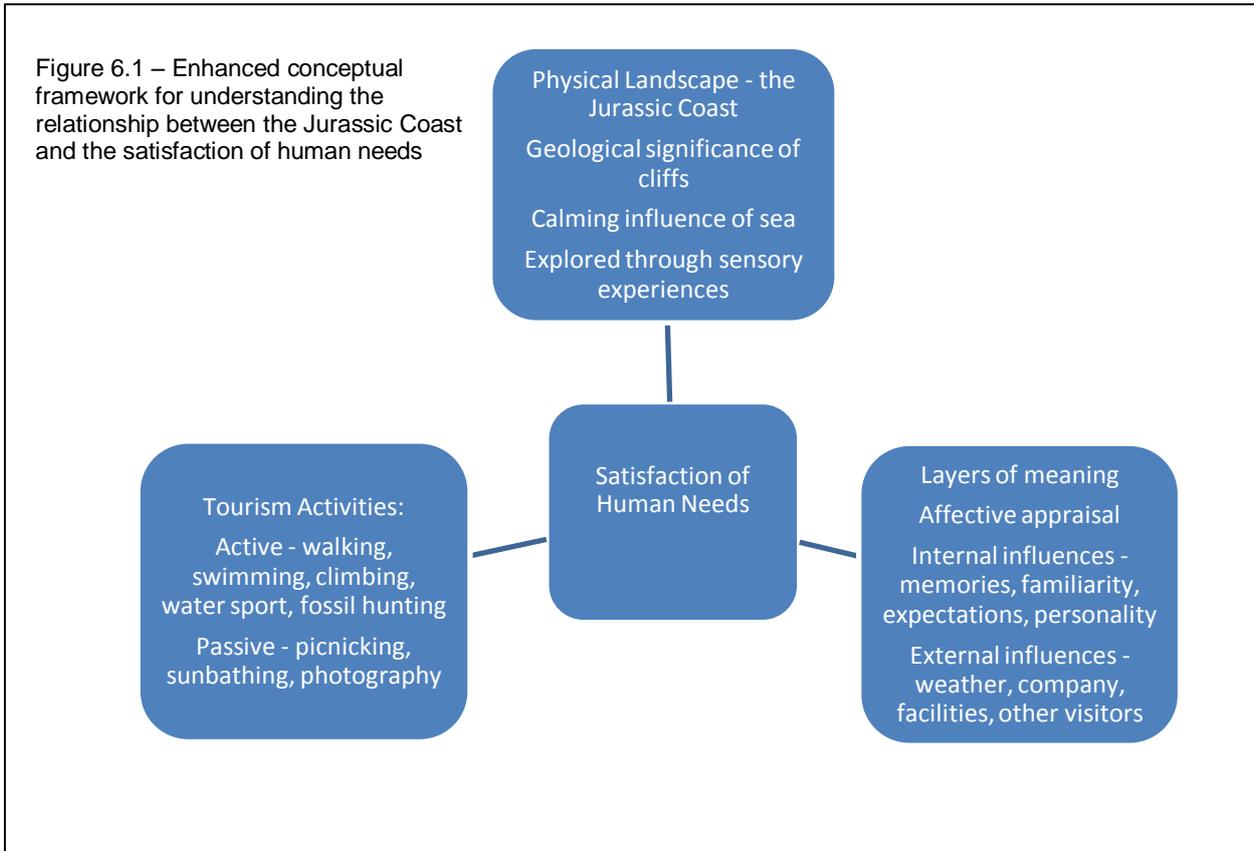
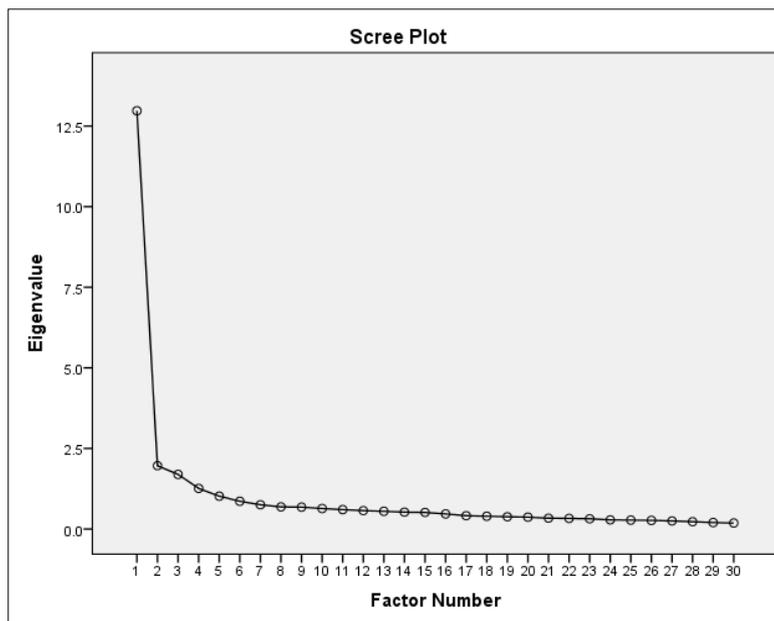


Figure 6.1 serves well to consolidate understanding about how the Jurassic Coast comes to have meaning and significance for visitors and how these elements combine to satisfy human needs to varying degrees. What this satisfaction of needs means for visitors and how this translates into eudaimonic well-being is the next step in understanding the relationship between the Jurassic coast and eudaimonic well-being. This can be, at least partially, revealed by conducting a Principal Component Analysis (PCA) on the data to reveal the underlying trends or the items which survey respondents answered most consistently. PCA is a data reduction technique which looks for ways in which data can be summarised or reduced using a smaller set of components which are related or which 'clump' together (Pallant, 2010, p181). The PCA, using oblimin rotation, was evaluated using eigenvalues (the amount of variance each item accounted for) and the scree plot (the visual representation of eigenvalues). The scree plot can be seen at figure 6.2 and is used for factor extraction. This involves 'determining the smallest number of factors that can be used to best represent the interrelationships among the set of variables' (Pallant, 2010, p183). Whilst it is largely a subjective matter for the researcher to decide how

many factors it makes sense to extract, in this case, one factor appeared most prominent and representative of the underlying trend in the data. This factor had an eigenvalue of 12.97 which accounted for 43.3% of the variance in the factor solution. This shows that almost half of the variance in the data can be explained by the items making up this factor.

Figure 6.2: Scree plot for Factor analysis



This solution identifies 14 items that 'belong' together as they share an underlying theme and a trend of consistent ratings. Table 6.1 provides details of these items which most strongly load onto this factor (loading is an expression of the strength of relationship between each item and the factor). It has been argued (e.g. Stevens, 1992, p382) that factor loadings are statistically meaningful at >0.298 where $n=300$ and >0.210 where $n=>600$. Items which had a factor loading of <0.22 were therefore, excluded from analysis of this factor, given the sample size of 550. The items which load most strongly onto the factor span all of the human needs categories, although self-actualisation and transcendence are most prevalent in the solution. Whilst these categories had means closer to 2 than to 1 showing a tendency to 'agree' with items measuring these categories rather than 'strongly agree', the PCA shows that items in these categories represented the underlying current of the

data. This factor solution also seems to provide a good fit with the interview data in particular which presents a clear picture of how experiences at the Jurassic Coast are associated with experiences such as clearing of one's head and putting things into perspective; experiences which could be recognised as self-actualisation and transcendent experiences.

To check the reliability of this new scale, an internal consistency test was conducted using the Cronbach Alpha Coefficient. This score should ideally be above 0.7 (Devellis 2003, cited by Pallant, 2010, p97). This analysis revealed a Cronbach Alpha score of 0.938 showing a very high level of internal consistency of the 14 items in this new scale which can be used in further statistical explorations of how different visitors rated these items. A test of normality was also run on this scale and the test statistic ($z=1.150$, $P>0.05$) shows that the data are normally distributed.

6.2.1 Interpretation of the Factor

Interpreting the factor involves analysing the items making up the factor to understand what the underlying themes or trends are in the data. Table 6.1 shows which items from the human needs categories load most strongly onto this factor. The top 10 items which load most strongly are from the self-actualisation and transcendence categories. These human needs categories are those associated with positive emotions which manifest in feelings of increased energy and vitality and a sense of optimism and enthusiasm and a connection with something other than the purely personal. Items that have a high loading on the factor can be seen to characterise the underlying theme that the factor represents.

An examination of these items reveals a theme of having the time and space to focus on one's life and to put things into perspective. Further, it is about a sense of inner calm, of peace and also of renewed vigour and energy. These simultaneous feelings of being calm and tranquil and yet energetic is reflected through the interview data (chapter 5) and also in the work of Kaplan (1995, p174) who cites Olmsted (1865) in concluding that 'nature employs the mind without fatigue and yet exercises it; tranquilises it and yet enlivens it; and thus, through the influence of the mind over the body, gives the effect of refreshing rest and reinvigoration to the whole system'.

The effects of the Jurassic Coast on visitors appear to come through a variety of feelings and responses to it. These responses can be seen as contributing to positive psychological wellbeing and positive functioning; a key requisite in eudaimonic well-being (Ryff and Singer, 2008, p20). This factor can be interpreted therefore, as a *eudaimonic well-being scale* with the items making up the scale as indicators of eudaimonic well-being. This points to the ways in which the satisfaction of human needs manifests itself in visitors as eudaimonic well-being. What this actually means to visitors and how it shapes how visitors perceive and value the landscape will be examined in the following section.

Table 6.1 – One Factor Solution: Items Measuring *Eudaimonic Well-being*

Human Need Items Loading onto Factor	Item	Factor Loading
1. Transcendence item 3	<ul style="list-style-type: none"> Being here helps me to think about my life 	0.938
2. Transcendence Item 4	<ul style="list-style-type: none"> Being here helps me to restore a sense of balance in my life 	0.839
3. Self-actualisation item 2	<ul style="list-style-type: none"> Being here gives me time and space to reflect on my life 	0.758
4. Transcendence item 1	<ul style="list-style-type: none"> Being here enables me to experience a sense of inner peace and tranquillity 	0.687
5. Transcendence item 2	<ul style="list-style-type: none"> Being here makes me feel good about myself 	0.660
6. Self-actualisation item 5	<ul style="list-style-type: none"> Being here makes me feel enthusiastic and full of energy 	0.605
7. Self-actualisation item 3	<ul style="list-style-type: none"> I feel inspired by being here 	0.503
8. Self-actualisation item 4	<ul style="list-style-type: none"> I feel a sense of vigour or vitality from being here 	0.503
9. Transcendence item 6	<ul style="list-style-type: none"> I feel calm and relaxed in this place 	0.488
10. Transcendence item 5	<ul style="list-style-type: none"> I feel very lucky to have experienced this place 	0.377
11. Aesthetic appreciation item 2	<ul style="list-style-type: none"> I feel a sense of being uplifted emotionally by being here 	0.346
12. Self-actualisation item 1	<ul style="list-style-type: none"> I feel a sense of accomplishment from walking or undertaking other activities in this area 	0.309
13. Freedom & escapism item 3	<ul style="list-style-type: none"> Being here makes me feel like I am away from all my day to day worries 	0.259
14. Need to know & understand item 3	<ul style="list-style-type: none"> Being here gives me a sense of understanding nature 	0.224
Eigenvalue		12.97
Percentage of variance explained		43.3
Cronbach's alpha		0.938

6.3 Manifestations of Eudaimonic Well-being in the Visitor Population at the Jurassic Coast

The items making up the above scale are useful in providing indicators of eudaimonic well-being and for giving a sense of what this might mean for visitors to the Jurassic Coast. The narratives presented through interviews provide further insight into how eudaimonic well-being is experienced at this landscape and these can be related to the indicators given in the scale. It is also interesting to note how these items compare to the indicators given in discussions around eudaimonic well-being through the literature.

Ryan and Deci (2000) for example, discussed the components of eudaimonic well-being and concluded that these could be thought of as three-fold which became the basis for their 'self-determination theory'. These are; autonomy or a sense of control over one's life, competence, a sense that one is functioning effectively and relatedness which they describe as positive interactions with others. Similarly, Ryff and Singer (2008) characterised positive psychological well-being (which they use as an indicator of eudaimonic well-being) as comprising six dimensions; self-acceptance, personal growth, relatedness, autonomy, relationships, environmental mastery and purpose in life.

The dimensions of psychological well-being identified on the eudaimonic scale and through interview data which appeared to resonate with visitors to the Jurassic Coast can be described as concentrating around four main themes which relate to those given through the literature above (Ryan and Deci, 2000; Ryff and Singer, 2008). These are; a sense of perspective; inner peace and calm; emotional and physical uplift and self-esteem. These will be explored in turn with reference to how these dimensions were detected through interview narratives.

A Sense of Perspective

Gaining a sense of perspective is something which was referred to both in a personal sense as in being able to reflect on life and to prioritise thoughts and also in a wider sense about thinking about the place of humanity in the wider universe. Items referring to this sense of perspective are those which load most strongly onto the eudaimonic well-being scale and include thinking about and reflecting on life and

restoring a sense of balance. This reflection is, for some, inspired by the surrounding cliffs which serve to highlight the timelessness of nature compared with the brevity of human existence; a reminder which is quite literally engrained in the landscape. One respondent for example, stated that 'in times of my life when I have problems, I always come here to clear my head and it makes me think that the little things you get worked up about aren't that important. Being here somehow does that. No-where else does that' (male, West Bay). Similarly, a participant describing her experiences at Burton Bradstock observed that seeing the beach in Dorset 'it gives you a sense of perspective and I feel in touch with things and you realise how very small we are and how very magical everything is'. Speaking about this sense of perspective, a male respondent at Charmouth also commented that feeling the 'power of the elements and our place in it, really puts things into perspective'. The unique heritage landscape at the Jurassic Coast seems therefore, to enable a frame of reference for individuals' own lives which is beneficial in ordering thoughts and priorities.

Inner Peace and Calm

The sense of inner peace and calm is captured through the survey as items relating to 'a sense of inner peace and tranquillity' and 'being calm and relaxed'. These sentiments were also frequently vocalised through the interviews; one participant for example, commented about being at Worbarrow Bay, 'it is so tranquil with the sound of the water on the shingles, I can take my worries with me but when I get there, they just disappear'. Another male visitor at Charmouth noted that the feeling of calm he experienced there was largely due to being by the sea which he noted made him feel 'homely and peaceful'. For many, these feelings came about through experiencing the landscape through the senses such as the 'fascination with the light on the sea' (male, Charmouth) and hearing the 'sounds of the tide which are very calming' (female, Charmouth). For others, the sense of calm came from the expending of energy walking to the beach which 'left us all feeling calm and happy to have done the walk' (female, Durdle Door).

Emotionally and Physically Uplifted

These feelings of inner peace and calm appear to be juxtaposed for many respondents with a sense of being emotionally and physically uplifted. As one female visitor to Durdle Door commented; 'I felt calm and relaxed and maybe energised. It obviously takes some energy to get up there but it is worth it, it also helps to clear your head as well'. These feelings also appear related to how Huta and Ryan (2010) describe eudaimonic well-being as 'associated most evidently with a state of 'elevating experience' (p739) which includes feelings of inspiration, awe and transcendence which they define as 'a connection with a greater whole'. For one male visitor to Durdle Door, these feelings came as a result of the sea and hearing it 'crashing onto the shore and the pebbles rolling up and down' which he found to be both 'quite relaxing and energetic at the same time'.

A sense of inspiration is also connected to this theme and specifically included on the eudaimonic well-being scale as item 'I feel inspired by being here'. Participants talked about a sense of inspiration from being at the Jurassic Coast and this manifested in inspiring thoughts both about respondents' own worlds, goals and aspirations and also with regards to being inspired to think about the heritage of the landscape, to the power of nature and the evolution of time. These feelings appear to be mostly engendered through the physical and unique qualities of the Jurassic coast landscape as illustrated in the following quote; 'the Dorset coast of course has a special character as you can just be walking along the beach and you can find a fossil and that inspires the imagination to go back in time' (female, Worbarrow Bay). Another female visitor commented that she found the landscape at Lyme Regis to 'inspire the imagination as it feels very rooted in history'. This gives a sense of how the Jurassic Coast is especially significant for visitors here.

Self-esteem

The theme of self-esteem includes the sense of accomplishment and environmental mastery and is indicated by the items on the eudaimonic scale 'being here makes me feel good about myself' and 'I feel a sense of accomplishment from walking or undertaking other activities in this area'. One female visitor for example, spoke emotionally about her feelings about seeing Durdle Door for the first time and how she felt 'total peace and a sense of achievement that I had actually found it and got

there'. These feelings were referred to most often by visitors to Durdle Door, for whom the walk is much more physically demanding than at Charmouth beach and a sense of accomplishment and achievement is indeed justified.

Although not significantly represented on the eudaimonic well-being scale, relatedness or positive relations and connections with others or a higher power does feature in many of the interview narratives. This is somewhat evidenced in the last item in the scale 'being here gives me a sense of understanding nature' which gives a sense of understanding and connecting with something other than the purely personal. This sense was described by one female respondent visiting Burton Bradstock as a connection with the landscape itself rather than with the people in it; 'I love the peace of the place, I can't explain it and even in the crowded places, I think I feel a connection here'. A connection in a spiritual sense was also described by others, not necessarily in any religious sense but simply in feelings of being spiritually fortified by an appreciation of the landscape. One respondent for example commented 'the beach I think has a positive impact on the soul which is really important' (female, Lyme Regis). Similarly, another female respondent expresses the ineffability of the experience in this landscape and the sense of a connection in some way with a higher power is evident;

There is the depth of the Jurassic coast which I don't know so much about but that is quite ancient and it's not religious but the sense of that coast, there's a kind of exposure there to something else (female, Dancing Ledge)

The dimensions of eudaimonic well-being appear to be well represented in this empirical data, both through the factor loadings on the eudaimonic well-being scale and also through this exploration of respondents' own words. Such enhancements of eudaimonic well-being have extensive benefits both for the individual and also for wider society. Feelings of calm and tranquillity gained by walking at the Jurassic Coast for example, are noted by respondents as enduring and something that can last 'for the rest of the day' (male, Charmouth) or even 'for about a week after I got back home to Sheffield' (female, Charmouth). Considerations of the relationship between the Jurassic Coast and eudaimonic well-being can thus have implications for how this landscape is valued in a wider sense. The psychological well-being of

interactions with nature is widely documented through the literature and is frequently referred to in terms of 'restoration'. In some senses, restoration can be equated with eudaimonic well-being as it involves feelings of being rejuvenated, energised and cognitively restored. This theme will be explored more fully in the following section where it will also be considered whether the Jurassic Coast can be considered a 'restorative landscape' in the sense that it appears to enhance eudaimonic well-being.

6.4 The Jurassic Coast – A Restorative Landscape?

Chapter three considered the role of nature in restorative experiences and how interactions in nature serve to enhance eudaimonic well-being. Kaplan and Kaplan's (1989) attention restoration theory was discussed which purports that spending time in natural environments leads to four progressive levels of restoration. These levels involve firstly clearing one's head and enabling directed attention to be restored and then progressively to be able to concentrate on one's thoughts and to reflect on one's life. It is interesting that all levels are evident in the quantitative and qualitative data from the Jurassic coast. Heinzman (2002) states that the first two levels of restoration can be described as attentional recovery whilst the latter two may be termed 'reflection'. Reflection he states is 'a deeper and more significant benefit than recovery' (p160). Such reflection has been explored in the previous section where it was noted that this leads to a sense of perspective and to prioritising one's thoughts. One male respondent for example stated that 'taking in the scenery' at Charmouth beach 'helps you take stock of things. It helps you to relax and think'. Similarly, another respondent commented on how the scenery enabled her to reflect on life, 'it was amazing, just looking at the scenery. Just looking and trying to put things into perspective, it just made you think a bit more' (female, Charmouth, August).

For Ulrich (1979, 1981) the benefits of contact with nature are evidenced largely in the reduction of stress. He states in his early experiment which used slides to gauge the benefits of viewing different scenes that 'overall, the results strongly suggest that exposure to natural scenes had mitigating influences on the subjects' anxiety states' (Ulrich, 1979, p20). This finding is corroborated in this study at the Jurassic Coast

as the items associated with low levels of stress (being uplifted emotionally, feeling happy, feeling a sense of vitality, being enthusiastic and full of energy and experiencing inner peace and tranquillity) each have a mode response of 2 which equates to 'tend to agree' on the likert scale used, which suggests an emotional state in which stress and anxiety do not feature, at least not to any great extent.

The issue of whether this relaxed state was induced by being in the landscape at the Jurassic coast is difficult to prove as measures of stress were not collected in this study before and after the individuals' visit. However, this link between the absence of stress and being in this landscape has been evidenced through interview data such as the following female respondent who spoke about Charmouth as 'a place that always engenders a feeling of just being completely with no stress'. Another respondent commented on how simply viewing the coastline triggered feelings of being uplifted; 'it's when you see the rugged coastline in Dorset that I start to feel brilliant – my heart expands and I just feel much more peaceful' (female, Durdle Door).

Whilst restoration theory has largely been concerned with renewed directed attention and stress reduction, it is interesting that attempts have been made to bring a number of parallel human experiences into the discourse of restoration. Kjellegrén and Buhrkall (2010, p464) for example, conclude from their study of the effects of being in a woodland setting that 'relaxing in the natural environment appeared to induce mental states termed 'altered states of consciousness' which they conclude are potentially relevant for restoration. Such states of consciousness were defined by Tart (1969, p2) as 'a state in which a person clearly feels a qualitative shift in his pattern of mental functioning, that some quality or qualities of his mental processes are different'. Such a shift is arguably evident in the quantitative and qualitative data as respondents clearly felt a difference in their emotional states compared with their normal day-to-day experiences and many attributed that shift directly to the physical landscape.

Ludwig (1969, p13) goes into further detail regarding the characteristics of the experience of an altered state of consciousness, noting that these include; increased mental alertness, alterations in thinking, changes in emotional expression, change in

meaning or significance, sense of the ineffable (persons claim an inability to communicate the nature of the experience) and feelings of rejuvenation. Such characteristics are apparent in the empirical data from the Jurassic Coast and it is interesting to consider how such states of consciousness can be beneficial to the individual. Recent reports have for example, argued that mind wandering or daydreaming, arguably similar to altered states of consciousness, is actually beneficial for the cognitive abilities of a person (Christoff et al., 2009; Levinson et al., 2012). In this sense, any experience such as contact with natural settings which lead to mind wandering and a clearing of the head such as identified in this research, could in fact lead to higher cognitive abilities such as an increased capacity for working memory and perhaps even for other 'higher order' tasks such as creative problem solving. The Levinson et al. (2012, p4) study reported that task-unrelated-thoughts (or mind-wandering) increase in situations which are less demanding on working memory capacity, i.e. where there are no immediate demanding tasks to complete such as in a natural landscape. It is proposed therefore, that natural environments can facilitate mind-wandering in presenting the individual with a situation where working memory capacity is not required to a great extent and that this state of mind may be beneficial to the individual in assisting with problem solving or focusing on life goals and aspirations. One respondent for example, commented that being at the Jurassic coast for him sparked an internal energy which he found positive in his daily life; 'always you bring back that good energy from this place'.

Kjellgren and Buhrkall (2010, p464) purport that 'a restorative environment is one which can help to restore depleted emotional and functional resources and capabilities'. This has clear resonances with Kaplan and Kaplan's work on attention restoration theory (1989, 1995) and both discuss how visually pleasant surroundings contribute towards increasing mental capacity and reducing stress by restricting negative thoughts and eliciting positive emotions. The aesthetic appreciation of the Jurassic Coast has been evidenced both through the interview data and also through the quantitative expression of satisfaction of the human need for aesthetic appreciation (79% of respondents at Durdle Door and 67% of respondents at Charmouth either 'strongly agreed' or 'agreed' with items making up this need category). This may thus contribute to an understanding of the relaxed state and positive emotions expressed by visitors to the Jurassic Coast.

The influence of waterscapes or 'blue space' on restoration has been explored through the work of White et al. (2010). In their study, participants were shown a series of photographs of different environments which included water to some degree and they were asked the extent to which they perceive the different scenes to indicate potentially restorative properties. Interestingly the results of this study showed that aquatic-only scenes were rated lower than green-aquatic scenes for restorativeness, suggesting that the interface between land and water may be particularly valued. They conclude with a discussion around why it is that the presence of water should trigger such high ratings for preference and restorativeness. In doing so, they identify three lines of enquiry. The first being that the visual qualities of water are attractive and potentially restorative, light reflecting off the water for example, may hold a certain visual stimulus which acts to induce a state of mind in which restoration can take place. Sounds also feature in the same way and lastly, the restorative qualities of immersion into water are discussed.

These aspects of being close to water also feature in this study of the Jurassic coast and activities in water did feature to an extent. Respondents cited swimming, boating and fishing as part of their experience at the case study locations and whilst figures were relatively low (20% of respondents stated swimming was part of their visit, 3% fishing and 2% boating/kayaking/canoeing n=550) they may account for some of the restorative potential in this landscape, though by far the most popular activities were walking and taking in the scenery which enabled a state of mind for reflection. Consistent with the White et al. (2010) study, respondents at the Jurassic coast spoke about the sensory experiences of being there and how they recalled 'the light on the sea' and the 'sounds of crashing waves' and as one other respondent put it 'being here envelopes all your senses'.

The study into cultural ecosystem services by Norton et al. (2012) also found that 'the presence of water was seen to increase the effective delivery of many cultural benefits of landscapes including recreation, calm/tranquillity, escape, spiritual feelings and inspiration' (p452). They also noted that openness and distance and seeing far-off horizons were considered important for calmness and a feeling of perspective i.e. people's place in the landscape and in the world. It can thus be

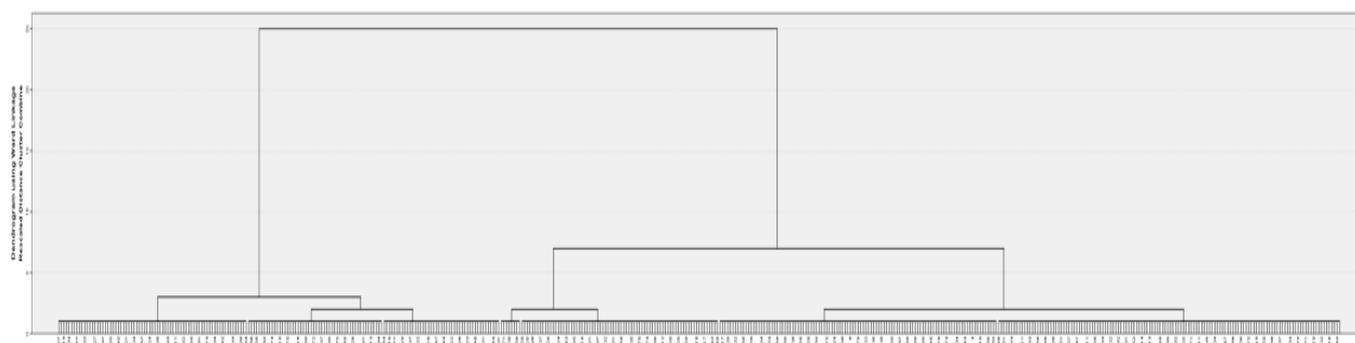
argued that there is something special in the coastal landscape and the seascape which plays upon the senses and facilitates and augments the psychological benefits which lead to eudaimonic well-being. Restoration then can be considered an indicator of eudaimonic well-being and in this sense, the empirical evidence from visitors to the Jurassic Coast does seem to point to it as a restorative landscape. Whether this is so for all visitors or whether particular segments of the visitor population experience eudaimonic well-being more than others will be explored through the next section.

6.5 How Do Different Visitors to the Jurassic Coast Experience Eudaimonic Well-being?

To begin to understand the relationship of different visitors at the Jurassic Coast and eudaimonic well-being, the data were segmented to explore if there were any differences in how respondents rated the items making up the eudaimonic well-being scale. A hierarchical cluster analysis was used for this purpose which is a multivariate method which aims to classify a data sample into a number of groups so that similar subjects are placed in the same group (Everitt et al., 2001). It does this by identifying similarities between individual cases in a dataset and thus helps to profile data according to significant statistical characteristics. In this way, a picture can be built up of how different groups of respondents rated items on this scale and what, if anything these respondents have in common.

An analysis of the dendrogram (the graphical representation of how cases are clustered in terms of their statistical proximity to each other) revealed three large identifiable groups in terms of how they rated the items making up the eudaimonic well-being scale. The dendrogram can be seen at figure 6.3.

Figure 6.3: Dendrogram used to identify clusters for items rated on the Eudaimonic Well-being scale



The groups or clusters can be described as ‘segments that share a broad range of characteristics within statistical limits’ (Barr and Prillwitz, 2011, p802). A one way analysis of variance test (ANOVA) computed in SPSS showed that there was a significant difference between the clusters in terms of how each group had rated the scale items ($F=569.46$, $p<0.05$). The effect of this difference ($\eta^2 = 0.069$) is medium (using Cohen’s (1988) interpretation for differences, small=0.01, medium=0.06, large=0.14 (cited in Pallant, 2010, p254)). As a way of characterising the clusters, their means and medians were compared to gauge levels of agreement with the items making up the scale. The results showed that cluster 1 agreed to a lesser extent with the positively worded items (median=2.86) than clusters 2 (median=2.21) and 3 (median=1.43) with cluster 3 demonstrating the highest levels of agreement (median closest to 1). The clusters were also then analysed in terms of socio-demographic characteristics which further enabled a profiling of the clusters to be carried out. A snapshot of this profiling is detailed in table 6.2.

Table 6.2 – Cluster Characteristics

Characteristics		Cluster 1	Cluster 2	Cluster 3	Test Statistic (One-way ANOVA)
N		77	247	169	
Mean**		2.95	2.19	1.56	569.46* (sig difference in how clusters rated items on eudaimonic well-being scale)
Median**		2.86	2.21	1.43	
Survey location	Durdle Door	42%	51%	56%	No sig difference in survey location between clusters
	Charmouth	58%	49%	44%	
Gender of respondent	Male	56%	49%	37%	4.708* (sig difference in genders between clusters)
	Female	44%	51%	63%	
Age of respondent	<=15	1%	4%	4%	No sig difference in ages between clusters
	16-24	9%	8%	4%	
	25-34	17%	17%	16%	
	35-44	27%	30%	20%	
	45-54	17%	24%	31%	
	55-64	21%	10%	15%	
	65+	8%	7%	10%	
Distance travelled (miles)	0-10	3%	2%	6%	No sig difference in distance travelled between clusters
	11-30	5%	10%	12%	
	31-60	21%	14%	16%	
	61-100	17%	30%	19%	
	101-150	44%	34%	32%	
	151-200	4%	7%	10%	
	201+	6%	3%	5%	
Occupation	Professional	34%	31%	32%	No sig difference in occupations between clusters
	Managerial	16%	18%	16%	
	Skilled non-manual	6%	17%	17%	
	Skilled manual	13%	9%	9%	
	Unskilled manual	3%	0%	1%	
	Student	7%	10%	8%	
	Retired	16%	10%	12%	
	Home maker/carer	4%	3%	4%	
	Not working	1%	2%	1%	
Familiarity with site	No familiarity	27%	30%	21%	4.63* (sig difference in familiarity between clusters)
	Low familiarity	24%	16%	13%	
	Medium familiarity	42%	44%	49%	
	High familiarity	7%	10%	17%	

*p<0.05

** Mean and median relates to the 14 items making up the eudaimonic well-being scale

6.5.1 Profiling of clusters

Table 6.2 illustrates that a statistically significant difference occurs between the three clusters in terms of their means, the gender make-up of clusters and the familiarity with case study locations. The mean and median scores show a higher agreement on the eudaimonic well-being scale for cluster 3 (mean=1.56 and is closest to 1) compared with cluster 1 who appear to agree the least with items on this scale (mean=2.95 and is further away from 1). These two clusters will be analysed in turn to determine if any socio-demographic differences can be detected between the make-up of each group.

Clusters 1 and 3

Cluster 3 appears to agree most strongly with the items making up the eudaimonic well-being scale and this group arguably therefore, gains the most in terms of this dimension of well-being benefits from the visit to the Jurassic Coast. This group represents 34% of the total number of respondents in clusters and of these, 63% are female and 31% are in the 45-54 age category. The one-way ANOVA showed a statistically significant difference in genders between the clusters ($F=4.71$, $p<0.05$) and the post-hoc (Tukey) test showed a significant difference between clusters 1 and 3, although the effect size, calculated using eta squared was small.

For cluster 1, arguably those who least benefitted in terms of eudaimonic well-being benefits from visiting the Jurassic Coast, they represent 17% of the total respondents ($n=77$) across the clusters, so a much smaller group compared with cluster 3 ($n=169$). In this group, the highest percentage for age categories was in the 35-44 age group (27%). Both clusters however had similar age profiles in terms of numbers of young and old and there was no significant difference found in ages between clusters. Cluster 1 for example has 10% of its members aged below 24 and 8% above 65 and cluster 3 has 8% below the age of 24 and 10% above 65.

In cluster 1, the majority were males (56%) compared with 37% males in cluster 3. This may have some bearing on how items were rated. Chapter 5 for example, demonstrated that across all the human needs categories, except for 'belonging & connectivity' and 'need to know & understand', females agreed most strongly with

items in comparison to males. Since this group is predominantly male and cluster 3 is predominantly female, this could explain this difference.

In terms of where respondents in each cluster were surveyed, the majority (56%) in cluster 3 were at Durdle Door, compared with the majority in cluster 1 who were at Charmouth. A statistically significant difference was found for the variable 'familiarity with case study location' ($F=4.63$, $p<0.05$). Again, the post-hoc (Tukey) test showed that this difference was between clusters 1 and 3. For both clusters, interestingly, the greatest proportion of respondents were categorised as 'medium familiarity' (49% for cluster 3 and 42% for cluster 1). The biggest difference is within the category 'high familiarity' which accounted for 17% of members of cluster 3 and only 7% of members of cluster 1. From interview narratives, familiarity with the landscape may be an important element in the satisfaction of the human need 'belonging and connectivity' but in rating items on the eudaimonic well-being scale, its influence is hard to define. For some interview respondents for example, a high degree of familiarity with the Jurassic Coast served to engender a feeling of 'coming home' whilst for others who had never before visited, the feelings of 'unexpected awe' appear just as acute and to arouse deep felt emotions which are 'hard to verbalise' (female, Durdle Door).

The cluster which rated items most strongly on the eudaimonic well-being scale comprised mostly of females aged 45-54. Largely, they were at Durdle Door and had travelled 101+ miles to reach the site (47% of members of cluster 3) and they had a high familiarity with the case study area. Further analysis shows that for cluster 3, 19% of respondents stated they visit 'quite regularly' or a few times a year and 12% 'very regularly' or weekly/monthly. This compares with cluster 1, 14% of whom visit 'quite regularly' and only 1% 'very regularly'. The number of visits made to the landscape and the familiarity that people have with it, then could provide clues as to how eudaimonic well-being might be experienced at the case study site.

To further examine how each cluster rated items making up the eudaimonic well-being scale, the mean scores for each item were calculated for each cluster and a one-way ANOVA test (used to compare the means of more than two groups (Pallant,

2010, p249) reveals whether there is any significant difference in how the clusters rates each item. Table 6.3 illustrates this.

Table 6.3 – Items on the Eudaimonic Well-being Scale by Cluster

Item	Cluster Means (and standard deviations)			Test Statistic One-way ANOVA*	Effect size of difference**
	Cluster 1	Cluster 2	Cluster 3	F	eta squared
Being here helps me to think about my life	3.40 (0.73)	2.43 (0.68)	1.75 (0.80)	138.66	.036 (small)
Being here helps me to restore a sense of balance in my life	3.42 (0.73)	2.48 (0.68)	1.67 (0.73)	170.77	.041 (small)
Being here gives me time and space to reflect on my life	3.13 (0.75)	2.28 (0.65)	1.59 (0.69)	141.78	.036 (small)
Being here enables me to experience a sense of inner peace and tranquillity	3.18 (0.70)	2.26 (0.60)	1.53 (0.59)	195.72	.044 (small)
Being here makes me feel good about myself	3.13 (0.57)	2.27 (0.58)	1.60 (0.67)	171.9	.041 (small)
Being here makes me feel enthusiastic and full of energy	3.08 (0.66)	2.37 (0.64)	1.58 (0.66)	156.21	.039 (small)
I feel inspired by being here	3.06 (0.57)	2.24 (0.64)	1.43 (0.57)	207.43	.046 (small)
I feel a sense of vigour or vitality from being here	2.99 (0.68)	2.17 (0.63)	1.43 (0.57)	177.49	.042 (small)
I feel calm and relaxed in this place	2.45 (0.62)	1.87 (0.46)	1.24 (0.44)	184.87	.043 (small)
I feel very lucky to have experienced this place	2.57 (0.68)	1.94 (0.58)	1.24 (0.47)	165.00	.040 (small)
I feel a sense of being uplifted emotionally by being here	2.95 (0.86)	2.18 (0.65)	1.28 (0.55)	192.68	.044 (small)
I feel a sense of accomplishment from walking or undertaking other activities in this area	2.62 (0.79)	2.13 (0.67)	1.44 (0.69)	89.00	.027 (small)
Being here makes me feel like I am away from all my day to day worries	2.35 (0.77)	1.90 (0.64)	1.22 (0.45)	108.64	.031 (small)
Being here gives me a sense of understanding nature	2.94 (0.83)	2.14 (0.54)	1.47 (0.55)	167.68	.041 (small)

*Ratings between clusters for all items were statistically significant ($p < 0.05$)

** For eta squared (one of the most common effect size statistics (Pallant, 2010 p254), the effect size was interpreted according to Cohen's (1988) guidelines for differences where .01=small, .06=medium and .14=large.

Table 6.3 illustrates clearly that cluster 1 has a lower agreement with all items on the eudaimonic well-being scale compared with cluster 3. Interestingly however, both clusters rate the same items as the ones which they agree with most. The highest agreement for both clusters is with the item 'being here makes me feel like I am away from my day to day worries' (cluster 1 mean=2.35, cluster 3 mean=1.22). The means closest to 1 indicate a stronger agreement on the likert scale. The next two highest rated items are about feeling lucky to experience this place and feeling calm and relaxed. These items can be related to the broad theme of inner peace and calm.

In contrast, the items which both clusters rate lowest on this scale relate to the theme of perspective. Cluster 1 rated the item 'being here helps me to restore a sense of balance in my life' lowest (mean=3.42) whilst cluster 1 rated the item 'being here helps me to think about my life' lowest (mean=1.75). Whilst these clusters are markedly different in the mean scores for all items, they do share an agreement that the biggest psychological effect of their visit to the Jurassic Coast is about a sense of inner peace and calm and being relaxed.

The exploratory data above demonstrates that significant differences do exist in the ways in which individuals rate items on the eudaimonic well-being scale. These differences have been explored in terms of socio-demographic variables to establish any commonalities in cluster membership. The following section looks at whether any particular variable(s) can predict high scores on this scale. This information is useful to tourism managers who are concerned with managing the landscape for the maximum benefits for people. If they are able to understand which segments of the population are most or least likely to be satisfied in the landscape, landscapes could be better managed to ensure benefits are maximised.

6.6 Predicting Agreement on the Eudaimonic Well-being Scale

Determining whether there are any variables which could predict agreement on the eudaimonic well-being scale could prove useful in decision making processes since interventions could be directed towards increasing opportunities to experience well-being benefits for those who currently do not and for maintaining the experiences for those who do. To explore this in light of data from the Jurassic Coast, a standard

multiple regression analysis was carried out. Multiple regression is based on correlation and can be used to tell how well a set of variables is able to predict a particular outcome (Pallant, 2010). The dependent variable used is the eudaimonic scale and the independent variables which were considered for inclusion in the model are: gender, age, familiarity with the landscape, distance travelled to site, survey location, activities undertaken and who visitors were there with. These variables were considered since evidence from both the literature concerning restoration and psychological well-being, and from previous statistical explorations as discussed through chapter 5, suggested that further analysis was warranted.

Gender differences in ratings for human needs satisfaction were detected in section 5.6.1 for example. This showed that females tended to rate items higher than males. There is some support for this in the literature as Hartig et al. (2007) found that women found nature experiences to be more restorative than men. For age, a significant difference was found in the sample at the Jurassic Coast, in terms of how different age groups rated the human needs categories of 'belonging and connectivity' and 'need to know and understand' (section 5.6.2). Results appeared to show a tendency for scores to increase with age for these human needs. It is thus interesting to determine whether age does in fact have any predictive ability on the eudaimonic well-being scale. Familiarity and distance travelled also yielded some interesting results in section 5.6.3. This pointed to a difference in how people rated items based on how far they had travelled and how many times they had visited. Broadly, those who had travelled the least distance (less than 10 miles) and those who had high familiarity with the area, tended to rate items higher in certain human need categories.

Survey location was also considered for inclusion in the model since statistical differences were found between the sites in terms of how respondents rated human needs in the categories of aesthetic appreciation, self-actualisation and transcendence (section 5.3). This showed higher ratings in these categories at Durdle Door. Activities in the landscape also appear to play a role in how human needs were satisfied. Section 5.4.2 showed small relationships between activities such as swimming and fossil hunting and the satisfaction of the human needs 'leisure and recreation' and 'need to know and understand' respectively. Who

visitors were with also appears to have some influence on how human needs are satisfied and this variable was also considered for inclusion in the regression analysis. Section 5.6.4 for example detected a difference in how respondents rated the items relating to 'freedom and escapism'. This showed that people who were part of an organised tour rated this category lower than those visiting alone or with friends and family. Related to this, Staats and Hartig (2004) noted that social context has an influence on restoration and that where safety is assured, being alone is considered more beneficial to restoration.

Before conducting the regression analysis, a Pearson correlation coefficient was used to determine whether any significant relationships existed between these variables and the eudaimonic well-being scale. Only those variables demonstrating a relationship were included in the model. Results showed a small, positive correlation between the eudaimonic well-being scale and survey location ($r=0.119$, $n=516$, $p<0.05$), meaning that as the number (of survey location) increases, so does the scores on the scale (with higher scores corresponding with lower satisfaction). In this case, as Durdle Door was coded 1 and Charmouth 2, this means that stronger agreement with the items making up the scale was recorded in Durdle Door.

A small negative correlation was found with gender ($r=-0.159$, $n=514$, $p<0.05$) meaning that as gender increases (ie goes from 1-male to 2-female), scores on the scale decrease (ie move towards 1 which corresponds to higher agreement with the item). A small negative correlation was also found with familiarity with the landscape ($r=-0.160$, $n=509$, $p<0.05$). This can be interpreted as familiarity increases (0=no familiarity, 3=high familiarity), scale scores decrease (ie move towards 1) so a higher familiarity is associated with higher scores on the scale. Since activities undertaken in the landscape were coded as multiple responses, these were investigated using a univariate analysis of variance. This showed that only fossil hunting showed any statistically significant correlation with the eudaimonic well-being scale ($f=4.26$, $p<0.05$). Walking was shown to be slightly significant ($f= 2.95$, $p<0.10$). The results of these tests are shown at appendix 9. Whilst the data showed that walking was popular at both case study sites, fossil hunting was much more popular at Charmouth beach with 47% of respondents stating that they took part in this activity on the day of the survey. This compares with just 8% of respondents at Durdle Door.

This is likely to be a result of the representation of Charmouth as a 'fossil beach', complete with organised fossil walks, in both tourist literature and websites (e.g. www.charmouth.org). The univariate analysis of variance for each site shows that fossil hunting is only statistically significant at Charmouth beach ($f=3.475$, $p<0.05$, $n=116$).

These 5 variables which were identified as having some correlation with the eudaimonic well-being scale (survey location, gender, familiarity, fossil hunting and walking) were then used in a standard regression model to determine if any were significant predictors of the dependent variable (the eudaimonic well-being scale). The procedure showed that this 5 variable model explained only 7.7% of the variance in the dependent variable ($r^2 = 0.085$, $r^2 \text{ adj} = 0.071$). The beta coefficient shows which variables make the strongest contribution to explaining the dependent variable and within this model, familiarity with the case study site followed by gender have the highest beta scores (0.190 and 0.168 respectively). This result is interesting and perhaps a basis for future investigation, though with such small values recorded for explaining the variance, caution must be exercised in making any firm conclusions.

To check if adding any other socio-demographic variables into the model would increase its predictive ability, age was added but this increased the predictive power of the model only slightly and only 8% of the variance was explained ($r^2 = 0.087$, $r^2 \text{ adj} = 0.080$). The only two other socio-demographic variables which were collected in this survey and could be added into the model are ethnicity and occupation but since dummy variables would have to be created to include these and in both cases, responses fell overwhelmingly into one dominant category (professional and managerial account for almost 50% of responses) and in the ethnicity category, 88.5% of respondents were white British, it was concluded that these variables would not add much to the predictive ability of the model

From this, it can be concluded that these variables (location, gender, familiarity, fossil hunting and walking) do not offer much in the way of predictors of high scores on the eudaimonic well-being scale which means that any predictor variable which does exist has not been tested for in this data set. An explanation could for

example, lie in the motivational or affective state of the perceiver of the landscape. Haber & Hershenson (1973 p264) for example, in their discussions of responses to perceptual recognition experiments, found that motivation and affective state were important and easily influenced by a variety of factors such as 'lasting characteristics of the individual perceivers, usually described as personality, as well as the more immediate and transient states like hunger and thirst'. In addition, people differ in their requirements for effective functioning and well-being (Hartig and Staats, 2006 p215). Such factors may well influence the ways in which respondents rated the items on the survey which were not controlled for.

There are clearly numerous factors which underpin how and in what circumstances human needs are satisfied for individuals and well-being enhanced in natural landscapes. One factor which has been explored further concerns connection with nature. This particular item was chosen for further exploration as Korpela et al. (2008) note that there is evidence to suggest that an individual's trait levels of feeling emotionally connected to the natural world are potentially related not only to place preference but also to life satisfaction and ecological behaviours (Korpela et al., 2008, p639). Item 3 in the belonging & connectivity scale used in this study was concerned with a sense of connection with nature, indicated by the item 'I feel a sense of connection here with nature' and the responses to this item can therefore, be used in a regression model to determine the predictive effect of connection to nature with high scores on the eudaimonic well-being scale.

Statistics for this item reveal that 80.8% of respondents (n=541) responded either 'strongly agree' or 'tend to agree' with this item. The mean for this item was 1.96 (sd=0.79). This suggests a reasonably high level of feeling connected to nature amongst this group of respondents. For cluster 1, the mean of this item was 2.79 (sd=0.85) and for cluster 3, the mean was 1.44 (sd=0.54). The regression procedure revealed a large positive correlation between item 3 and scores on the eudaimonic well-being scale ($r=0.553$, $n=512$, $p<0.05$) with high psychological wellbeing associated with high agreement with connection to nature. In the regression model, this variable also accounted for 30.4% of the variance in the data ($r^2 = 0.306$, $r^2 \text{ adj} = 0.304$, $p<0.05$). So it can be seen that adding this variable into the regression model, does add to its explanatory power. Connectedness to nature could then play

a part in how some individuals experience the Jurassic Coast. Future research to explore the effect of this item could prove interesting especially in light of comments by Dutcher et al (2007 p489); ‘we hypothesise that other things being equal, environmental concern and behaviour are a function of a sense of connectivity with nature’. Thus, promoting connectedness to nature may be a central concern for landscape managers.

6.7 Conclusions

This chapter, together with the previous analysis chapter have presented compelling evidence of the ways in which human needs are satisfied through visits to the Jurassic Coast. This has been explored through the interplay of three dimensions, the physical landscape, the activities in the landscape and the meanings and interpretations that people ascribe to the landscape. The ways in which this satisfaction of needs is translated into enhancements in eudaimonic well-being were also examined to determine how this manifested within visitors and what this actually meant for them. To assist with this, a factor analysis was conducted which reduced the data and presented a clearer picture of the underlying themes in the data. These were explored and summarised under the headings of a sense of perspective (both on a personal level and about the wider world), a sense of inner peace and calm, a sense of being uplifted both physically and emotionally and resultant feelings of being energised and re-invigorated and finally self-esteem which includes feeling good about oneself and feeling a sense of accomplishment. These findings largely agree with evidence from the literature concerning psychological well-being where these dimensions are identifiable within those such as personal growth, purpose in life, self-acceptance, environmental mastery (Ryff and Keyes, 1995) and competence and relatedness (Ryan and Deci, 2000).

The importance of the physical landscape for enhancing eudaimonic well-being was explored with reference to the attributes of the cliffs and the sea and how their combined effects acted to sooth, energise and inspire respondents and influence positive emotions. Again, this evidence from the Jurassic Coast supports previous studies which have also found that the sensory experience of being at the coast seems to induce states of mind in which people can relax and reflection can take place (White et al.,2010). The cliffs at the Jurassic coast which embody a sense of

timelessness appear particularly important in this process for visitors as well as the sense of freedom people seemed to derive from seeing the distant horizon. Norton et al. (2012) found similarly that openness and distance were considered important for calmness and a feeling of perspective. There seems to be therefore, something quite unique and special in coastal landscapes which facilitates and enhances a sense of psychological well-being and contributes towards eudaimonic well-being.

To explore whether these benefits were universal for all visitors to the Jurassic Coast, a cluster analysis was conducted. This revealed the existence of three distinct clusters which rated items differently on the eudaimonic well-being scale, with cluster 1 demonstrating markedly lower ratings than cluster 3. Analysing the composition of each cluster revealed statistically significant differences between how males and females rated items, with females more strongly agreeing with items than males. Such gender differences have been noted through the literature (Hartig et al.,2007) but the reasons behind these differences have not fully been explored and would make for some interesting future research.

A difference was also detected in the variable 'familiarity with the landscape', with high familiarity with the landscape having the effect of increasing agreement with the items making up the eudaimonic well-being scale. This could be a result of previous positive experiences at the case study sites motivating visitors to return and to experience again the benefits of visiting the Jurassic Coast. It could also be that people living locally to the site have a strong connection to it and thus may be more disposed to positive affect and positive emotions (Mayer et al.,2009) from experiences at the setting. The regression analysis also demonstrated that both familiarity and gender had the highest predictive ability of the variables in the model. However, this result must be taken with caution since so little of the total variance was explained with all 5 variables in the model. Connection to nature showed a much higher predictive ability on scores on the eudaimonic well-being scale and this is an area which could be investigated much more in future research. This relationship may be important not only in promoting a sense of eudaimonic well-being but also in developing and promoting a sense of stewardship towards natural resources, as Schultz et al. (2004) note 'the type of concerns a person develops

about environmental issues is associated with the extent to which the individual believes s/he is part of nature' (p31).

The evidence presented reveals that visitors to the Jurassic Coast do, to varying degrees and for varying reasons, experience enhancements in eudaimonic well-being. The amount of well-being gain was not examined in this study but could prove fruitful in future research. Kjellgren & Buhrkall (2010) for example subjected respondents to deficit creating tasks in order to prove the net gain and restorative potential of being in a natural environment. This research from the Jurassic Coast does however, make a contribution to the growing evidence through the literature that interactions with nature are important for 'emotional and psychological development, adding richness and meaning to the lives of individuals' (Reid and Hunter, 2011, p5). This evidence and discussion is also important in the context of tourism as what in the landscape is important and significant for visitors is the cornerstone of decisions about what to protect, enhance, interpret and market. Evidence presented here for example has demonstrated that it is not only the bio-physical components of a landscape that are of value to people, but also the significance given to them through complex layers of meaning which are important to people. Understanding the nuanced ways in which landscapes come to have value for people can provide detailed insights into how to manage the landscape for multiple realities. The following chapter will discuss how these insights can inform tourism management practices at the Jurassic Coast.

Chapter 7: Discussion

Using Insights into Visitor Experiences and Perceptions to Inform Tourism Management Practices at the Jurassic Coast

7.1 Introduction

The Dorset and East Devon World Heritage Site Management Plan (2009-2014) states that 'survey figures show that in general, world heritage is only a small part of the main motivation for people to visit a place' (p29). Other important reasons they state, include a desire to be in a stunning natural environment, the weather and an enjoyable previous visit. The empirical evidence from visitors to the Jurassic Coast reveals similar findings and in addition, has identified a dimension of visitor experiences which is concerned with feelings of restoration and eudaimonic well-being benefits that may not have been fully recognised in past assessments of why people visit this landscape and consider it to be so special. These benefits have been uncovered through quantitative testing of the extent to which human needs are satisfied at the Jurassic Coast and through qualitative enquiry of the causes of this satisfaction. This revealed that eudaimonic well-being was enhanced for all visitors to at least some extent. The ways in which the physical landscape, activities in the landscape and meanings and interpretations of the landscape shaped the ways in which visitors felt these well-being benefits and how different influences acted upon them was also explored and these contribute to the picture of the complex ways in which this landscape comes to have value and significance for visitors.

The effect of this complex relationship is that individuals come to perceive and value the landscape in diverse ways for diverse reasons, and thus motivations for visiting the Jurassic Coast and satisfactions with visits may be bound up with these individual values. Understanding these nuanced insights may provide tourism and landscape managers with insights into what in the landscape is important and why, and how the Jurassic Coast may be managed more effectively for diverse realities, motivations and expectations, and to enhance instances of positive experiences for visitors.

This chapter will firstly seek to understand the subjective ways in which the Jurassic Coast is valued and how insight into how eudaimonic well-being is enhanced in this landscape adds to this picture. It will then explore the ways in which the Jurassic Coast is currently managed and identify ways in which understandings from the empirical evidence presented can add value and benefit current practices. It will also examine the ways in which similar comprehensions of 'intangible values' have been used in landscape management practices elsewhere to determine what might be learned from these and how this research could advance them. The importance of this work is underlined by Hartig et al. (2001) who assert that positive experiences in natural environments underlie the formation of positive attitudes towards ecological behaviour. Understanding how positive experiences are created and managing the landscape to ensure the maximum possibilities for positive experiences can thus have benefits that extend much wider than the Jurassic Coast.

Putting nature at the heart of tourism decisions and developing techniques to reveal how nature is valued for its contribution to human well-being, adds a new dimension to the principles embedded within the search for sustainable tourism. As McCool and Moisey (2001, p3) point out, 'sustainable tourism does not just happen, it occurs only with explicit decision-making processes that consider what futures are plausible and desirable and the pathways to them'. Through the literature, pathways explored have included various visitor and destination management strategies, including the development of mathematical models to determine destination carrying capacities or the optimal numbers of tourists in destination areas which will not result in degradation of natural resources (Shaw and Williams, 2002; Sharpley, 2006). However, this has led to planners asking the question 'how many is too many?' when the real issue concerns how we best protect the values, biophysical conditions and social meanings that are important to people (cited in McCool and Moisey, 2001 p3). This is the real potential of including experiential qualities and the psychological value of tourism interactions in decision-making processes.

As discussed in chapter three, leisure experiences, at their best have often been conceptualised as optimal states with the potential to contribute to psychological growth and well-being (Mannell, 1999, p409). Human experiences in nature have variously been explored through deep held connections with nature and 'that the way

we are programmed by evolution causes us to perceive and experience natural environments in such a way as to promote relaxation and restoration' (Mannell, 1999, p412). If tourism management can understand this connection more fully, it can help to provide the conditions for optimal experiences and the satisfaction of tourist needs. This chapter will explore how this study at the Jurassic coast strengthens theoretical understandings of the relationship between tourism and eudaimonic well-being and how these insights can inform current tourism management practices.

7.2 Strengthening Theoretical Understandings of Tourism and Eudaimonic Well-being

This study has evidenced the ways in which visitors to the Jurassic coast benefit in terms of the satisfaction of human needs and enhancements in eudaimonic well-being. It has been shaped by and in turn is able to shape thinking in several important areas of theory such as tourist motivation, the tourist gaze and restoration in nature. The benefits experienced by visitors at the Jurassic Coast have been explored in terms largely concerned with psychological well-being and restoration, involving the ability of individuals to clear their head, prioritise thoughts and focus on life goals. That such benefits may feature in tourists' decision-making processes is an important contribution to this literature and one worthy of further exploration. Dolnicar (2012) argued that tourism brings enhancements to quality of life through personal interactions and identity formation. The quantitative and qualitative evidence from the Jurassic coast supports this as respondents spoke about a sense of strengthening personal relationships during their visits and forming enduring bonds with the landscape which motivated them to return year after year. These benefits of nature experiences may not always be conscious to the individual and respondents at the Jurassic Coast were not always able to recall the exact motivations for visiting. However, the evidence suggests that human needs were highly satisfied through the visit and even sub-consciously, visitors may make choices to visit again based on memories and past experiences of being there. This is also interesting in light of the work by Holden (2006) who concluded that motivations were created by a drive to fulfil needs. Through the satisfaction of needs from interactions with the Jurassic Coast and the enduring benefits of those interactions, visitors may well make decisions to return.

These insights also chime with the writing of Urry and Larsen (2011) who argue that the tourist 'gaze' as a way of perceiving and interpreting surroundings, is not merely visual but that it involves all the senses, emotions and cognitive abilities in order to deconstruct and enjoy surroundings. They purport that such ways of perceiving are thus culturally framed and influenced by 'images and texts of places, as well as personal experiences and memories' (p17). Evidence from the Jurassic Coast suggests that visitors there also construct their own views of the setting through the perceptions and uses of the physical landscape and also through the personal layers of meaning they attach to it. Respondents did speak passionately about the visual qualities and the aesthetic pleasure of the landscape, but often this was in the context of a more encompassing physical and psychological experience. 'Gazing' then is a set of practices which also involves 'daydreaming, mind travelling and reverie' (Lofgren, 1999, cited by Urry and Larsen, 2011, p17). Such practices were identified at the Jurassic Coast and moreover, the qualitative and quantitative data were also able to demonstrate the influence of the 'gaze' at this setting on human needs satisfaction and enhancements in eudaimonic well-being.

Thinking about the gaze in this way is also closely related to Csikszentmihalyi's (1988) concept of 'flow' or 'an optimal state of experience' (p3). He discusses how flow arises from activities which are enjoyable but that require full concentration which exclude irrelevant or negative thoughts. In this state he says 'self-consciousness disappears and the sense of time becomes distorted' (Csikszentmihalyi, 2002, p71). Such experiences, he goes on to say, produce intense feelings of enjoyment and creativity. This theory resonates with ideas of eudaimonic well-being, and managing landscapes to ensure the best possible opportunity for enabling visitors to experience such optimal states should be a priority in tourism management which is concerned with the experience of place. This study of the Jurassic Coast goes some way to moving forward understanding of how such states arise for different visitors. It also points to ways in which individuals do not need to be engaged in physical or demanding activities to experience such states; simply having the opportunity to access the setting and enjoy the view was reported by many respondents as enough to enable them to experience optimal states.

Whilst these theories have informed thinking around this study and indeed have been advanced by it, they are not concerned necessarily with gazes upon and experiences in nature. However, they do converge and overlap with theories of restoration in nature in important ways. Kaplan and Kaplan (1989) for example, argued that 'natural environments provide a context in which people can manage information effectively' (p196). This is because natural environments involve enough 'fascination' (Kaplan, 1995, p172) to hold a person's gaze effortlessly. This allows for cognitive functions to rest and for stress to be reduced (Ulrich, 1997). Evidence from the Jurassic Coast suggests that such a state is more likely to induce positive states where individuals are more likely to be receptive to the benefits of nature and to take note of nature in ways which hurried lives often miss. This in turn engages the senses and enables a deeper sort of reflexion where mind wandering allows for the sorting of priorities and for creative problem solving, leading, it is hypothesised to enhancements in eudaimonic well-being.

This thesis integrates aspects of environmental restoration and psychological well-being and uses these to build upon theories relevant to tourism. The possibilities of using the insights gained in land use planning and tourism development are evident in that certain settings may be conserved and designed to incorporate opportunities for restoration and optimal states which lead to eudaimonic well-being. The policy implications of these insights are twofold. Firstly, the metrics used through this study to systematically collect and quantify the satisfaction of human needs can be applied in different settings. This would enable a deeper understanding of the benefits of different landscapes and provide clues as to how they might be managed to better provide opportunities for optimal experiences. Secondly, understanding the place of nature in tourist motivations to visit certain settings can lead to an expanded understanding of tourist behaviour and more appropriate strategies for marketing, market segmentation and interpretation can be developed. The following section will detail some of the ways in which these insights and understanding of well-being shape thinking about the meaning and significance of the Jurassic Coast.

7.3 The Place of Well-being in Understanding the Significance and Meaning of the Jurassic Coast

The World Heritage Status designation of the Jurassic Coast, recognising the global importance of the site's geology, ensures that it has a distinctive place in the regional and national psyche and economy and a certain shared understanding of its value. The Management Plan for this landscape⁸ states that in addition to its geological significance, 'residents, visitors, students and teachers have for decades realised that this part of the country was very special'. Understanding the reasons behind why it is considered to be so special provides clues as to the wider values of the Jurassic Coast which include some hard to define values not previously accounted for in any significant way in considerations of why the site is valued by so many.

Staiff et al. (2013) state that 'touristic encounters are mediated by the modalities of organised 'industrial tourism' (p9) and tourism at the Jurassic Coast is arguably no different. An internet search of terms associated with the Jurassic Coast reveals much in terms of how it comes to take shape and significance in the wider social and cultural consciousness. Associations are unsurprisingly geologically motivated, although the 'walk through time' (www.jurassiccoast.org) strap-line does begin to fuel the imagination in different directions for the individual. Similarly literature and artistic works depicting the 'Monsters of the Jurassic Coast' (Jurassic Coast Team, Darell Wakelam) inspires thoughts of dinosaurs and a prehistoric land. Features in films and pop-videos have also cemented this landscape as a valuable one in popular consciousness, even in the minds of those who have never visited. Interview narratives from visitors at the Jurassic Coast also echo how this landscape is perceived and even for those who had never before visited, impressions are formed before the visit around what to expect. Expectations of the landscape are interesting to examine as they are an important part of understanding tourist satisfaction; if expectations are met or exceeded, then satisfaction results. Expectations arise from both within the individual, such as through memories of past visits or from external sources such as recommendations and wider media portrayals of what to expect. One respondent for example, stated that recommendations from friends motivated her visit to Charmouth whilst for others, it was an understanding of

⁸ Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014

the importance of the landscape for fossil hunting; 'my daughter was desperate to go fossiling so we found out the best place to go' (female Charmouth). These narratives give an impression of a shared understanding of what to expect from the landscape and as one male at Charmouth noted 'I think it does have a special character and the fact that it is the Jurassic coast makes it quite unique' whilst another stated 'you've got that real sort of Jurassic look to it' illustrating a definite, or at least perceived shared understanding of what it means to be the Jurassic Coast. Even for those who had never before visited, the impressions were almost identically of 'unexpected awe' and 'wonder' at the scene (female, Durdle Door). For one male who had only ever seen pictures before in a guide book stated that 'it felt bigger than I expected, it looks like a landscape you weren't expecting in North West Europe' (Male, Durdle Door). This perception of the specialness of the landscape also appears to be shared amongst visitors, whether or not they had previously visited. Notable through interviews for example, were statements of how 'dramatic' the scenery is and how 'it is every bit as stunning as the Australian or New Zealand coastline' which 'we easily forget exists in our own country' (female, Durdle Door).

Shared perceptions and a cultural understanding of the value of the Jurassic Coast are thus evident through these narratives and also through the wider portrayals of the significance of the landscape. However, as previous chapters have illustrated, personal experiences add meaning and value to this landscape in diverse ways. So, whilst expectations of this landscape may be shaped by forces including external representations, 'nothing can fully prepare us for the encounter in place' (Staiff et al., 2013, p9). A certain intimacy comes from these personal encounters and individuals construct their own ideas of why this landscape is so special to them. As one female respondent stated of a visit to Durdle Door 'I feel really emotional just thinking about it'. Such deep-felt psychological experiences of the Jurassic Coast are testament to the much deeper ways that people value this landscape. It has been hypothesised that these psychological values are largely the result of connections and interactions with the landscape that satisfy human needs and result in enhancements in eudaimonic well-being. This relationship is fundamental to appreciating why the Jurassic Coast is so meaningful to a wide variety of visitors and how the landscape can be managed to ensure maximum opportunities for people to connect with the landscape in ways which enhance their well-being.

Perceptions of destinations are important in motivations for visiting an area in the first place and in returning to the destination for subsequent visits. As evidenced so far, destination image of the Jurassic Coast is built up both through portrayals and representations of the landscape and through individual experiences and connections with it. The role of destination image has similarly been explored in the literature by San Martin & del Bosque (2008) as one which involves both cognitive and emotional evaluations of place. The cognitive components refer to the 'beliefs or knowledge a person has of the characteristics or attributes of a tourist destination', while the affective dimension or emotional evaluations of the destination is represented by the individual's feelings towards the destination' (p264). They suggest that the combination of these factors may explain how and why individuals come to hold certain thoughts and impressions about a landscape which may not entirely be determined by its physical properties. This resonates with the findings of this study and the reasons why the Jurassic Coast appears to hold both a collective notion of value and also very personal, psychologically motivated reasons for valuing the landscape. In a similar vein, Staiff et al. (2013) discuss how individuals come to 'make unauthorised meanings and challenge typologies that render places special' and in so doing, they both 'challenge and add to the semiotic richness of special places' (p2).

Appreciating both the cognitive and affective ways that visitors perceive and experience the Jurassic Coast is important in managing it for diverse realities and also in understanding differing behaviours at the site. Human needs and expectations of those needs being satisfied for example, guide behaviour so that if needs are met, behaviours and perceptions are likely to be positive. Emotional attachments to places are equally likely to inform behaviours and motivations for visiting a destination. Hartig et al. (2007) for example, put forward the hypothesis that 'people may behave in environmentally friendly ways because they gain psychologically from their experiences in natural environments' (p291). By understanding both visitor expectations and the deeper emotional attachments that visitors have with the Jurassic Coast, it can be better managed to ensure positive experiences for all visitors and to promote positive ecological behaviours which could have resonances far wider than the Jurassic Coast. Even for those who may never

have visited and therefore, may not have previously formed emotional attachments, understanding the ways in which the landscape can trigger such responses can also inform management in providing opportunities for these psychological benefits to be realised. Moreover, using not only cognitive dimensions to inform the destination image of the Jurassic Coast (such as the geological significance of the landscape and the tourist infrastructure available) but also emphasising the emotional, restorative and eudaimonic well-being benefits it is able to evoke in the visitor's mind, may well help to give it an even more unique positioning in the destination market.

The empirical evidence from the Jurassic coast has revealed that value and significance arises in this landscape not only from appreciations of its heritage value, but also from individual encounters and experiences which serve to create memories and to stimulate restorative experiences which enhance eudaimonic well-being and positive human functioning. Managing this landscape for the diverse range of ways that it is meaningful for people then means not only managing the heritage and the 'authorised', 'scientific' and 'accepted' perceptions of it, but also the 'felt' and 'personal' experiences of visitors and the hard to define reasons why this landscape is important. Porteous (1990), in his work 'Landscapes of the Mind' concluded that 'landscapes do not exist without an observer and mentally or physically, we frame the view, and our appreciation depends on our frame of mind' (p4). Landscape and tourism managers can arguably play a crucial role then in framing the mind in a positive direction, by ensuring maximum possibilities for human needs to be satisfied and for both cognitive and emotional demands to be met. The following section will investigate these possibilities for management at the Jurassic Coast in greater detail.

7.4 Using Well-being Insights to Inform Tourism Management Practices at the Jurassic Coast

The importance of including assessments of both the cognitive and emotional ways in which visitors perceive the landscape have been discussed. To a certain extent, these considerations are evident in the management practices of the Jurassic Coast and a brief overview of the Management Plan (2009-2014) illustrates this. Importantly, the Management Plan states explicitly that 'management is not just about conservation or protection but also about making the landscape a function in

the life of the community' (p59). This means that the community is actively encouraged to engage with the landscape through various activities and to learn about it through educational, cultural and arts programmes.

The management plan is structured around eight long-term aims, some of which may benefit from an expanded understanding of how visitors perceive and experience the landscape, including both cognitive and emotional aspects. Aim one for example, is about protecting the outstanding universal value and integrity of the site by allowing the natural processes which created it to continue. This is especially important as the unique character of the Jurassic coastline greatly contributes to the satisfaction of human needs and the well-being benefits derived by visitors to it. Evidence from this study for example, shows that natural changes in the landscapes are appreciated by visitors and that this adds to the value of the site. One female visitor to Durdle Door for example commented 'I just love the drama of how nature has shaped those rocks and to think how they will be in a few hundred years, it's quite awe-inspiring'. Allowing these processes to continue then is important to how the landscape is perceived as significant. Similarly, this understanding strengthens the policy of protecting the landscape 'through prevention of developments that might impede natural processes or obscure the exposed geology' (p37).

The need to protect and enhance the landscape for these 'intangible' or 'hard to define' (Driver and Ajzen, 1999) benefits also cuts across the other management aims as stated in the Management Plan. Aim two for example is about 'conserving the site for science, education and public enjoyment'. Within this aim, policies for conserving and enhancing nature are articulated which include taking account of litter on the beach and for 'working with landowners to remove derelict or superfluous structures from the Site' (p46). Taking account of the ways in which the natural site enhances human well-being re-enforces the importance of such policies. Aim three is concerned with 'strengthening understanding of the outstanding universal value of the site' and this research again feeds into understanding why this is important. Significantly, this aim recognises that embedding such an understanding within the minds particularly of community members, will lead to an 'appreciation, valuing and long-term ownership of the natural world' (p51).

Aim four focuses on supporting communities to realise the economic, social and cultural opportunities and benefits that World Heritage status can bring. Whilst there is some debate as to the extent of tourism, economic and conservation benefit from World Heritage designation (see Tisdell and Wilson, 2012; Hazen, 2009 for example) there is clear evidence from this and previous studies of the Jurassic Coast (e.g. ERA-Ltd., 2008) that benefits have been felt by the local community in terms of increased investment and the development of a distinct identity. Evidence of the ways in which the landscape acts to satisfy human needs and enhance eudaimonic well-being can certainly add to this picture of wide-ranging benefits. This evidence also supports aim seven which sets out policies to raise public awareness of the outstanding value of the site locally and globally. By including not only the geological significance of the landscape but also highlighting the prodigious range of well-being benefits of visiting the site, this could promote a much wider appreciation of the value of this landscape.

Ensuring appropriate access and infrastructure to support visits and enable interaction with the Jurassic Coast is essential in enabling visitors to enjoy the benefits of this landscape. These points are underpinned by aims five and six which together cover the key issues surrounding the management of visitors to the site. Aim five for example is about improving and sustaining access to the site whilst aim six focuses on providing a welcoming experience and high quality facilities.

Finally, aim eight underlines the importance of management practices which are 'exemplary'. Managing for well-being benefits not only provides an opportunity to demonstrate such management practices but also ensures a unique positioning for the Jurassic Coast as simultaneously valued for its outstanding universal values and also for more personal and psychological values. Management practices which enable opportunities for people to engage with the landscape in all sorts of ways which satisfy human needs and provide for valuable experiences will undoubtedly ensure optimal visitor experiences and may even promote wider ecological behaviour. Compelling reasons indeed for including eudaimonic well-being considerations in management plans.

Despite not being framed in the language of cultural ecosystem services or eudaimonic well-being benefits, there is a lot of activity which is being undertaken by the Jurassic Coast World Heritage Team to promote and encourage engagement with the landscape. Culture and the arts for example run through the Management Plan and an array of activities to develop the cultural identity of the Jurassic Coast have been undertaken. The Jurassic Coast arts programme is a tangible example of how cultural activity is integrated with the management of the landscape, and is thought to be the only example of this union for a natural World Heritage Site. The broad aim of this programme is not only to explore World Heritage values but to 'integrate the creative sector in education, interpretation, design, conservation and awareness programmes to increase participation and engage different audiences'⁹, all of which have the potential to increase opportunities for people to enhance the well-being benefits of engaging with this landscape.

Similarly, in terms of integrating the Jurassic Coast into schools and promoting it in formal education, an array of educational resources have been developed, led by a dedicated Education Co-ordinator. This work ensures that the Jurassic Coast is not only integrated into curriculum planning but also that it helps to improve and enhance children's interaction and perceptions about the landscape and to shape behaviours that favour stewardship of it. Although no young people (aged fifteen or under) took part in the interviews during the empirical work into human needs satisfaction at the Jurassic Coast, they were represented in the surveys (n=23). The need most satisfied for them was leisure and recreation and this is further evidenced through the activities they undertook in the landscape which were fairly active and included walking (70%), swimming (39%) and fossil hunting (48%). This suggests that engaging young people with the landscape should focus around activities and active pursuits. The need least satisfied was belonging and connectivity as for all other age groups, again reflecting that the majority of this group were visitors to the site and 22% had never visited the Jurassic Coast before. For this group however, all other human needs were highly satisfied and engaging those who have never before visited should thus be a high priority alongside community events and strategies.

⁹ Dorset and East Devon Coast World Heritage Site Management Plan (2009-2014) p28

7.4.1 Managing the Landscape for Well-being

The empirical research presented through this thesis has provided insights into how visitors experience and perceive the Jurassic Coast, which it has been argued, is not only about leisure and recreation and heritage values, but experiences which enhance well-being at the deepest of levels for people and provide benefits which have far-reaching consequences for them and for wider society. The insights into the importance of these benefits evidenced through the satisfaction levels of human needs as well as through interview data, provides an innovative lens through which to focus management activity. It has also provided a framework to build upon which helps managers to conceptualise the relationship between the Jurassic Coast, tourism and eudaimonic well-being, and a methodology for revealing these benefits. Moreover, in promoting the integration of meanings and well-being values into resource and tourism management, practices can focus on the things that really matter to people which will increase opportunities for positive visitor experiences. In this way, management and thinking can move 'beyond the commodity metaphor' of concentrating on economic values to a focus also on well-being values. This is an innovative approach to tourism and landscape management which could contribute to demonstrating 'exemplary World Heritage Site management' (Management Plan, 2009-14, aim 8).

An expanded understanding of how the Jurassic Coast is valued is thus important for the management of the site and also for understanding the wider benefits of tourist encounters with the Jurassic Coast. The conceptual link between human needs satisfaction and eudaimonic wellbeing was depicted in figure 4.2. This showed that the satisfaction of needs contributes to attaining the components of psychological well-being necessary to achieving eudaimonic well-being. The causes of this satisfaction have been explored in terms of the physical landscape, the activities that people undertake in the landscape and the meanings and interpretations they ascribe to it. Table 7.1 builds on these findings and uses evidence from interview data to attempt to link the attributes of the Jurassic Coast with how they satisfy human needs and contribute to a wider understanding of value. These insights could prove useful in managing the landscape for maximum value enhancement and for preserving the landscape for the continuation of well-being benefits it provides.

Table 7.1 illustrates the possibilities of linking the physical attributes of the Jurassic Coast with the well-being benefits they afford to individuals and gives an insight into what those benefits might mean also to wider society. In considering these wide ranging benefits, Heintzman states that rejuvenation or a renewal of the human spirit is important 'for the individual to enjoy a full life and to be a productive member of society, for the members of a family to regain their vigour, motivation and interests in the family unit and for members of the community and the nation to maintain a long-term productive role as economic agents and as socially responsible citizens' (2002, p148). Similarly, English Nature's report on nature and mental health concludes that 'psychological well-being influences how we think and feel about ourselves and others are how we interpret events (English Nature, 2003, p9). These psychological benefits then can have potentially great consequences not only for the individual but far wider in society (NEF, 2004; English Nature, 2003; Heintzman, 2002). Such a connection provides a hugely compelling reason to consider managing landscapes for well-being and for encouraging greater interactions with them. Interpretations of value of a landscape can also therefore, be greatly informed by these considerations and the unique ability of natural settings to positively influence psychological well-being should thus be taken into account in decisions about managing the landscape for these positive benefits.

Table 7.1 – Linking the attributes of the Jurassic Coast with well-being values

Physical attributes of the Jurassic Coast	Human Needs Satisfied	Component of Psychological well-being	Well-being Value
<ul style="list-style-type: none"> • Iconic arch of Durdle Door • Jurassic coast WHS designation that people are proud of • Distinctive colours of rocks 	Belonging and connectivity	<ul style="list-style-type: none"> • Sense of place and identity • Connection with nature and the natural environment 	Individual and societal connections with nature as conservation motivator
<ul style="list-style-type: none"> • Accessible heritage in fossils and geological importance of the coastline 	Need to know and understand	<ul style="list-style-type: none"> • Sense of understanding the world and our place in it • Connection to the past and sense of timelessness of nature and brevity of human life • Environmental mastery 	Learning opportunity as motivator to inquire / explore further, to join conservation movements (Jurassic Coast/National Trust) Engendering sense of ownership/stewardship and pride in national heritage.
<ul style="list-style-type: none"> • Iconic landscape • Geological and biological diversity • Deep rooted connection and fascination with the sea 	Aesthetic appreciation	<ul style="list-style-type: none"> • Sense of the beauty and physical appeal of nature • Fascination of nature leading to altered and uplifted emotional states 	Appreciation of physical landscape as motivator for conservation. Emotional uplifting effects of being in nature affecting positive mood changes and leading to mental health improvements.
<ul style="list-style-type: none"> • Land and water as base for activities, from coastal walks to swimming and kayaking • Playing and relaxing on beach 	Leisure and recreation	<ul style="list-style-type: none"> • Having time to relax and have fun • Participating in activities supported by the landscape • Environmental mastery • Competence 	Physical health benefits of undertaking physical activities in nature. Societal benefits of taking time to be with family and friends
<ul style="list-style-type: none"> • Connecting with nature as a physical and emotional escape from daily life 	Freedom and escapism	<ul style="list-style-type: none"> • Sense of being away from habitual constraints (psychological or structural) • Sense of autonomy and of being in control 	Psychological well-being benefits to individual. Positive impacts on society at all levels.
<ul style="list-style-type: none"> • Mix of dramatic coastline and sensory experiences of the sea leading to alterations in cognition and perception 	Self-actualisation	<ul style="list-style-type: none"> • Feelings of rejuvenation, of accomplishment and of being enriched 	Psychological and physical wellbeing benefits, impacting on all areas of life (health, work, family) at all levels. Potentially great individual and societal impacts.
	Transcendence	<ul style="list-style-type: none"> • Sense of the ineffable • Unity with higher power • Spiritual experiences 	

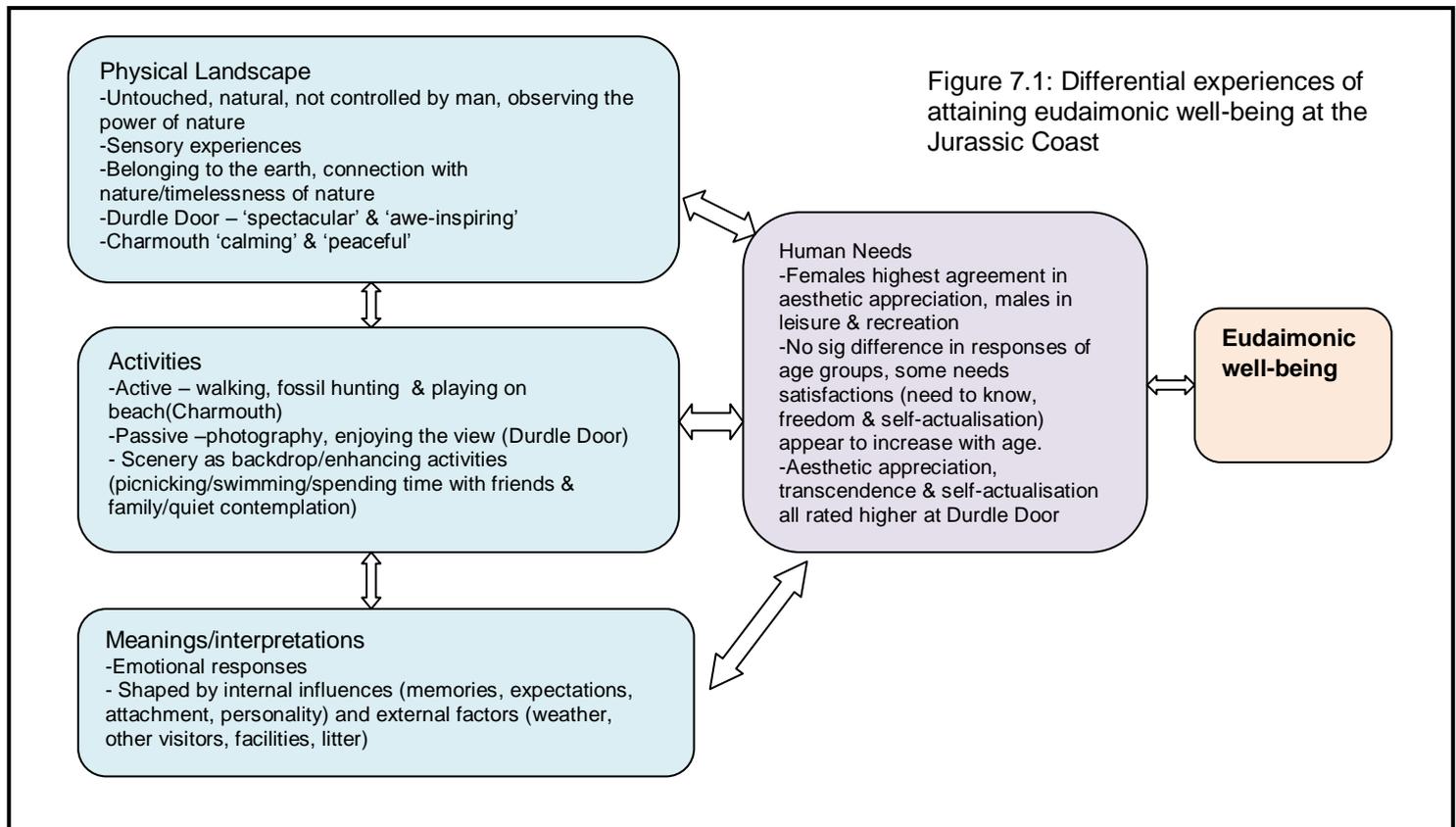
This study has evidenced the positive psychological benefits of visits to the Jurassic Coast and some of the ways in which they arise for visitors. Management of the Jurassic Coast can therefore, be informed through an understanding of why maximising opportunities for visitors to access the landscape and using it in ways which meet differing needs is important. Further, it has illustrated that the well-being benefits that people experience from the landscape differ in terms of how they arise and that for some, they are personal and born out of previous experiences or personal expectations. By understanding the differentiated experiences of visitors, markets can be understood and opportunities provided for optimal visitor experiences. Poria et al. (2003) for example discussed the importance of understanding differentiated motivations for visiting heritage sites and they categorise visitors into 'tourists in heritage places' and 'heritage tourists' (p249). Each will have differing motives for visiting the same destination and differing expectations and should thus be managed differently in order to ensure maximum satisfaction for both groups. For visitors at the Jurassic Coast, the satisfaction of human needs and resulting well-being benefits may form part of the motivation for visiting and the ways in which this well-being arises is likely to be different for different individuals. Thus opportunities for a spectrum of interactions with the landscape should be accommodated, from active pursuits to opportunities for quiet contemplation. The following section will discuss some of the ways in which these well-being benefits can be maximised through tourism management practices.

7.5 Maximising Opportunities for Eudaimonic Well-being at the Jurassic Coast

Increasing instances and opportunities for eudaimonic well-being benefits to arise for different visitors is clearly a challenge given the diversity of visitors, reasons for visiting and the myriad ways in which well-being arises. However, it is in meeting this challenge that Jurassic Coast management can most benefit from the insights of this study. This section focuses on what opportunities exist for benefit maximisation and also some of the barriers to achieving this.

The differential experiences of visitors has previously been examined and empirical data revealed that human needs are satisfied for visitors in different ways, leading to eudaimonic well-being felt to differing degrees for individuals. Relating back to the

conceptual framework, the ways in which differential experiences of eudaimonic well-being arises can be examined. Figure 7.1 illustrates this.



From this, it is clear that different influences shape the ways in which human needs are satisfied and how eudaimonic well-being is attained. The role of internal influences and the ‘layers of meaning’ through which individuals perceive and make sense of their environment have been discussed, and understanding these is important for management in terms of understanding the visitor market and expectations. Whilst there may be little which can be influenced in terms of personal memories or the degree to which visitors might be receptive to well-being benefits, understanding how external influences can shape visitor perceptions can inform management to a greater extent. The type of activity that visitors are able to engage in for example, may be important to their overall experience. The survey undertaken at the Jurassic Coast revealed that visitors enjoyed a wide range of activities from active (walking, climbing, swimming, fossil hunting) to more passive pursuits (picnicking, sunbathing, enjoying the view). It also revealed that whilst the type of

activity did not appear to play a large role in the overall satisfaction of human needs, the physical landscape did influence how people felt about the activities they engaged in. Respondents for example, commented that even commonplace activities such as swimming and talking with friends and family took on new meaning and significance in the presence of the 'stunning backdrop' (female, swimming at Durdle Door) of the Jurassic Coast.

With regards to the types of activity enjoyed, the most popular for all respondents at both case study sites was walking, followed by fossil hunting at Charmouth and photography and enjoying the scenery at Durdle Door. Ensuring that visitors have the opportunity to engage in a variety of activities whilst ensuring satisfaction and the opportunity for eudaimonic well-being to arise in different ways for different visitors is a clear management challenge. Mitchell et al. (1991) distinguished between 'use-oriented' visitors and those who are more 'attachment-oriented'. Use-oriented are those who focus on using the natural environment for whichever activities they wish to undertake. Attachment-oriented visitors on the other hand, have more of an emotional bond with the setting and may be more inclined to search for opportunities for quiet contemplation and reflection. In reality, visitors may derive satisfaction from an interplay of active and passive pursuits and may be motivated to visit for reasons associated with both use and emotion. However, the use of these binaries is helpful in thinking about how individuals respond to the landscape and to remind managers that there is no one type of 'visitor' to be catered for and that a range of strategies are required to respond to the differing needs of tourists. Practical examples of managing the setting for multiple realities could include providing zoned areas for organised beach games and activities whilst providing seating in areas of high aesthetic appeal for example.

Interviews revealed that visitor infrastructure had mixed reviews from respondents, many of whom considered the relative lack of facilities to be a positive characteristic of the area which added to the possibilities for quiet reflection without the noise of background attractions. The heritage centre at Charmouth however, seemed to be an exception to this however, as it was discussed very positively by many respondents, one for example stated; 'it is brilliant, really child-friendly, the fact that it is free and they can touch the screens, is a really nice touch'. At Durdle Door, whilst

overwhelmingly comments referred to the tranquillity afforded by the lack of visitor facilities, it was noted that some more interpretation would be a positive in terms of 'learning a bit more about the area and maybe what fossils we could look out for' which 'would engage the children a bit more'. For some, most notably those with young children, minor adverse comments concerned the lack of toilet facilities at Durdle Door and that they were 'a bit of a trek over the pebbles' at Charmouth. Also, the lack of refreshments available at Durdle Door meant that one female and her family 'had to leave early because we were thirsty'.

Litter also was mentioned as a problem at both sites but more so at Durdle Door. Whilst litter is a wide problem and results frequently from deposits of marine litter, it could also be a result of the steep climb to and from the beach which may encourage people to leave litter at the beach rather than bringing it back with them. In any case, such scenes do serve to detract from visitors' experiences a little and may be a barrier to the satisfaction of some human needs. It is interesting that the human need 'freedom and escapism' was rated lower at Durdle Door than at Charmouth which the relative crowding on the beach at Durdle Door and the resultant litter may have contributed to.

Ensuring that visitors are able to access the means to satisfy human needs and achieve eudaimonic well-being is evidently an important management consideration and accessibility issues were a concern for some respondents. The terrain at Durdle Door was mentioned most often as being inhospitable for the elderly and those with mobility problems who would struggle to get from the car park to the descent point to the beach and certainly would not be able to manage the steps. Even younger respondents commented about the challenge involved at Durdle Door; 'it is quite a hard walk and it made me realise how much I had aged since I last went. We didn't even go down the steps to the beach'. This perhaps accounts for a greater number of older people being at Charmouth beach than Durdle Door since Charmouth beach is relatively flat and easily accessible. Others commented on the safety aspect of the terrain and the worry it caused particularly for families with young children. Similarly, one respondent commented that she had bad memories of being at Durdle Door and no longer wanted to return because her dog had fallen off the cliff 'he was

fine but we do have bad memories of it, so that is somewhere that we just don't want to go to again'.

Considering how experiences at the Jurassic Coast shape the satisfaction of human needs is an innovative and potentially enlightening perspective from which to consider management options. Driver et al. (1999) suggest in their 'benefits approach to leisure' that management should not simply focus on activities but rather on the benefits accruing to the individual, society and to the environment. The empirical findings from the Jurassic Coast support this and propose a focus for how experiences can be enhanced to enable the maximum opportunities for visitors to gain psychological benefits from interactions with the landscape. The following section outlines some practical ways in which a focus on such benefits can be achieved at the Jurassic Coast.

7.5.1 Incorporating Eudaimonic Well-being in Jurassic Coast Management

Promoting a nature-based tourist destination for the things that people can 'do' are common in tourism management strategies (Driver et al, 1999) but emphasising how people can 'feel' in the destination could complement marketing material. Since tourists use both cognitive and affective dimensions to form images of a destination (San-Martin and Bosque, 2008), it is important that the best and most encompassing picture is produced and marketed. This includes promoting not only the physical features of the Jurassic Coast but also the amalgam of emotions that it is able to evoke in the tourist's mind. Urry and Larsen (2011) refer to this process as 'tourism reflexivity' which involves identifying and maximising a place's 'actual and potential material and semiotic richness' (p24).

Such reflexivity could build on the existing work of the Jurassic Coast team to promote interactions with the landscape in ways which point the visitor to a certain 'gaze' or way of seeing the landscape. Such gazes could be about education and learning or indeed about health and restoration, concentrating on 'how to think' about the landscape rather than 'what to think' (Roggenbuck and Driver, 1999). These approaches could lead into activities such as producing 'sensory' as well as 'thought' and 'emotion' maps of how people experience the landscape. Promoting activities with a focus on the psychological responses to the Jurassic Coast could provide a

valuable addition to current activities focused on increasing understanding of its geology. Such multisensory activities may 'facilitate the deeper, nature-based experiences such as spirituality, introspection and transcendence' (Roggenbuck and Driver, 1999, p317) and they could be used with the local community as well as with the visitor population who may develop a sense of attachment with the landscape and motivations for repeat visits as a result.

Increasing opportunities for visitors to interact with the landscape will also likely result in increased levels of need satisfaction. Providing written or personal guides for walks at both beaches may for example, increase the likelihood of people engaging with the landscape in a variety of ways. In addition, transport between car parks may encourage people to undertake the walks without having to worry for example about climbing the hill back from Lulworth to Durdle Door car park.

The empirical evidence from this research has demonstrated that the Jurassic Coast is significant and valuable for many people for different reasons, both cognitive and affective. Promoting both aspects in destination marketing should therefore, include all of the reasons why the landscape is so special, highlighting both its geological importance and also the possibilities as a place to gain important well-being benefits. The empirical work undertaken at the Jurassic Coast has demonstrated a variety of methods to reveal these benefits of interacting with the landscape and Mannell (1999) also highlights the importance of social science methods in coming to know about these phenomena. The following section will detail experiences from elsewhere of revealing and utilising the experiential or psychological qualities of landscapes.

7.6 Using Social Science to Reveal Nature's Benefits

Developing methods which reveal well-being values and using them as a basis for discussion around different policy options, can add new insights into decision making processes. Those involved in decisions for example, may be made more aware of how the landscape underpins well-being in diverse and meaningful ways. Such insights can then be used to support decisions, even where they may appear somewhat illogical. In Brown's (2006) study for example, where mapping exercises revealed what in the landscape was meaningful to people, the collective decision

was made to preserve values such as the spiritual and therapeutic associations in the landscape rather than subject them to change through tourism development, despite evidence of the potential economic benefits of further development. Other destinations may well make different choices as the pressures for economic maximisation may take precedence over well-being values. In either case, the role of well-being in tourism decisions appears to be important in developing mechanisms for a more insightful and nuanced understanding of the relationship between tourism, the landscape and well-being.

Social science techniques which seek to understand the experiential qualities of the landscape by asking, observing and variously talking to people have been shown through this study to be fruitful in developing a picture of how being at the Jurassic Coast makes people think and feel. A number of prominent examples from around the world also highlight the increasing importance given to experiential qualities of landscapes and attempt to integrate them within planning and management frameworks. Lessons can be learned from these and methodologies replicated which may further increase the level of understanding of the experiential and intangible properties of the Jurassic Coast.

The Australia ICOMOS (International Council on Monuments and Sites) for example, have produced 'the Burra Charter' (1999) which is considered the best practice standard for cultural heritage management in Australia. It recognises that places of cultural significance 'enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experience'¹⁰. It advocates an interdisciplinary approach to understanding this cultural significance based on documentary, oral and physical evidence. Similarly, ICOMOS Canada adopted the Quebec Declaration (2008)¹¹ which sought to preserve 'the spirit of place' in the protection and promotion of world heritage monuments and sites. This declaration recognises that the spirit of place is made up of tangible and intangible elements. Tangible elements, such as landscapes, objects and monuments are arguably easier to measure and assess whereas intangible

¹⁰ http://australia.icomos.org/wp-content/uploads/BURRA_CHARTER.pdf

¹¹ http://www.international.icomos.org/quebec2008/quebec_declaration/pdf/GA16_Quebec_Declaration_Final_EN.pdf

elements such as memories, narratives, written documents, traditional knowledge and rituals are more difficult to examine and the process will benefit from the use of social science techniques such as recording personal narratives. The Declaration states that such a process is important in understanding how these elements come together to 'make a place and give it spirit'. Again, an interdisciplinary approach is called for which makes use of the expertise of different stakeholders in order to 'better understand, preserve and transmit the spirit of place'.

Scottish Natural Heritage, in a similar vein have developed a toolkit 'Talking about our Place'¹² to guide and encourage local communities and organisations in managing their local landscape. Specifically, it helps communities to articulate what is special to them about their landscape and what benefits they derive from it. The toolkit points to the importance of involving as many stakeholders as possible and offers various ways that participation can be increased, from attending organised community events to enabling the recording of information in different formats. By simply asking people 'what is it that makes this place special' will reveal much about what in the landscape is meaningful and the ways in which it contributes to human well-being. Additional techniques as demonstrated and tested through this study such as understanding how human needs are satisfied in various landscapes, appreciating how landscapes are meaningful for different users through other medium (diaries, creative writing and photographs) can add enormously to the evidence of what is meaningful and valued in the landscape, why and for whom.

Such insights can benefit the management of the Jurassic Coast by deepening understanding of methods to reveal the deeper felt, psychological experiences and connections that people have with the landscape. Finding ways to sustain or enhance these relationships and increase the opportunities for people to develop them, is an important part of managing such a significant and deeply valuable landscape.

¹²<http://www.snh.gov.uk/docs/B1117676.pdf>

7.7 Conclusions

Evidence throughout this empirical study has demonstrated that the Jurassic Coast is replete with natural, cultural and psychological value which contributes significantly to the psychological or eudaimonic well-being of those who engage with it. Managers, as guardians of this landscape are in a privileged position to be able to manage the site to ensure the continuation of these benefits and to provide further opportunities for more people to experience them. Management could thus benefit from these insights and utilise these techniques and develop others to ensure the cognitive and affective motivations of visitors are met and that human needs are satisfied, providing optimal visitor experiences.

This study and illuminations from elsewhere have demonstrated the use of social science techniques to reveal the psychological benefits of engagements with the landscape and the reasons why people consider it to be so special. As Driver and Ajzen (1999) note, understanding how people experience the landscape provides 'the conceptual scaffolds around which the text is built' (p438). The conceptual scaffold in this case is the framework of a cultural and shared understanding and appreciation of the Jurassic Coast and the text around this is the rich and deeply meaningful ways in which the Jurassic Coast has meaning and value for so many who visit it. Continuing to listen to and reveal these narratives will ensure a landscape which is managed for the enhancement of human well-being and in particular for preserving the conditions which promote eudaimonia.

The following chapter will continue to build on this theme and discuss how these insights from the Jurassic Coast can be used in wider policy contexts and in developing techniques to reveal the well-being values of landscapes.

Chapter 8: Discussion

Impact and Implications of Research in Wider Policy Thinking

8.1 Introduction

The empirical evidence from the Jurassic Coast provides a more nuanced understanding of how visitors to this landscape experience and perceive it and how it contributes to satisfying human needs and enhancements in eudaimonic well-being. These insights point to an imperative for managing the landscape to preserve and enhance these benefits both for optimum visitor experiences and for the wider individual and societal benefits engendered by increases in eudaimonic well-being. Furthermore, these insights have wide ranging implications for diverse policy areas and something important to say about the way that a case is made for nature in decision making processes.

As discussed through chapter two, many social scientists are arguing that the time is right for policy-makers to 'extend their traditional focus on material well-being and economic development to include the impact that policies have on how people think and feel about their lives' (Dolan and White, 2007, p71). This research into well-being at the Jurassic Coast provides a practical context in which to examine how well-being might be measured and taken into account, which has been explored specifically with regards to tourism management practices. Considerations of subjective well-being are however, not straightforward and have received criticism through the literature for their very subjectiveness. This research for example, utilised methods of self-reports of human needs satisfaction and well-being derived from interactions with the Jurassic Coast which may be subject to the vagaries of human responses and changes over time. How best to strengthen the position of subjective accounts of well-being and incorporate methods of measurement into wide policy areas is the broad question that this chapter will investigate.

These considerations undoubtedly will find expression, challenges and opportunities at different levels of policy practice. This conceptual chapter will make an analytical distinction between the strategic level, the tactical and the operational levels of practice to examine the impact and implications of this research into understanding

the links between nature and well-being in wider policy areas. Following the definitions utilised in research by Fish et al. (2011a), the strategic level includes the structures and processes and the wider environment within which policies are informed and developed. The tactical level is the level at which strategic goals are translated into practical rules, procedures and tools for decision making and the operational level describes the practical context in which procedures and tools are practiced and applied. The reason for making this analytical distinction is that incorporating the notion of eudaimonic well-being and how it is derived from interactions with nature in policy will involve both conceptual and methodological challenges and opportunities at different levels of decision making. These will be investigated through this chapter.

8.2 Eudaimonic Well-being in Policy Making

Despite the challenges of revealing and articulating the subjective well-being benefits which arise from interactions with nature, there is evidence of an appetite for deepening understanding of this process and for incorporating new ways of thinking in decision-making. There are strong arguments to suggest that subjective indicators are required in policy making in order that a deeper picture is gained of the ways in which people think and feel about decisions. A focus on objective measures of well-being may miss much of this picture since indicators of how well certain needs are met such as fundamental physiological needs (food and shelter for example) may do little to present a clear picture of how important those needs are and what public preferences are with regards to need fulfilment.

Despite growing acceptance for including human well-being as a central policy focus, part of the criticism of actually doing so focuses on the appraisal of subjective indicators as being 'unstable and incompatible and therefore, of little use in social policy' (Veenhoven, 2002, p35). It is also argued that attitudinal data fluctuates over time and assessments of well-being are also relative and largely conditioned by the cultural contexts under which reflections are sought. This could mean for example, that assessments of subjective well-being may have little chance of comparability over different cultural contexts. Such indicators may therefore, not provide a 'steady policy compass' (Veenhoven, 2002, p35) which could prove problematic in many policy contexts.

Problems of interpretation of both questions about subjective well-being and how people answer those questions may also be problematic. Surveys may for example, evoke different responses in different individuals and questions may be interpreted differently. Scales on which those responses are recorded may also be open to subjective interpretation as 'reasonably satisfied' for one person may equate to 'extremely satisfied' for another. The same levels of satisfaction may then be represented in different ways leading to distortions in results.

In spite of weaknesses identified and criticisms levied at subjective accounts of well-being, they do provide an enormous amount of nuance and texture to how people think and feel and can provide a useful complement to other preference satisfaction questions. Veenhoven (2002) argues that they are in fact 'indispensable in social policy, both for assessing policy success and for selecting policy goals' (p38). Measures of subjective human well-being can be assessed for example before and after a policy intervention to gauge the level of affect and in this way can be used as a deeper form of social impact assessment. Questions over reliability and validity of subjective measures of well-being may be overcome, at least to a certain extent through the development of robust techniques to ensure measures accurately tap into the underlying dimension of well-being that is of relevance to the policy in question.

In the case of eudaimonic well-being derived from interactions with the natural environment, the role of policy is arguably to maintain and enhance the things in the environment that matter to people and that give rise to these well-being benefits and to provide continued opportunities for meaningful engagement with the landscape so that benefits are felt over time and repeat visits are encouraged. A focus on eudaimonic well-being is an important complement to other ways of understanding the value of the natural environment and ensures a wider range of questions are addressed than those framed in economic terms which may miss opportunities for policy to influence opportunities for people to increase their psychological well-being and to flourish. Such a state of well-being, as previously discussed, has important implications not only for individuals but for society as a whole. This provides compelling reasons to include considerations of eudaimonia and how it is influenced

by engagements with nature in policy decisions which affect the environment. Importantly, as noted by Dolan & White (2007), attaining subjective and eudaimonic well-being does not have to be the primary goal of policy for it to be a useful concept. It is useful in various ways at different levels of policy making such as in helping to assess and predict policy outcomes using measures of subjective and psychological well-being. This will be examined more thoroughly in the following section which will focus on the strategic level of policy thinking.

8.3 Eudaimonic Well-being at the Strategic Level of Policy Thinking.

At the strategic level of policy thinking which takes account of high level structures and overarching environments which inform policy development, considerations of subjective well-being have advanced in recent years. The Millennium Ecosystem Assessment (2005) and the UK National Ecosystem Assessment (2011) for example, are testament to the growing appreciation of the links between the natural environment and human well-being. The conceptual frameworks used in these assessments propose a holistic approach to managing landscapes, and they specifically take account of the hard to define, intangible values categorised as 'cultural ecosystem services' which resonate with the psychological benefits that respondents at the Jurassic Coast outlined in accounts of their interactions with the landscape.

By recognising and giving weight to this nuanced information, environmental decisions can be made which have greater impact for conserving and enhancing landscapes for well-being. As Dailey et al (2009, p21) articulate, 'if we can help individuals and institutions to recognise the value of nature, then this should greatly increase investments in conservation, while at the same time fostering human well-being'. However, as evidenced through this study, the ways in which landscapes contribute to a sense of well-being is often difficult to assess and relies on subjective accounts of individual experiences. For this reason evidence of this relationship is often left out of policy decisions around landscape management when in fact, it should arguably be central to them. Putting intangible values firmly on the policy table at the strategic level will require a shift in thinking to take account of subjective indicators. Whilst there is evidence of such a shift, developing robust techniques to reveal what matters to people in the environment and why, are required to further

strengthen understanding of this relationship. The concept of 'ecosystem services' (MEA, 2003) has become important in strategic thinking and can play a role in understanding the link between ecological and socio-cultural systems in a wider sense and this can help in framing thinking about the ways in which natural resources provide benefits for people and underpins human well-being.

Moreover, appreciating the intangible values which have found popular expression in the notion of 'cultural ecosystem services' and accommodating such 'experience preferences that motivate people to seek out the natural environment to fulfil psychological needs' (Driver et al., 1999, p6) has become more of an accepted idea in thinking around landscape planning and management. The Ecosystems Services Framework outlines the contribution of cultural ecosystem services to human well-being and although the links are not highlighted as particularly strong, this at least acknowledges a space for such values. The following section will discuss the ecosystem approach and how it has influenced strategic level thinking around the value of cultural ecosystem services and subjective well-being as not only valid but an important consideration for policy concerning the natural environment.

8.3.1 The Influence of an Ecosystems Approach in Strategic Level Policy Thinking

Whilst the Convention of Biological Diversity (CBD) discussed issues around the sustainable use and conservation of biodiversity in the early 1990s, it was the Millennium Ecosystem Assessment (2005) which really opened up the debate around the linkages between natural resources and human well-being. The framework put forward by the MEA, despite its conceptual weaknesses in terms of identifying links to aspects of psychological well-being, does provide a strong foundation for exploring the way we make a case for nature in decision making.

The CBD defines the ecosystems approach as 'a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way' (CBD 2010). It is clear from this that such an approach is not entirely new and appears to embrace the principles of sustainable development which are already firmly embedded into strategic level thinking such as

through the UN Commission on Sustainable Development¹³ and the former UK Sustainable Development Commission¹⁴. What is arguably new in an ecosystems approach is the appetite for valuing natural resources in a holistic and interdisciplinary way so that more account can be taken of them in decision making processes. In this way, the approach is about appreciating the breadth and range of services and stakeholders that need to be considered in decision-making. Fish (2012, p6), on this point notes, 'the environment is not only generative of fundamental benefits to human welfare such as providing sustenance, but it also underpins more qualitatively complex aspects of society and culture, from the spiritual and mystical functions of landscape to the building of cohesive communities'. These latter 'qualitatively complex aspects' are arguably as important as other services and perhaps even more so for certain groups who perceive value as the result of how different settings make them feel to be there.

The main advantage of the ecosystems approach is that it makes explicit the interconnections between natural and social systems. In the absence of this appreciation, decisions may be in danger of being made in 'discipline silos' with a one dimensional approach to development and appraisal resulting. The ecosystems approach, on the other hand promotes the consideration of the socio-ecological relationship and for example, instead of concentrating on single goods (e.g. fish) and relying on one type of knowledge only (e.g. fish stock assessments), the ecosystems approach examines the functioning of the entire system which considers human beings and their knowledge as part of the system (e.g. fishing communities, their needs, rules and practices) (TEEB, 2010, p33).

The basis of an ecosystems approach is therefore, about holistic thinking around how any given project, intervention or change in an environmental setting would impact on the provision of a range of well-being benefits to people. Whilst holistic thinking has always been the clarion call in sustainability efforts, what is arguably novel about an ecosystems approach is the way in which it attempts to standardise the ways in which decision makers can 'read across the potential impacts of a

¹³ <http://sustainabledevelopment.un.org/csd.html>

¹⁴ <http://www.sd-commission.org.uk/>

decision' (Fish, 2011, p672). It thus provides a systematic basis for comparing potential changes across diverse aspects of resource management, including the impacts on well-being. The ecosystems approach therefore, aids strategic level thinking around how and why nature has value for people and how changes in nature could impact on human subjective well-being.

What is required in a policy context then is a collection of processes and procedures which bring together a range of information and viewpoints in decision-making arenas. This will foster greater understanding of landscape meanings and the multiple realities through which people experience and value places. Using established economic techniques, supported by methods which help to gain richer insights into the reasons behind people's preferences can help in the efficient management of resources, based not only on economic efficiency but on the things that really matter to people which are multidimensional and not easily captured in quantitative analysis. Williams et al. (1992) note that such deeper considerations of human perception 'recognises that resources are not only raw materials to be inventoried and moulded into a recreation opportunity, but also, and more importantly, places with histories, places that people care about, places that for many people embody a sense of belonging and purpose that give meaning to life' (p44). The following section will explore what a more holistic consideration of socio-ecological systems, and how eudaimonic well-being results from interactions with nature, can add to tourism development thinking.

8.3.2 Eudaimonic Well-being and Tourism Policy

Appreciating the connections between natural landscapes and psychological well-being and the wider value of eudaimonic well-being for society has wide ranging implications for diverse policy areas. Strategic level thinking around tourism development for example, could greatly benefit from such an understanding. Tourism, in many ways has the potential to degrade or destroy the natural resources upon which it depends and special consideration is thus required to raise awareness of and develop techniques which highlight the importance of natural resources not only to the economic sustainability of the industry but for the well-being of tourists. Chapter 7 focussed upon maximising opportunities for individuals to experience the Jurassic Coast landscape in ways which could enhance eudaimonic well-being. This

section examines the potential of an ecosystems approach for revealing the ways in which natural resources support human well-being in planning and managing tourism development. The strength of the ecosystems approach in this endeavour is in its holistic and integrated approach to involving all stakeholders in a decision and in particular for lending the vocabulary for those stakeholders to articulate the non-material benefits that nature provides.

By recognising and embracing the interconnectedness of human and ecological systems, tourism thinking and planning can be based on the maximisation of human well-being for all stakeholders. This may prove to be a powerful motivator for the conservation of nature which in turn may provide greater economic returns through repeat tourist visits and a more sustainable tourism product. In addition, ensuring that all stakeholders have a voice and are considered in strategic level decision-making could help to foster positive host-guest relationships which might otherwise be soured if economic preferences are allowed to overshadow considerations of well-being in development decisions. Understanding the connections that people have with nature and how changes in the provision or access to ecosystem services could affect well-being is therefore essential to developing a sustainable tourism product.

Decisions which are taken with scant regard to this relationship may undermine livelihood strategies and have far reaching and damaging consequences. To illustrate this point, consider a fictitious example for illustrative purposes, of a community who rely on fishing for their livelihoods. In the pursuit of economic gain, they degrade the fish stocks to serve a developing tourism industry with the consequence that workers are displaced into alternative livelihood strategies such as in positions of servitude to tourists. The simple substitution of economic activity may not entirely make up for the loss in other services such as cultural services which include the prestige and honour of being a fisherman and the sense of identity that comes with that. Such a loss of natural resources in this example, is clearly damaging to individual and community well-being and is innately bound up with this struggle between profitability and sustainability. A deeper appreciation of how nature underpins eudaimonic well-being where a person functions positively and flourishes

as a result, could add greatly to strategic level thinking around the consequences of changes in natural resources for both society and for tourism development.

The recognition that more nuanced understandings are required of the ways in which people experience and value environmental settings provides a solid platform for including what Kumar and Kumar refer to as 'the socio-psychological dimension of value' in policy thinking (2008, p809). These dimensions are however, conceptually difficult to decipher, largely because the ways in which the natural environment impacts upon psychological well-being are issues 'which transcend the domain of rational choice and lie more in the discourse of culture, memory and language' (Kumar and Kumar, p814). If these values are not elicited however, they will fail to be legitimised and will be ignored in decisions. In the context of tourism, such values may be even more important as tourists are often more conscious during leisure time, of the subtle ways that nature acts to shape well-being since they are arguably more relaxed and receptive to emotional responses to nature. Moreover, it may be these intangible values which prove most enduring in touristic encounters and in the memories which follow (Heintzman, 2002).

The importance of such values was evidenced through the interviews with visitors to the Jurassic coast who spoke at length and with emotion about the sense of rejuvenation, of positive introspection and renewed sense of energy and vitality that the landscape inspired. The paradox of intangible values then appears to be that whilst they are intangible, they are the most apparent to the individual during and after interactions with nature and these are strongly associated with positive psychological well-being. Preserving nature for such benefits then seems vital in ensuring visitors continue to gain these benefits from encounters with the natural world. By broadening the scope of analysis in tourism planning and focusing on the links between the landscape and eudaimonic well-being, a platform is created for better understanding the competing interests in tourism landscapes and an impetus for refining policy to better reflect what matters most to people.

The potential for using well-being as a concept to guide tourism development should be considered seriously in natural areas as this could have implications on a number of fronts. As a tool for destination marketing and development, promoting well-being

could prove economically beneficial and also help to address the 'extraordinary disengagement of humans from the natural world' (Maller et al., 2005). In this endeavour, there is clear potential for co-operation with public health policy and Hartwell et al. (2012, p1072) note that framing the benefits of nature-based tourism in terms of benefits for eudaimonic well-being that emphasise human flourishing 'could be more contemporary and acceptable' and thus have considerable influence in tourist decisions. Integrating public health and nature-based tourism thus offers some interesting avenues for holistic thinking. The following section will explore this in more detail.

8.3.3 Eudaimonic Well-being and Public Health Policy

Despite the growing evidence and acceptance of the contributions of 'cultural ecosystem services' to human well-being, there still appears to be a disconnect between this evidence and real integration into health promotion interventions (Maller et al., 2005). In the face of a growing separation between nature and society and growing pressures on public health systems due to increasing instances of non-communicable diseases including obesity and depression, there appears to be a considerable untapped potential for promoting nature's benefits in health strategies.

The considerable benefits of contact with nature have been discussed previously and evidence from the Jurassic Coast also lends weight to the argument that interactions with nature can be linked to increases in psychological and eudaimonic well-being. Maller et al. (2005) further state that 'ecological inequality' or a lack of opportunity to experience nature may come to be recognised as a likely determinant in the health and well-being of populations (p50). Integrated and holistic thinking is then required at the strategic level to advocate a socio-ecological approach to public health which affords nature a more prominent place in interventions.

Lang and Rayner (2012) extend these arguments and underline the importance of public health in defining 'what a good society is' and in measuring progress (p1). They call for better understanding of the inter-connectedness between human and ecosystem health and for embedding these ideas of 'ecological public health' (Lang and Rayner, 2012, p1) in policy thinking. These ideas clearly resonate with the principles of the ecosystems approach in which collaboration and holistic thinking are

central. Unravelling these connections and revealing what matters to people in the landscape and why, involves developing robust methodologies and tools at the tactical level of policy making. Operationalising these methods will ensure that the nuanced ways in which people experience and benefit from nature can be captured and incorporated into decisions. The following section will explore what this means in practice.

8.4 Eudaimonic Well-being at the Tactical and Operational Level

At the tactical and operational level of policy thinking, the focus is on developing tools to reveal the connections between landscape and eudaimonic well-being for different stakeholders and how these connections shape priorities for management. Developing techniques which have the potential to add to the process of revealing and incorporating eudaimonic well-being values into decisions will ensure that landscape management is approached in vitally different ways.

Recent literature has evidenced a number of frameworks for evaluating the links between nature and well-being and an array of methods for revealing them. The TEEB (The Economics of Ecosystems and Biodiversity, 2010) report for example, identified a number of frameworks grounded in economic, ecological and developmental approaches. Whilst one may be preferred to another depending on the particular disciplinary focus and the context of the decision, the strength in working to a framework is that it provides a structure for enabling policy makers to include nature's benefits in decision making. Deliberative and participatory methods which involve stakeholders in discussing and making decisions about the individual and collective values of natural resources are a useful way of revealing the stories behind valuation estimates and for giving people the opportunity to hear how and why the landscape is important for others (Fish et al., 2011). Approaches to valuation which enable dialogue around the benefits generated by natural resources can help in providing a collective understanding of the inter-linkages between natural capital and human well-being which may not always be obvious to all stakeholders.

It has been discussed that not all values can be monetised and so techniques which enable the integration of non-monetary evaluations of values are required at the operational level of decision-making, so that the whole range of human values can

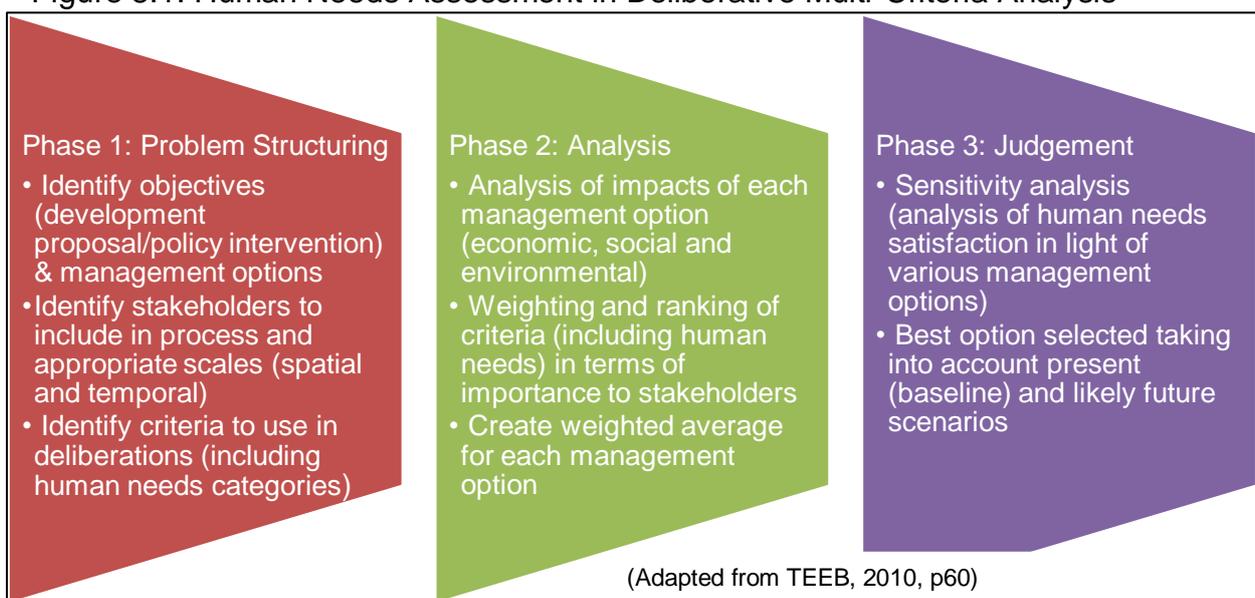
be considered. Indeed, Church et al. (2011) state that it is not appropriate the value everything in monetary terms, such as deep felt values and finding ways to integrate qualitative evidence in meaningful ways to decision-makers is paramount. One technique which has found wide-ranging support (HM Treasury; Maxwell, 2011, Proctor and Drechsler, 2006) is the multi-criteria analysis. This technique does appear to hold great potential for incorporating both monetary and more qualitative assessments of value, and this will be discussed in greater detail here as an example of how non-monetary values can be incorporated in decision making processes. Furthermore, it is argued here that this technique has the potential to be developed to include different measures of subjective well-being such as the human needs assessments generated through this study of the Jurassic Coast.

The technique of multi-criteria analysis is identified in the Government's 'Green Book' (HM Treasury guidance for Central Government, which sets out a framework for the appraisal and evaluation of all policies, programmes and projects) as a recognised method for assessing non-monetary evidence and it is a well-tried and effective procedure for structuring and aiding complex decision-making processes. The deliberative version of this technique holds considerable promise for ensuring that non-monetised costs and benefits of natural resources are incorporated into appraisal processes in a systematic way (Fish et al., 2011b). This involves multiple stakeholders deliberating over criteria for assessment and the relative importance of those criteria using weights to rank them. The technique is a means of simplifying complex decision making tasks which may involve many stakeholders, a diversity of possible outcomes and intangible criteria by which to assess the outcomes. It is an effective technique with which to identify the alternatives or options that are to be investigated in coming to a decision and developing a set of criteria by which to rank these alternatives. This is not necessarily to suggest that the 'right' solution will be reached as a result, but its value lies in the ability to unravel the complexities involved in assessing the worth of different resources and the consequences of the trade-offs for different stakeholders. As Proctor & Drechsler state 'the multi-criteria analysis process is valued for the enlightenment and unravelling of issues that it can provide in the decision-making process' (2006, p172).

The strength of this technique is that it allows for a high input from stakeholders and enables decision makers to understand in light of discussions, what is important in the landscape and for whom and to ensure that these are taken into consideration at the outset. This technique gives voice and weight to the various and sometimes competing criteria by which people value nature and make decisions. The technique thus provides a more realistic and nuanced way to view the uses, values and priorities of the benefits arising from natural capital (Proctor and Drechsler, 2006).

The methods developed for assessing the contribution of the natural environment to human needs satisfaction and eudaimonic well-being at the Jurassic Coast, contribute to an understanding of how measures of subjective well-being can be captured systematically. Whilst this method has the benefit of enabling a deep understanding of how individuals and groups of individuals respond to the natural environment, the deliberative form of multi-criteria analysis can build on this technique to incorporate human needs as a category for consideration to be weighted against other variables. Stakeholders can then debate the relative importance of the satisfaction of different human needs in a setting and discuss the reasons why they are important to them and how they might change in light of future scenarios. This process and where human needs could fit into it is summarised in figure 8.1.

Figure 8.1: Human Needs Assessment in Deliberative Multi-Criteria Analysis



By incorporating human needs into this technique, understandings can be developed of the shared and collective values that people hold for environmental resources. It would facilitate some enlightening discussion around why some human needs are important for some and not for others and which, collectively should be maintained in light of changing futures. Decisions and priorities for management can then be guided by their relative impacts on the satisfaction of human needs.

Assessments of human need satisfaction can thus be seen as a useful contribution to the growing suite of techniques which can be used in non-monetary assessments of landscape value. By ascertaining the extent to which an environmental setting acts to satisfy human needs and the relative importance of meeting various needs for individuals, decisions can be made regarding the creation or preservation of opportunities to satisfy those needs. Cruz et al. (2009) discuss an interesting extension to this process, similar to the discussions during a multi-criteria analysis, in which human needs satisfaction is discussed in a group context and these are then compared to likely changes given futures scenarios. Participants can also develop graphical representations of satisfaction levels, thereby creating visual aids for decision making at a local level. Thinking about future scenarios does however require a great deal of imagination on the part of participants so acknowledging levels of accuracy and strategies for dealing with uncertainty will be required. However, this approach does serve to identify areas of agreement or disagreement and to manage group discussions around largely abstract concepts in a relatively enlightening and illustrative way.

Other qualitative methodologies such as those developed and tested at the Jurassic Coast are also valuable and could be refined further to gain a deeper understanding of what is valuable and meaningful in the landscape for different users. The use of landscape diaries, solicited photographs and interviews for example, provide practical techniques which reveal a great deal about the value of the landscape and how changes in it could affect well-being benefits that people derive from it. These techniques also provide profound insights into what well-being actually means for different stakeholders and what, by extension, the degradation of natural resources might mean to individuals in the pursuit of positive functioning and flourishing.

The conceptual framework developed from this work at the Jurassic Coast can also be transferred to different contexts. It provides a useful way to think about the ways in which value is created which appears to cluster around the physical landscape, the activities and interactions with the landscape and the meanings and interpretations of it. The framework provides a template from which to investigate local conditions and develop local indicators of cultural ecosystem services and the ways in which they are experienced and how individuals shape meanings and derive benefits and value from the landscape.

An amalgamation of techniques at the operational level may provide the best strategy for eliciting hard to define values and for ensuring they are represented in policy decisions. The assessment of human needs and various qualitative methods have proved useful in understanding the value of the Jurassic Coast to visitors in terms of psychological well-being and these can be developed further and usefully used alongside other existing value elicitation techniques. The challenge in moving forward with such techniques is to 'combine analytical rigour with interpretative complexity' (Fish, 2011, p677) and using a combination of quantitative and qualitative techniques to reveal and understand values is a useful way to ensure that evidence represents the inevitable complexity and nuanced ways in which nature supports human well-being.

These techniques can also be useful in developing local level indicators to assess the extent to which the natural environment supports human psychological well-being (Church et al., in press, Veenhoven, 2002). These could include assessments of the quality of the landscape in terms of how it is perceived through the senses. This is important as empirical evidence from the Jurassic Coast suggested that the visual qualities in particular as well as the sounds and smells of the landscape were important in evoking restorative benefits which contributed to psychological well-being. Degradation of these sensory experiences may detract from the experience and warnings of this are required such as through assessments of indicators. Other indicators of eudaimonic well-being value could include access to the landscape, levels of engagement with it and overall assessments of needs satisfaction. This would serve well to build a picture of how nature underpins eudaimonic well-being in

particular destination areas and how landscape managers might usefully take account of these and monitor changes in them.

8.5 Conclusions

This chapter has discussed how a more nuanced understanding of how natural resources underpin eudaimonic well-being can be revealed and used in different levels of policy thinking. At the strategic level, thinking has shifted to include discussions of the ways in which nature underpins well-being and the emergence and widespread acceptance of the ecosystems services framework has arguably been integral to this shift (MEA, 2005; UK NEA 2011). What is most noteworthy about this reinvigorated interest in nature and human well-being is the increased legitimacy being afforded to ideas of subjective and hard to define values which are finding their way into decision-making processes.

Whilst the conceptual and methodological challenges of hard to define values or cultural ecosystem services have been discussed, the empirical work at the Jurassic Coast adds considerable detail to understanding what these values are and what they mean for visitors to this landscape. It serves also to shape thinking around how different techniques could be developed to capture these benefits of nature and how they could usefully be incorporated into existing valuation techniques.

This research in particular, contributes to understanding the importance of cultural ecosystem services in tourism encounters and how developing opportunities for meaningful engagement with the landscape can enable more positive tourist experiences and encourage repeat visits. This understanding is crucial for managing successful and sustainable tourism in natural areas and for preserving the things that really matter for people in the landscape. It is crucial also for strengthening arguments around the health benefits of contact with nature and the imperative for integrated policy systems which could link tourism to public health policy for example. Daily et al. (2011, p12) notes however that 'in many cases, sections of society are open to the idea of ecosystem services and natural capital, but simply do not know how to take the idea and use it in a concrete way'. The methodologies utilised in the empirical work at the Jurassic Coast demonstrate how notions of intangible values can be operationalised into workable techniques to reveal what in

the landscape is valuable and how it serves to satisfy human needs and contribute to eudaimonic well-being. These insights can be developed and further refined at the tactical and operational levels of decision making to ensure that a wide range of voices are heard in landscape decisions and a broad understanding is gained of how landscapes are valued in subjective ways and what the priorities for management should be.

Understanding landscape value in terms of subjective well-being is gaining currency in policy thinking at all levels and changing the way that conservation and development are understood. As Potschin & Haines-Young (2011, p575) state; 'the idea that ecosystems provide services to people is dominating current debates and is shaping research and application'. Whilst not a panacea, an ecosystems approach does provide a framework for strategic level thinking about the links between nature and well-being and a platform for developing techniques to reveal what these are and what they mean for people at the operational level. The empirical work from the Jurassic Coast demonstrates how thinking at all levels can be influenced through these debates and how more robust and sustainable techniques for preserving the landscape for well-being benefits can be developed.

Chapter 9 – Conclusion

Theoretical and Practical Contributions of Research to Intellectual Debates

9.1 Introduction

This study has evidenced the profound ways in which the Jurassic Coast is valued by those who visit it. More than an asset with shared cultural and economic value, research has revealed the very personal ways in which individuals add texture to these shared understandings and how the Jurassic Coast comes to be meaningful and valuable to those who visit it. Such connections with the landscape have been explored variously in the literature through concepts such as place identity and attachment (Davenport and Anderson, 2005; Devine-Wright and Howes, 2010) an evolutionary pull towards nature or 'biophilia' (Kellert and Wilson, 1993) and through ideas of stress reduction and restoration (Hartig et al., 1996; Ulrich, 1979; Kaplan and Kaplan, 1989). Acknowledging the importance of these intangible well-benefits of nature can contribute greatly to management thinking especially in a tourism context where providing opportunities for benefit maximisation can ensure positive touristic experiences.

The ecosystem services framework is crucial to moving forward these debates and in lending the vocabulary to discuss the intangible benefits of nature or 'cultural ecosystem services' alongside other ecosystem services which underpin human well-being. Considerations of cultural services are however, conceptually and methodologically challenging and this study goes some way to advancing thinking around overcoming these challenges. Specifically, this study advances thinking in three important ways. Firstly, by emphasising the emotional and subjective ways in which landscapes come to resonate as significant, a clearer idea of how and why value is created is gained. This advances debate around the importance and imperative of developing valuation techniques which incorporate non-monetary measures of value. The concepts of human needs and eudaimonic well-being are innovative additions to these debates, as they effectively tap into the reasons why some landscapes are valued at a very profound level. The framework presented which conceptualised the relationship between tourism, the Jurassic Coast and

eudaimonic well-being highlights how experiences in this landscape serve to satisfy human needs and contribute to eudaimonic well-being. This relationship is important in understanding the benefits of nature which are referred to in the ecosystems services framework as 'non-material' but which often are central to the reasons why people visit natural areas and consider them to be so special and valuable.

Secondly, the challenges of capturing these non-material benefits of nature and revealing how interactions with nature enhance eudaimonic well-being have been addressed through this study. The UKNEA (2011) study of cultural services concluded that these services 'make a significant contribution to achieving people's key needs' (p634). By developing a methodology based on these key human needs which represent those required to achieve psychological well-being, it has been possible to make assessments about the level of satisfaction achieved by visitors to the case study landscape. The conceptual framework developed from this outlines the ways in which interactions with the landscape leads to the satisfaction of human needs and results in eudaimonic well-being benefits.

Lastly, this study contributes to discussions around the ways to incorporate these understandings of how the landscape is valued in subjective ways, in decision-making processes. Through an understanding of the ways in which value arises, which has been conceptualised as an interplay of the physical landscape, the experiences and activities undertaken in the landscapes and the meanings and interpretations of it, this provides a practical steer for landscape management at different levels. At a local level, tourism management will greatly benefit from these insights which provide indications of what in the landscape is important, to whom and how opportunities for well-being benefits can be enhanced or developed. Moreover, these insights provide an innovative lens through which to focus management activity which can be based around not only the cognitive reasons behind visits to the Jurassic Coast but also the emotional and affective elements which may be as, if not more important for some visitors. In wider policy thinking, these insights are also valuable. At a strategic level, thinking around valuing natural resources and wider notions of prosperity has shifted in recent years to include notions of human well-being and the importance of natural resources for underpinning human well-being.

This study contributes to the discussion of why such considerations are important and why work should continue in this area.

This chapter will further discuss how this study contributes to both a theoretical and practical understanding of the intangible benefits of nature, what they mean in terms of eudaimonic well-being and how these insights can be used as non-monetary valuation evidence in decision-making processes. The following section will explore how key debates around environmental valuation and well-being have been advanced through this study.

9.2 The Place of Eudaimonic Well-being in Assessments of Environmental Value

Literature through the ages is replete with descriptions and understandings of the ways in which nature benefits humans and serves to fortify the human spirit (Driver et al., 1999). Whilst this value of nature has been recognised and described in various ways through diverse bodies of literature, methods to capture, measure and articulate it are less well developed (Chan, 2012). The complex relationships that people have with nature are important to unravel however, both for extending ideas about what constitutes value for people in the landscape and for devising effective policies aimed at preserving the things that are valuable and that matter to people. By extending thinking in this way, policies may have the potential to 'reconnect increasingly urbanised societies to nature' and to encourage a 're-encounter with the knowing of oneness' (Putney, 2003 p4). This 'knowing of oneness' has resonances with the idea of eudaimonic well-being which this study has shown to be an important construct when thinking about well-being. More than an account of happiness, eudaimonia is concerned with a more enduring sense of psychological well-being in which positive functioning and human flourishing are possible. By identifying the criticality of natural resources to eudaimonic well-being, management practices can focus much more on protecting and enhancing these resources and developing strategies to maximise opportunities for people to experience the benefits of them.

Further, such insights may serve to re-invigorate a sense of environmental ethical behaviour and stewardship borne out of an understanding of the individual human

benefits of preserving the landscape (Harmon, 2003). Managing landscapes for the eudaimonic well-being value they have for those who experience them is an important outcome in itself but it is also important because well-being is so often a cause of other valued outcomes such as worker productivity and rewarding relationships (Diener and Seligman, 2004, p2). It is for these reasons that debates around environmental valuation should be extended and policy driven by a need to consider managing landscapes for well-being benefits.

There is evidence of some shift in thinking in the field of environmental valuation as traditional monetary measures of value are increasingly contested and debated (Spash, 2008; O'Neill et al., 2008; Harmon and Putney, 2003) and room is being made for subjective and experiential qualities to be considered in tandem. Putney (2003, p4) for example states that 'there is a need to make explicit the intangible values that impact the way we perceive, select, establish and manage protected areas without trying to force them into some sort of scientific, ethical or economic framework'. The conceptualisation of these intangible values as cultural ecosystem services in a variety of policy areas ensures that a more prominent place is granted for them in discussions of how the natural environment supports human well-being. As Church et al. (2011) conclude, 'cultural goods and services represent the newest ways of interpreting human-environment relations' (p679). Interpretation which includes specific assessments of the links between cultural services and psychological and eudaimonic well-being could add considerable value to these discussions.

This study has highlighted how the Jurassic Coast, a culturally valued landscape as its World Heritage designation attests to, also comes to have personal significance and value for visitors by virtue of the psychological and eudaimonic well-being benefits individuals derive from interactions with it. Moreover, it has highlighted how this relationship can be conceptualised and tested. This is important in advancing understanding of the ways in which environmental value can be assessed in ways which do not rely on monetary values. By systematically capturing the contribution of the landscape to the satisfaction of human needs and demonstrating ways in which they can be quantified, this study will provide a valuable contribution to the growing suite of techniques for capturing and integrating non-monetary measures of

value into decision-making processes. The following section outlines in greater detail how the methodology developed reveals these values and what they mean for visitors to the Jurassic Coast.

9.3 Methodological Advances to Reveal the Value and Significance of the Jurassic Coast

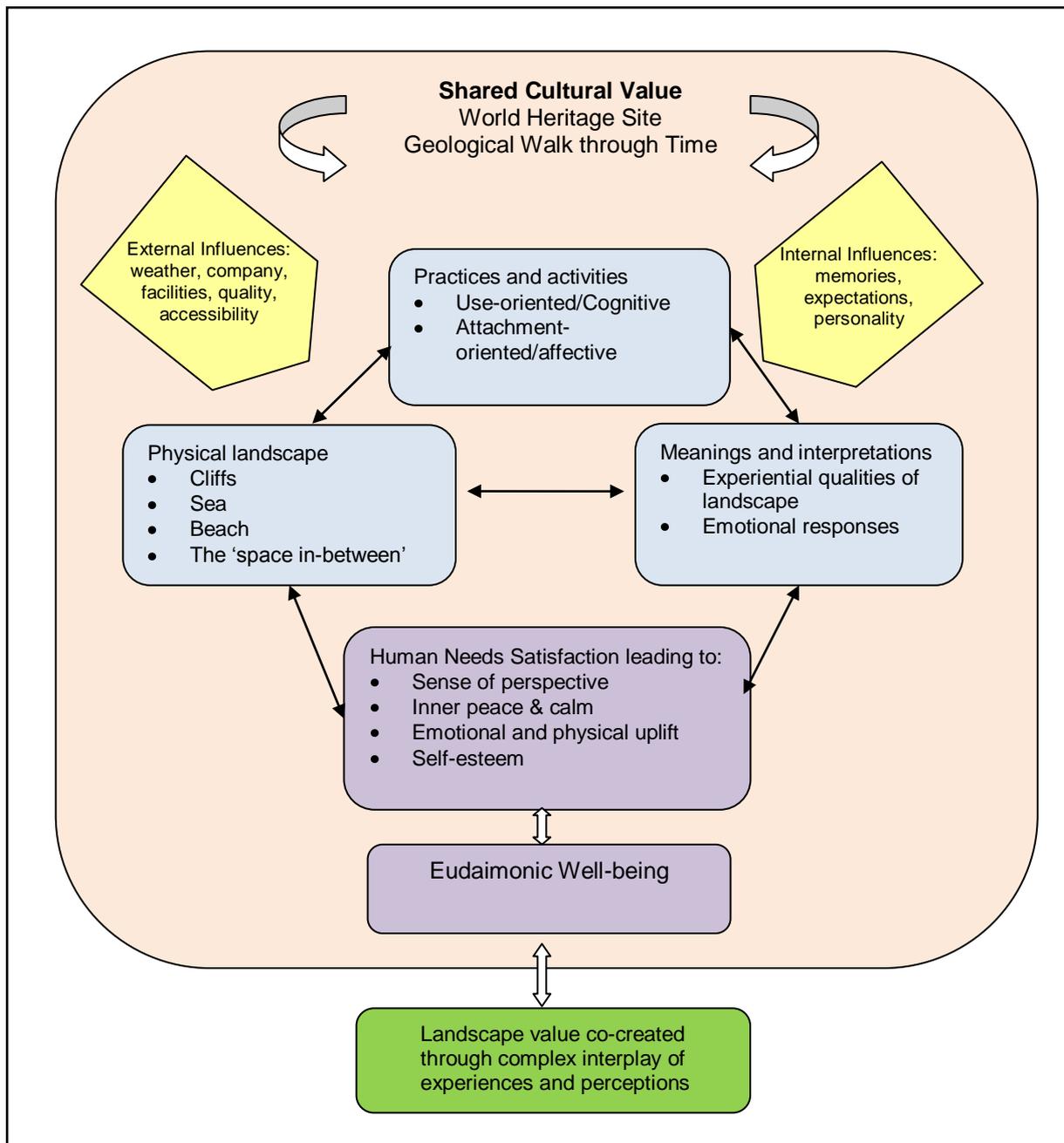
The previous section outlined the ways in which notions of intangible values, discussed more often in recent years as cultural services, are increasingly becoming accepted as legitimate in discussions of the value of natural resources. Much more however needs to be done to put this thinking to practical use. The methodology presented in this study contributes to this aim by developing both quantitative and qualitative techniques to capture the ways in which interactions with this landscape lead to well-being benefits.

This methodology was based on the idea that certain fundamental human needs can be satisfied through experiences in the landscape. By using a human needs framework to understand these intangible benefits of nature, a deeper understanding of what these benefits actually mean in terms of human flourishing and psychological well-being is possible. Such information can usefully feed into a range of decision making processes aimed at preserving the things that matter to people and maximising opportunities for people to access the things that matter. As Costanza et al. (2007 p275) note; 'while we cannot directly invest in human needs, we can invest in built, natural, human and social capital in ways that create the opportunities for people to fulfil their needs'. This suggests that enabling and facilitating opportunities for people to enjoy natural resources may be a hugely important role for policy makers and stakeholder partners to play in contributing to human psychological well-being. Similarly, Dasgupta (2001) argues that the state's responsibility is not the management of happiness (or human well-being) but instead, the provision of opportunities for all to pursue their own purposes. This study is important in providing an evidence base through the survey of human needs satisfaction and supporting interviews as to how the opportunities to interact and recreate in this landscape have value for people and serve to underpin psychological well-being.

The questionnaire developed for this study amalgamates the dimensions of human needs as proposed by Max-Neef (1992) and what appear to be the important dimensions of psychological well-being (Ryff and Keyes, 1995; Diener et al., 2009; Ryan and Deci, 2001) and these, it is proposed, map well onto the categories of cultural services as proposed by the Millennium Ecosystem Assessment (2005). The theory which is proposed through this thesis is therefore, that the satisfaction of human needs derived from the case study landscape leads to psychological and eudaimonic well-being which serves to confer value and significance on the landscape.

The insights gained from this methodology enable a rich appreciation of the ways the Jurassic Coast landscape serves to satisfy human needs and how that translates in eudaimonic well-being for visitors and what that means to them. The conceptual framework for understanding the relationship between landscape, tourism and eudaimonic well-being (figure 3.1) pointed to a threefold relationship in which value was created from the interplay of the physical landscape, the activities in the landscape and the meanings associated with the landscape. Through this interplay, it is hypothesised that human needs are satisfied which results in psychological well-being, optimal experience and human flourishing; states associated with eudaimonia. Through the evaluation of the empirical data from the case study sites, this framework can be further embellished to elaborate on the causes of human need satisfaction at the Jurassic Coast. This is important in guiding management priorities which can be directed at facilitating opportunities for human need satisfaction, thereby enabling the conditions required for optimal visitor experiences. Figure 9.1 shows how the framework has evolved through the interpretation of data collected.

Figure 9.1: Evolved Conceptual Framework



9.3.1 Exploring the Conceptual Framework

The empirical data collected from the Jurassic Coast highlights the ways in which participants value the landscape. This is through a complex interplay of a shared cultural understanding of the value of the site as a World Heritage Site and the expectations that come with that which are re-enforced by destination images. Value and significance of the site is also coloured by a variety of other factors which shape the ways in which individuals use and perceive the landscape. Whilst this interplay

may be different for different individuals, the survey results showed that for the majority of the visitor population who took part, all human needs were highly satisfied (evidenced by a score of 1-2 on the likert scale used). The exception to this was in the category of belonging and connectivity. Interestingly, females tended to rate human need satisfaction higher than males which may be a feature of the emotional language used through the survey which could resonate more with females with males. There is some support for this in the literature as Hartig et al. (2007) for example, conclude from their study of psychological restoration in nature that females are more likely than males to perceive an environment as restorative. However, interview narratives from the Jurassic Coast do not entirely support this as males also employed emotionally charged language in their expressions of how they felt to be at the Jurassic Coast. One male respondent at Durdle Door for example, spoke about he felt 'more alive, more human' being there and another expressed his sense of 'connecting with nature' and yet another about 'appreciating God's creation'. Male respondents taking part in interviews however, make up only a small proportion of the total males who took part in the survey as a whole, and so it is not possible to make any definite conclusions on this point.

Qualitative techniques to explore the causes of this satisfaction revealed that for many, it was the physical qualities of the landscape which contributed most to feelings of satisfaction and well-being, although this was derived in different ways for different individuals. The aesthetic appeal of the landscape was noted most often as providing an important and memorable backdrop to experiences in the landscape. This was largely connected with the cliffs which due to their geological significance seemed to evoke a sense of perspective, with the timelessness and force of nature contrasted to the brevity of nature and the fleeting moments of present-day leisure time. The sea in addition, provided a calming influence, both through the sensory experiences of it and also through contemplations of its vastness which for many evoked a sense of freedom and escapism. The beach itself also seemed to be important in this as 'the space in-between', the space presumably habited by humans which represents the end of land and the start of 'something beyond'.

Benefits also arose and needs satisfaction gained from activities undertaken and engagements with the landscape and with others in the landscape. Whilst the type

of activity undertaken did not appear from the empirical data, to play a significant role in the level of satisfaction of human needs, the backdrop of the Jurassic Coast did serve to enhance how certain activities were remembered. Passive and everyday activities for example such as sunbathing, picnicking or spending time with friends and family seemed to be recalled as even more positive due to the backdrop of the Jurassic Coast. The type of activities that people undertook in the landscape were distinctive in that some were active pursuits which visitors had travelled specifically to undertake, such as boating and swimming whilst others were passive and involved seeking out opportunities for quiet contemplation and connecting with nature in more personal ways.

Meanings and interpretations of the landscape are shaped by a combination of these factors and personal layers of meaning are built up around the landscape by the individual as people develop their own personal stories and interpretations. These are in addition, shaped by influences which are both internal and external to the perceiver. Internal influences can be distinguished as personal to the individual and associated with memories or associations with the landscape and personal expectations for example. External influences include the weather, the social setting of the experience and also visitor facilities. These interlinking factors are key to understanding how value and the visitor experience are constructed which may be quite different for different individuals. What does seem to unite visitors to the Jurassic Coast however, is that these differential experiences all seem to lead to the satisfaction of human needs to varying degrees. The factor analysis of the human needs items revealed that this satisfaction gave rise to a sense of perspective, inner peace and calm, a sense of being uplifted physically and emotionally and self-esteem. These emotional states are all evidenced through the literature as important components of eudaimonic well-being (Ryan and Deci, 2000; Ryff and Singer, 2008) and pivotal in positive human functioning and flourishing.

Such a deeper, more nuanced understanding of how benefits arise from this landscape and what they mean for visitors is vital in understanding how the landscape is valued which may be more than the sum of 'use values' might suggest. Such insights are significant in assessments of what is valuable in the landscape, to whom and what should therefore, be protected in the landscape and why. This has

wide appeal in a variety of decision-making contexts, most notably at the Jurassic Coast in the context of land and tourism management. By revealing these benefits and values, ideas around managing for well-being can be developed and grounded in evidence such as collected through this study. The following section will explore how these insights can advance thinking around using intangible and subjective values in decision-making processes.

9.4 Advancing the Place of Nature's Benefits in Decision-Making Processes

By understanding and incorporating the ways in which landscapes come to resonate as valuable and significant for individuals, decision making processes can be oriented towards what is of value in the landscape, to whom and why. This can add substantial texture to landscape information which may largely be missing if focus is on the value of it which can be measured in monetary terms. At a local level, tourism management practices at the Jurassic Coast can benefit from these insights by ensuring that what matters to people in the landscape is preserved and enhanced. Ensuring that visitors are able to access the landscape they value and enjoy it in ways which satisfy human needs and lead to eudaimonic well-being is also important for ensuring optimal visitor experiences which may lead to repeat visits.

This study has revealed that people feel emotionally connected to the landscape because of how it makes them think and feel about their own lives and how it benefits them psychologically, as much as they may appreciate the geological and heritage significance of the landscape. Understanding this sheds new light on marketing the landscape in terms of both showcasing its heritage value as well as the emotional associations and well-being benefits of it. This also has implications for managing the landscape for the diversity of visitors who may use and value the landscape in different ways. Managing for 'use-oriented' and 'attachment-oriented' visitors (Mitchell et al., 1991) is highlighted through this study as important. By appreciating the differential uses and benefits of the landscape, management can be directed to ensuring the best possible opportunities for all to maximise those benefits. This extended understanding of the ways in which people experience, perceive and value the landscape, making use of both 'cognition' and 'emotion' (San-Martin and Bosque, 2008) will add depth and insight to tourism management

practices and enable management to respond effectively to the varying ways that people engage with the Jurassic Coast.

This evidence can feed effectively into decisions about how to preserve and present the landscape for the enjoyment of a diverse array of people for a diverse array of purposes. In terms of deepening understanding of these purposes and the ways in which visitors 'consume' or 'gaze upon' (Urry, 2002) the landscape, the work of Gossens (2000, p301) offers some interesting insights. He developed a model of tourist motivation in which emotion plays a central part in the push and pull factors of destination areas. He argued that 'tourists are pushed by their emotional needs and pulled by the emotional benefits of activities and destinations'. Emotional needs are therefore, important in both understanding the motivations of why tourists visit certain landscapes and also in terms of understanding their responses to those landscapes and by extension, their motivations for repeat visits. In the context of the Jurassic coast, the depth of emotional response to the landscape is evident in recollections about experiences in which some people became obviously emotional and expressed deep-felt connections with the landscape and a desire to return to re-experience those same emotions and connections. Interestingly, this was expressed even by those who were visiting for the first time and were not therefore, pulled by more personal factors such as memories and place attachment. Emotional needs are therefore, important for visitors when making destination choices and these should be taken into account in decisions about how to promote and manage the landscape to appeal to these emotional needs which push them to the destination.

By understanding this interplay of visitor and landscape in ways which make explicit the intangible and emotional, the role of decision-makers in facilitating this consumption becomes two-fold. Firstly it is about raising awareness of the landscape and the particular emotional and psychological well-being benefits associated with it. This could serve to attract a whole new market in search in emotional uplifting and psychological health benefits from their touristic experiences. Secondly, it is about facilitating opportunities for people to make the most of their experiences once they arrive and for enabling and providing space for both activities and practices in the landscape and for more sedate musings, imaginings and daydreams that are sparked by the natural environment and which translate into

benefits for the individual. Poria et al. (2003) suggest that by understanding tourists' motivations and their emotional or psychological connections to the landscape, it may be possible and beneficial to differentiate these tourists in terms of marketing and interpretation, catering differently for those who come to be emotionally involved in the experience of being in the landscape and those who have other motivations such as participating in specific activities. This of course involves further thinking around balancing the preservation of the natural landscape with developing appropriate visitor facilities and activities; debates that decision-makers concerned with preserving and promoting the enjoyment of sites of special interest are well versed in.

Debates around the sustainability of tourism to natural areas can also benefit from these insights (Tisdell and Wilson, 2012; Clarke, 2011). It has been revealed through this study for example, that visitors to the Jurassic Coast value the landscape in ways which may only be loosely connected to its heritage value. Far more important for others is the ways in which it serves to satisfy human needs and evoke emotional responses which lead to psychological well-being and feelings of inner calm and rejuvenation. By ensuring that opportunities are created or maintained for people to engage with the landscape in ways which strengthen these responses, more sustainable ecological behaviours could be enabled as people may be more motivated to protect the landscape from which they derive such well-being benefits. Instances of litter for example, may reduce as people appreciate how this detracts from the benefits of the landscape.

Considerations of the emotional and subjective ways in which value is co-created in the landscape, can add considerably to decisions about managing the landscape. An 'expanded land management ethic' (Driver et al., 1999) may then incorporate these ideas alongside other measures of value to enhance practices and maximise benefits for visitors.

9.5 Limitations and Further Research Questions

Whilst some interesting insights into what the Jurassic Coast landscape means for people and how it affects them in quite profound ways have been gained, the limitations of the research approach must be noted. The study has explored for

example, the conceptual difficulties inherent in identifying these benefits since there appears through the literature to be no universally agreed definition of well-being. To overcome these difficulties, a human needs framework was utilised which amalgamated the most prominent constituents of psychological well-being as gleaned from the literature. It must be recognised however that placing items to measure particular human needs categories is a particularly subjective process since there is potentially a great deal of overlap and items could equally be placed in a number of categories. The internal consistency for each human need category was however, shown to be high which means that we can be confident that the items were measuring the same underlying constructs. In addition, the qualitative data does provide strong evidence to substantiate the arguments from the quantitative data and provides rich insights into what the satisfaction of human needs means for visitors.

In addition, by making the conceptual leap from human need satisfaction to value, some degree of measurement is enabled but in reality, this measure of value may be contingent on how important the satisfaction of human needs actually is to the individual. If for example, a person states a high satisfaction with the need 'freedom and escapism' at the case study site, this may not equate in all circumstances to a high level of value for the landscape if the need was not important to the individual. Due to the limitations of survey design, this study did not attempt to make any assessments of the importance of human needs to visitors. It is not possible therefore, to make completely robust judgements about the relationship between human needs satisfaction and landscape value. However, the qualitative data does serve well to strengthen arguments about how the well-being benefits of being in this landscape did bestow upon it a high level of value and significance. Despite these limitations, the methodology presented in this study does provide an innovative way of exploring the relationship between landscape and well-being and for capturing nature's benefits and what they mean for visitors who experience them.

Whilst this study advances current thinking in a number of important areas, further work is required in order that methods for capturing nature's benefits in non-monetary ways are refined and techniques further developed to embed them into decision making processes. Answering a number of important research questions

could help in this endeavour. Further questions might include a more specific focus on different landscapes in which to test these ideas and methodology. This study has demonstrated for example, an almost universal appreciation and positive affect from being at the Jurassic Coast. This landscape is however, a high profile tourist setting in which visitors come with the express intention of enjoying the benefits of the setting. Whether the same benefits would be felt or expressed so candidly and emotionally in more mundane 'everyday favourite places' (Korpela et al., 2008) is a matter for further research. Similarly, in less developed country settings, it is a matter of great interest whether economic considerations would supersede emotional ones in the face of competing pressures for the land and for the necessity to prioritise lower level, subsistence needs over psychological well-being ones. Perhaps then the non-material benefits of nature are a luxury for those who can afford to take account of them.

Another interesting question concerns the reasons why people choose not to visit certain settings and whether they suffer any detrimental psychological well-being effects as a result. This could prove fruitful in understanding further the role that nature plays in human well-being and how non-engagement could lead to certain well-being deficiencies. Haukeland (1990) interestingly carried out a study of non-travellers in Norway by way of interviews and found a variety of reasons why people chose not to travel which ranged from being constrained, financially or in other ways, to simply not having the motivation to travel and being content to remain at home. A similar study could provide some useful insights for policy planning such as the extent to which visitors are motivated by and recognise the benefits of nature and what the constraining factors are for those who recognise the benefits but are unable for whatever reason to interact with nature. Priorities for social policy might then be focussed around facilitating further engagements with nature.

9.6 End Thoughts and Personal Reflections

The Jurassic coast, as a World Heritage Site, is valued globally as a site of special scientific interest and unique in its geological significance. As a coastline, its value for visitors is much deeper than this and this study has provided insights into how the landscape comes to have value and significance by virtue of the well-being benefits that visitors derive from it. This deeper idea of value is evident throughout both

survey responses and interviews where visitors expressed the deeply emotional and ineffable experiences at the Jurassic Coast. Moreover, this value is also interlinked with the non-conversational ways in which it is represented. The media portrayals, artists impressions as well as myths and stories surrounding it, all serve to convey a certain shared cultural value to the landscape which shape expectations and the emotional pull towards it for many visitors.

This study has presented a unique methodology to capture the well-being benefits of being at the case study site and a resultant psychological framing of environmental valuation. In this way, the non-material benefits of nature or cultural ecosystem services are revealed through an understanding of which human needs are satisfied and what that means to people. This seems at least to a certain extent to surmount some of the difficulties inherent in deciphering cultural services which 'are complicated by the properties of intangibility and incommensurability' (Chan et al., 2012b, p8). By understanding the ways in which human needs are satisfied through contact with nature, an appreciation can be built up of the deep-rooted relationship that humans have with nature. The idea that value arises as a result of the intangible benefits people derive from being in nature is not new and this relationship has been explained variously in terms of an innate and evolutionary pull towards nature and the idea that natural environments are more conducive to relaxation and to restorative experiences. What is new here is the weight that has been afforded to such discussions in recent years and the potential to use such non-monetary and nuanced information in decision-making contexts.

There are still challenges to be faced in incorporating the intangible benefits of nature into decision making processes, not least because of the difficulties in recognising the 'uniqueness of individual perceptions and the privacy of individual world-views' (Tuan, 2003, p878). However, emerging methodologies such as described through this study as well as shifts in strategic level thinking are a way forward in this endeavour. The Ecosystems Approach for example, has received wide-spread recognition and acclaim for advocating holistic and inter-disciplinary thinking and approaches to natural resource management which take into account the full array of contributions that ecosystems make to human well-being. This study provides a useful contribution to the theoretical and practical understanding of how

natural resources can be accounted for in non-monetary ways in decision making and the ways in which value finds expression in well-being benefits.

Through both this study and personal involvement in the UKNEA follow-on work (in press) to further understand and develop techniques to reveal cultural ecosystem services, it has become increasingly clear that whilst the appetite and momentum appears to exist to account for the wide range of human values in decisions concerning natural resources, mechanisms to incorporate this understanding into policy are less developed. The UK NEA process however, has advanced thinking in this area and a refined conceptual framework for understanding cultural ecosystem services will greatly benefit future attempts to incorporate these values into decision-making processes. By re-defining cultural services for example as 'the contributions ecosystems make to human well-being in terms of identities they help frame, the experiences they help enable and the capabilities they help equip' (Church et al., in press) a more profound understanding is gained of the benefits of ecosystems. The conceptual framework which evolved to frame understanding of the experiences of visitors to the Jurassic Coast was undoubtedly informed by my involvement in the UK NEA work although distinctions can be made between the frameworks which emerged. The conceptual framework in this study for example, emphasises how a range of practices and interpretations of one cultural space (the Jurassic Coast) lead to the satisfaction of human needs and well-being benefits which result. The emphasis here is on how experiences in this landscape manifest into eudaimonic well-being through enhancements in psychological well-being which does incorporate ideas of identities and capabilities. Undoubtedly, work will continue in this area to further refine and test these ideas in different settings.

In the meantime, these insights should serve to remind resource managers that landscapes are as much 'socially constructed places as scientifically delineated space' (Williams & Patterson, p514) and as such, people and nature should be at the heart of decisions about using and preserving landscapes. As Daily et al. (2009) note of ecosystem services in decision making 'it is time to deliver'. If human well-being is seen to be a product of interactions with the natural environment, then a higher priority needs to be given to protecting those natural resources on which

human well-being depends. In short, the aim should be to make the non-material benefits of nature a more mature part of decision making processes.

A Survey to Understand How People Experience and Value the Jurassic Coast

INTRODUCTION

Thank you for agreeing to complete this survey. It is designed to gauge your thoughts about this landscape, your experiences here and how it makes you feel to be here. It is funded by the Economic and Social Research Council and Dorset County Council. The results will assist in the completion of my PhD providing a greater understanding of how landscapes are meaningful and valuable to people.

PRIZE DRAW: By completing this survey you will be entered into a prize draw to win a luxury hamper of local produce worth £50 which will be sent to you. Please provide your contact details in the space provided below. The draw will take place in October.

PARTICIPATION: The research will also be running a series of telephone interviews as a way of providing more detailed information about people’s experiences in this landscape. The interview will take place within a week of your visit at a time convenient to you. **If you are selected to take part in an interview you will receive a £10 Marks & Spencer voucher.** If you would be willing to undertake an interview please complete your contact details below.*

I would like to (please tick one or both boxes):

Enter Prize Draw **Take part in interview**

Name	
Address	
Postcode	
Telephone	
E-mail	

***Confidentiality: If you have completed your personal details above, please be assured that the responses you provide in the survey will be stored separately from your contact details.**

For researcher: Location.....

Date.....

If you require further information about this questionnaire, please do not hesitate to contact me.
Cheryl Willis, PhD Researcher
University of Exeter
Email: C.A.Willis@exeter.ac.uk

SECTION 1

This section is about the nature of your experiences here today and in the past if you have visited before.

Q1. Have you visited here before?
Yes (Go to Q2) No (Go to Q4)

Q2. How often have you visited/ do you visit?
 Once before
 Several times before
 Quite regularly (a few times a year)
 Very regularly (weekly/monthly)

Q3. When were you last here?.....

Q4. Are you visiting here today:
 Alone
 With friends
 As part of a family group
 As part of an organised tour group

Q5. What are you doing here today?(Please tick all that apply)
 Walking
 Climbing
 Swimming
 Bird/wildlife watching
 Sunbathing
 Picnicking
 Eating/drinking in local pub/restaurant
 Fossil collecting
 Dog walking
 Fishing
 Other (please specify.....)

SECTION 2

Q6. I am interested in your experience of this place and how being here makes you think and feel. Please think about how you feel right now and then indicate the extent to which you agree or disagree with each of the following statements. Please answer intuitively without thinking too deeply about each answer:

	Strongly agree	Tend to Agree	Neither agree nor disagree	Tend to Disagree	Strongly disagree
I feel a sense of attachment to this place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here gives me a sense of belonging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel a sense of connection with nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel like I am a part of the life of this place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appreciating the history/culture of this place is important to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My attention is drawn to many interesting things here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here gives me a sense of understanding nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here enables me to really appreciate the geological importance of this place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here gives me time to appreciate the wonder of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel a sense of being uplifted emotionally by being here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here makes me happy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find this place fascinating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel there is enough space here to relax and enjoy the landscape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to participate in activities here which I enjoy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coming here is a great way to spend my leisure time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't find this place chaotic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel I have the freedom here to do what makes me happy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are all the facilities here that I need to enjoy my visit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here makes me feel like I am away from all my day to day worries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel a sense of accomplishment from walking or undertaking other activities in this area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 2 - CONTINUED

	Strongly agree	Tend to Agree	Neither agree nor disagree	Tend to Disagree	Strongly disagree
Being here gives me time and space to reflect on my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel like I am spending some quality time here with friends/family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel inspired by being here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel a sense of vigour or vitality from being here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here enables me to experience a sense of inner peace and tranquillity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here makes me feel good about myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here helps me to think about my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here helps me to restore a sense of balance in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel very lucky to have experienced this place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel calm and relaxed in this place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being here makes me feel enthusiastic and full of energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 3

Q7. This section is about how you would describe this place. Please indicate as above the extent to which you agree or disagree with each of the following descriptions:

I find this place:

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree
Awe inspiring					
Serene					
Scary					
Uninspiring					
Spectacular					
Peaceful					
Disturbing					
Boring					
Calming					
Stressful					
Unimpressive					
Sensational					
Any other words you would use to describe this place:					

SECTION 4: About you:

Q8. Are you: Male female

Q9. Age:

15 and under	16-24	25-34	35-44	45-54	55-64	65 and over

Q10. What is your postcode (please write in first part): _____

Q10a. Or country of origin if overseas visitor: _____

Q11. Please state which of the following occupation categories you fall into (please tick one only):

<input type="checkbox"/>	Professional (eg doctor, dentist, teacher)
<input type="checkbox"/>	Managerial (eg company manager)
<input type="checkbox"/>	Skilled non-manual (eg office worker)
<input type="checkbox"/>	Skilled manual (eg electrician, plumber)
<input type="checkbox"/>	Unskilled manual (eg cleaner)
<input type="checkbox"/>	Student
<input type="checkbox"/>	Retired
<input type="checkbox"/>	Home maker or carer
<input type="checkbox"/>	Not working (for other reasons)

Q12. What is your ethnic group? Please choose from a-d and tick the appropriate box to indicate your cultural background:

<p>A) White</p> <p><input type="checkbox"/> British</p> <p><input type="checkbox"/> Irish</p> <p><input type="checkbox"/> Other (please write in)</p> <p>.....</p>	<p>b) Black</p> <p><input type="checkbox"/> Black British</p> <p><input type="checkbox"/> Black African</p> <p><input type="checkbox"/> Black Caribbean</p> <p><input type="checkbox"/> Other (please write in)</p> <p>.....</p>	<p>c) Asian</p> <p><input type="checkbox"/> Indian</p> <p><input type="checkbox"/> Pakistani</p> <p><input type="checkbox"/> Bangladeshi</p> <p>Other (please write in)</p> <p>.....</p>	<p>d) Other</p> <p><input type="checkbox"/> Chinese</p> <p><input type="checkbox"/> Mixed background</p> <p><input type="checkbox"/> Any other (please write in)</p> <p>.....</p>
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THANK YOU

Appendix 2

Telephone Interview Schedule

Please think back to your visit to the Dorset coast:

Section 1: General Information about your Visit

- Have you visited this area before?
- What was it that made you want to come (back) here? Prompt for expectations, to relax, participate in activities etc)
- Who were you with?
- What did you do?
- What stands out most in your mind?

Section 2: The Landscape

- How would you describe the area? Does it have a distinct or special character?
- What do you particularly like about this area / landscape?
- What are the things that aren't so good?
- Has it changed at all (if visited before)? How? (general character, level of development, condition, amenities, beauty, naturalness, wildlife/biodiversity)

Section 3: How being in the landscape makes you think and feel

- Can you remember how you felt for the most part during your visit? (excited, agitated, bored, enthralled, calm etc)
- What would you put this down to?
- How do you take these feelings into your everyday life?
- How do these feelings affect you or influence your everyday life?

Section 4: Recommendations and Future Plans

- What could have improved your visit?
- Do you intend to come back to this area?

Section 5: General questions relating to landscape

- What do you think of immediately when I say the word landscape? (what images, sounds, smells or feelings come to mind?)
- How do you feel about the natural landscape? Is it important to you? Why?
- In what ways do you experience landscape? How often (weekends away, holidays, daily environment?)

Appendix 3

Nodes used to code and explore interview data

Parent Node	Child Node	Explorations
Human Needs	<ul style="list-style-type: none">• Belonging & connectivity• Need to know & understand• Aesthetic appreciation• Leisure & recreation• Freedom & recreation• Freedom & escapism• Self-actualisation• Transcendence	Evidence of language of human needs through narratives
Physical Landscape	<ul style="list-style-type: none">• Jurassic Coast• Coastal landscape/seascape• Attributes/features in the landscape	<ul style="list-style-type: none">• Indicators of uniqueness/specialness of this particular landscape• Identification of special features
Activities in the landscape	<ul style="list-style-type: none">• Active• Passive• Group• Individual	Indicators of influence of activities on perceptions and satisfactions
Responses to landscape	<ul style="list-style-type: none">• Connection to nature• Emotional responses• Cognitive responses• Sensory experiences• Attachment/belonging	Differing narratives around responses to being in the landscape. Meanings and interpretations of the landscape
Health & well-being	<ul style="list-style-type: none">• Psychological	Positive functioning
Influences on satisfaction and well-being	<ul style="list-style-type: none">• Internal influences• External influences	What influences and what effects do they have?

Appendix 4

In-depth Interview Schedule

Section 1: General information about your visit

- Where did you go?
- When?
- Who were you with? (during your visit and during completion of the diary?)
- Why did you go there?
- What did you do? (in general and during completion of diary?)
- Weather?
- Have you been there before?
- What brought you back if so?
- Where did you stay?
- How long were you there?

Section 2: The Landscape

- How would you describe the landscape? Does it have a distinct or special character?
- What do you particularly like about this area?
- What are the things that aren't so good?
- Is there anything that could have improved your visit?
- Has it changed at all (if visited before)? How? (general character, level of development, condition, amenities, beauty, naturalness, wildlife/biodiversity)

Section 3: Thoughts and feelings in the landscape

- Can you remember how you felt for the most part during your visit? (excited, agitated, bored, enthralled, calm etc)
- What would you put this down to? Any influence from the landscape? Which parts if so?
- How do you take these feelings into your everyday life?
- How do these feelings affect you or influence your everyday life?
- Does being in this particular landscape give you time to reflect on worries or to forget them?
- Do your feelings in the landscape vary depending on who you are with or how long you stay?
- Can you derive similar feelings from doing other things now related to 'nature'?
- Were you aware of your emotions while you were in the landscape or are you more aware of your feelings now you are back and in a different environment?
- Do you still get the same feelings when you think about the coast or are they now lost to you?
- Can those thoughts and feelings be re-captured by thinking about the landscape and your experiences in it or do you need to go back to recapture those?

Section 4: Photographs

Go through photos, which do they like best and why? What meanings and feelings are evoked by these photos?

- Can you tell me about your photos? What are they of? Why did you take them?
- Can you recapture some of how you felt in that landscape by looking at these photos?

Section 5: Landscape Diary

- How did you feel about writing this diary entry?
- Did doing this give you time to reflect more fully on your feelings and perceptions of the landscape?
- Reflect upon and expand on what you have written.

Section 6: General thoughts on landscape

- What is your favourite type of landscape and why?
- How does it make you feel to think about this landscape and then to actually be in it?
- Do the feelings you get in this landscape last and for how long?
- Do you imagine that other visitors to the same landscape think about it in the same way as you or are your experiences / feelings highly personal?

Appendix 5

Instructions for Solicited Photographs

I am interested in what you notice about the coastal landscape, what is meaningful to you and how you feel when you are in the coastal landscape in Dorset. Please take photographs of anything in the landscape that interests you. This could be a single thing like a tree or part of the whole landscape or a whole view.

In particular, you could look for:

- Things which you find attractive
- Things which you find unattractive
- Things which inspire you
- Things which elicit an emotional response from you (positive or negative)
- Things which are meaningful or valuable for you
- Things which you find distinctive of the Dorset coast
- Things which give you a sense of history or culture

The camera is a 27 exposure camera. I would like to keep up to 10 landscape photos. Please feel free to use the rest of the film and I will return these additional photos to you when we meet for our interview.

Please post the camera back to me in the envelope provided and I will develop the photos before our interview so that we can discuss them.

Appendix 6

Instructions for Landscape Diaries

Please use the space below and overleaf to keep a record of a visit to the Dorset coast. Please complete this either on-site or shortly afterwards so that you can capture all your thoughts and feelings. While you are there, look around you and keep a record of anything special for example:

- Aspects of the landscape you particularly like
- How you feel during your visit
- Anything you don't like

Please feel free to be creative in this diary entry by using poetry, drawings, a list of adjectives or any other way you would like to express yourself. Please use additional paper if you wish.

We may discuss some of this information at our interview but please rest assured that it is confidential and no comments will be attributed to anyone in the final research report.

Thank you and enjoy your time!

Section 1: General information about your visit

Name	
What was the day and date of your visit to the Dorset coast?	
Where did you go?	
How long was your visit?	
How many people were there altogether on this visit? Who were they? (eg family members / children . friends etc)	
What was the weather like?	

Section 2: My Experience in the Dorset Coastal Landscape

(Please use as much additional paper as you wish)

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Appendix 7

Item Responses for Each Human Need

1. Belonging & Connectivity

Scale Items	Mean	SD	Mode
I feel a sense of attachment to this place	2.38	0.922	2
Being here gives me a sense of belonging	2.59	0.897	3
I feel a sense of connection here with nature	1.96	0.792	2
I feel like I am part of the life of this place	2.71	0.939	3

2. Need to know & understand

Scale Items	Mean	SD	Mode
Appreciating the history/culture of this place is important to me	2.01	0.851	2
My attention is drawn to many interesting things here	1.82	0.649	2
Being here gives me a sense of understanding nature	2.03	0.786	2
Being here enables me to really appreciate the geological importance of this place	1.81	0.820	2

3. Aesthetic Appreciation

Scale Items	Mean	SD	Mode
Being here gives me time to appreciate the wonder of nature	1.65	0.675	2
I feel a sense of being uplifted emotionally by being here	1.99	0.879	2
Being here makes me happy	1.64	0.655	2
I find this place fascinating	1.71	0.741	1

4. Leisure & recreation

Scale Items	Mean	SD	Mode
I feel there is enough space here to relax and enjoy the landscape	1.62	0.686	1
I am able to participate in activities here which I enjoy	2.00	0.804	2
Coming here is a great way to spend my leisure time	1.65	0.647	2

5. Freedom & Escapism

Scale Items	Mean	SD	Mode
I have the freedom here to what makes me happy	1.98	0.743	2
There are all the facilities here that I need to enjoy my visit	2.20	0.873	2
Being here makes me feel like I am away from all my day to day worries	1.75	0.736	2

6. Self-actualisation

Scale Items	Mean	SD	Mode
I feel a sense of accomplishment from walking or undertaking other activities in this area	1.95	0.807	2
Being here gives me time and space to reflect on my life	2.16	0.833	2
I feel inspired by being here	2.09	0.819	2
I feel a sense of vigour or vitality from being here	2.04	0.813	2
Being here makes me feel enthusiastic and full of energy	2.20	0.837	2
I feel like I am spending some quality time here with friends and family	1.47	0.562	1

7. Transcendence

Scale Items	Mean	SD	Mode
Being here enables me to experience a sense of inner peace and tranquillity	2.15	0.820	2
Being here makes me feel good about myself	2.17	0.800	2
Being here helps me to think about my life	2.34	0.912	2
Being here helps me to restore a sense of balance in my life	2.33	0.921	2
I feel very lucky to have experienced this place	1.78	0.727	2
I feel calm and relaxed in this place	1.73	0.647	2

Appendix 8

Summary Portraits of In-depth Participants

Depth 1: Male, aged 16-24

He lived quite close to Weymouth so was visiting Preston beach nearby because it is less 'touristy'. He has happy childhood memories of being at this beach and realises how lucky he is to live so close to the beach. The family has two dogs also so it's very practical for them to go there with the dogs. He also spoke of his attachment to the beaches at Burton Bradstock and West Bay because of they are '*more out of the way than here*'. He often likes to go to the beach alone or just with his brother to read a book as '*it just feels like you're getting away a bit*'. He spoke also about his feelings in different weather as although he enjoys the beach in calm weather, he is also feels inspired and exhilarated in stormy weather; '*it's a bit more awe inspiring on stormy day that's for sure, a bit more scary also as there are pretty big waves and the wind, it's pretty exhilarating as well*'.

He reflected on the forces of nature and how they seem to come together at the beach, at Burton Bradstock in particular, and how this provides an escape and a release from the everyday;

'You kind of feel quite released I suppose because you just sit there with this huge expanse of sea and you've got this huge backdrop of cliffs behind you and you're just kind of at this point where there are these two massive forces and you're just sat in the middle of them. Especially at Burton Bradstock because the cliffs are just sheer and you can really appreciate just how strong the sea can be and it's just good to look out and reflect on that. Its good escapism'

He commented however, that at although he enjoyed Preston beach for being able to walk the dogs, he did not get the same feelings here because of the clash of the man-made with the surrounding nature; '*the awful hotel at Bonleaze and the amusement park here clash with the striking geography*' (photograph 1). He also lamented over the imposition of signs which also seemed to clash with ideas of being in nature and escaping rules (photograph 2).



Photograph 1



Photograph 2

Depth 2: Male, aged 16-24

He visited Charmouth beach to walk his dogs as it is close to where his aunty and uncle live who he was visiting and he had visited Charmouth beach several times previously. . He enjoyed this visit since he feels most *'relaxed'* and *'comfortable'* by the sea. In particular, these feelings were enhanced by his fascination with the landscape which he described as being *'very rugged and it always seems so battered'*. The sense of change in the landscape was also something he enjoyed; *'even when you are walking along, you can see the cliffs sliding a bit, so it's always changing and it's interesting. It's quite, I don't know how to describe it, it's brutal because they are very steep, the cliffs and they are always sort of exposed'*. Photograph 1 is of the cliffs which shows the rugged landscape which he commented inspired him to think about the past and how it *'been here for millions of years before any of us were here and will be here long after we're gone; it's a shot into time'*.

In contrast, photograph 2 shows the river running to the beach at Charmouth which he notes is a *'much softer scene'* which made him feel *'calm and quite different to looking at the cliffs'*. Interestingly, he stated that he would prefer to look at the coast.

Whilst there were many people at the beach that day, he commented that he still enjoyed the visit and was able to be *'alone with my thoughts'* although he did admit that ideally, he would prefer for less people to be around as *'you kind of want that hidden gem sort of thing sometimes'*.

Photograph 1



Photograph 2



Depth 3: Male, aged 55-64

He has been visiting Charmouth for over 30 years for family holidays. He owns a caravan at Charmouth and he and his family particularly enjoy bird watching on the estuaries of the nearby rivers. He also enjoys walking the coastal path and on this particular visit, they attended the Melpath agricultural show.

The attractiveness of the coast which he describes as *'fairly unique'* and the convenience to get to Charmouth from where they live in Surrey are the main attractions that keep them coming back year after year. The improving bird watching facilities nearby are also a great attraction and he often visits on his own simply to enjoy bird watching.

He comments that the busy times are *'just awful with so many people on the beach'* but he does note that *'we are tourists too so we can't criticise too much'*. However, having the caravan means that they can avoid these times and visit out of season when they enjoy *'sitting on the beach reading books, that feels nice'*. He feels relaxed in this landscape largely because it provides a break from his busy routine as although he is retired (he used to work for the Forestry Commission) he still does some work for them and coaches tennis. Being in this landscape means that he can *'just relax and take the newspapers and books that I like to read and just escape from it all'*.

Photograph 1 shows the view from his caravan which he describes as *'just beautiful'* and photograph 2 is taken outside the heritage centre at Charmouth beach which he says *'is a great feature that has been developed in a natural manner so it doesn't look out of place'*. The reason for this photo was that he was *'intrigued by this family who were all intently looking at the information board, even the little boy was fascinated by it'*.

Photograph 1



Photograph 2



Depth 4: Female, aged 16-24

She visited Lyme Regis on a Monday afternoon with her boyfriend which is something they often do because they both enjoy spending time here. On this occasion, there weren't many people around so it felt *'even more special'* and *'as if I was in a holiday village in one of the Mediterranean countries'*.

She enjoys being by the sea in particular because; *'I grew up in Istanbul so I am so much used to the feel of the sea breeze and it kind of relaxes me, I don't know, it gives me peace. For a moment, I just forget about everything'*. She appears to have a real affinity with the sea which she notes also affects her energy levels and moods; *'if it is sunny and I am close to the sea, I feel very energised, I am full of positive energy'*.

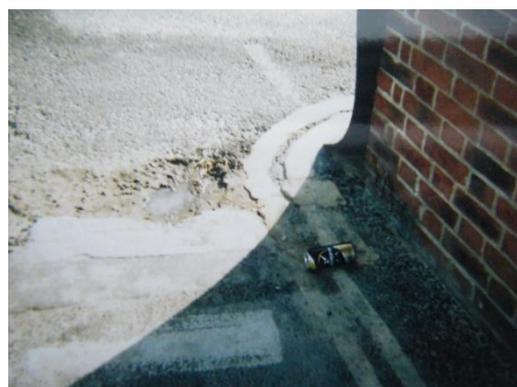
She described the sea as *'fascinating'* in her diary entry and she also commented that the sea symbolises freedom to her and a sort of link between here and home so that *'at any time I feel I can be home'*.

Her photographs largely depicted the peacefulness of the scene at Lyme Regis with children and families enjoying the beach which she remarked *'it is lovely that the children can play feely, it feels quite safe'*. She also commented on the brilliance of the blue sky and sea. Photograph 2 however, is taken as an expression of her incredulity of people who would drop litter in such a relaxing and wonderful scene.

Photograph 1



Photograph 2



Depth 5: Female, aged 55-64

She lives in Dorset, but on this occasion visited Worbarrow Bay as although she has visited there lots of time previously she describes it as *'just lovely, somewhere you can just relax, even though there are usually lots of people there'*. She describes reading a book about Tyneham and how being there made her contemplate about what it must have been like all those years ago. She took some time to sit on a bench and gaze out to the bay to ponder on this, for quite some time. She commented that the old village *'add to the atmosphere of the place and together with the cliffs and the bar, are just magical'*.

She notes how the sounds of the sea turning the shingle and the smells of wild flowers all combine to make for a tranquil experience in which *'I can take my worries with me but when I get there, they just disappear'*. The sense of history and added mystery seemed to add to the experience for this participant whose thoughts about the former village combined with thoughts about the rock formations in photograph one and she comments of this *'I think you can just see a little cave and that also makes me want to go and explore'*.

Photograph 1



Photograph 2



Photograph 2 on the other hand she describes as *'an absolutely beautiful scene'*, looking at which, she comments *'I get a feeling of total peace here almost immediately'*. Even the presence of other visitors in the area do not detract from that peace and she notes in fact that other people add to her enjoyment; *'there are dogs barking and children playing but it doesn't matter at all – they are enjoying themselves which just adds to my enjoyment of the whole scene'*.

Depth 6: Male, aged 25-34

He visited a number of places along the Jurassic Coast on this five day holiday which he took alone. He has visited the Jurassic Coast previously and said that the pull for him was the changing landscape which he commented was *'physically and mentally stimulating, endlessly fascinating and always interesting. It is the sort of landscape where you can sit for ages and just watch the world go by'*. For him, the tourist facilities do detract from his enjoyment of the scene and photograph 1 depicts a caravan site which he states *'ruins a bit the view from Chesil beach'*.

He particularly worries about increasing development and that *'if you keep building more and more to accommodate people, eventually, you ruin the thing you came to see'*. For this participant, it is the juxtaposition of the man-made with the natural which he finds *'a bit disturbing'*. He much prefers scenes of nature where there is no sign of people or of anything artificial such as in photograph 2 which the combination of the beach, the sky and sea is what attracts him most to the scene, *'the vast expanse where you can stand, particularly on a day when the sea is rough and you feel totally insignificant against the forces of nature. People not too far away are totally dwarfed by the beach, the sky and the sea. This is a place where I can come and think, contemplate and watch the world go by. I have walked along the beach in all seasons – snow, rain'*.

Photograph 1



Photograph 2



The sensory experiences of being at the coast is also something he particularly enjoys, the smells of seaweed which evoke childhood memories and also *'listening to the sounds of the waves coming in and going out on the shingle, it has an endless quality about it – something which is natural and permanent about this sound. The waves will come in and then go out, whatever else is happening in the world. If there wasn't a single human left on the planet, the waves would still come in and go out'*.

Depth 7: Female, aged 45-54

She is very familiar with Lyme Regis and spent the afternoon visiting alone on this occasion. She has fond memories of being there with family but she particularly enjoys being alone there since she can just ‘amble along’ and she *‘feels anonymous there’ and ‘I can just watch people and the world around me without needing to interact with it. I find this truly relaxing. I have an attachment to the place without being involved with it and somehow this makes me feel calm and content’*.

She says of the Dorset coast in general that *‘you feel you have arrived somewhere a bit special’*. She has a sense of Lyme as being *‘charming, traditional and timeless’* and special due to its place both nestled behind the surrounding hills and because it has also *‘a sense of space and freedom looking out to the distant views and open sea’* (photograph 1).

Photograph 1



Photograph 2



It is also the atmosphere at Lyme which she finds palpable and appealing. Particularly because ‘it is quite evident that people are on holiday there which means I feel I can dip into that holiday atmosphere just for a while’. The combination of the scenery, gazing out to sea and enjoying that atmosphere which *‘does utterly make me switch off from my real life; it isn’t real life there because everyone is on holiday’*. Photograph 2 depicts people pic-nicking overlooking the Cobb which captures some of this atmosphere for her.

Depth 8: Female, aged 45-54

She visited Chesil beach and the surrounding area and spent four days there with her sister. They have fond memories of being there as children and actually have an ancestor who is buried nearby which they discovered recently. They had also come back to this spot a few years earlier to scatter their father's ashes from Dancing Ledge as they thought it was such a wonderful place, where *'everything is easy on the eye – the greenness and the blue sky and the sparkling sea'*. She commented that there is something *'magical'* about Dorset and the Jurassic Coast which the colours of the stone contribute to as well as the wildlife and the prolific wild flowers. It is *'a place where we just feel that we belong a little bit there'*. A place where she can relax totally and enjoy nature; *'feel you're in unspoiled countryside that it could look like this in 20 years time. And something's don't change except the changes that go on within nature which is quite nice in this hustle bustle world of everything being available and changing'*. She noted on this point that very little had changed from when they visited as children and that is what she particularly liked, especially at Chesil beach where there was a marked absence of the 'trappings of the seaside'.

She commented that she had read a biography of Thomas Hardy and how he has provided the 'bridge' from her imagination to the landscape and *'it is easy to see how this would have been a great experience for setting his descriptive passages in his novels so beautifully'*. Photograph no. 1 evokes ideas about this and also reminds her about a painting that she has.

Photograph 2 shows the dramatic scenery of the Jurassic Coast around where they scattered their father's ashes which she comments 'looks like a film set because it is so dramatic'. She also notes that she has some sort of connection here which may be described as a spiritual experience; *'there is the depth of the Jurassic coast and it's not religious but the sense of that coast, there's a kind of exposure there to something else, somehow which makes you feel you've come from somewhere you couldn't possibly understand into a place where you can holiday and enjoy the scenery'*.

Photograph 1



Photograph 2



Depth 9: Female, aged 16-24

She visited West Bay with her family for the day. It is a place where she has been coming to on holiday since she was a child and has witnessed lots of changes in that time, some of which she notes are good and others which she laments *'ruin a bit the view'*. Photograph 1 for example shows something of this as she comments that when a new pier was built, a lot of rock was imported and *'I spent a lot of time climbing across the rocks when I was a child and eating fish & chips on them and exploring them and now it's kind of 'keep off the rocks' and you can't climb across them. It's a shame'*.



Photograph 1

In any case, she says that she feels *'very relaxed at the Dorset coast'* and that *'the golden cliffs never fail to lift my spirits'*. Photograph 2 shows the scale and the colour of these prominent cliffs which she also enjoys because *'they are always changing, there are landslides so they never look the same'*.



Photograph 2

She commented that she much prefers to be at this coast in Winter *'when it is quiet and there is not the Summer crowds there'*. Even in stormy weather she enjoys going up on the cliffs and in such times, she *'feels a bit closer to nature when the sea is crashing about'*.

Depth 10: Male, aged 35-44

He was staying in Lyme Regis for a few days at his parents-in-law's house. He and his wife spent a day walking from Lyme to Charmouth beach and back again. It rained quite hard that day so *'we got soaked and my wife said that I had a big grin on my face. I suppose there is something quite raw about the weather which is part of nature'*. He talks about the sensory experience of being in nature and how this is built into the whole experience of being outdoors and what he remembers most about it; *'I think it's because it envelopes all the senses so you've got the feeling of the wind on you, the sunshine on you or even the rain on you but you've got the sight of the beautiful landscapes or beautiful views'*.

Taking part in this study also made him concentrate on other things in the landscape which normally, he would have taken little notice of. The sign in photograph 1 for example, which is warning people about the dangers of the sea and landslides and he comments of this *'you sort of see these signs but never really take notice, but doing this research, it made me actually stop and read them. It is amazing how many people ignored them and were still tapping away trying to find fossils where they shouldn't have been'*.



Photograph 1

Generally, they enjoy being outdoors and tend to walk on Dartmoor quite often as that is close to where they live. However, he comments that growing up in Devon, he *'has an affinity with the sea'*, although he doesn't actually like being on the water, instead he likes *'being on the beach, I like the power of the sea and the waves and just the expanse of it'*.

He commented however, that he does prefer to be away from people when outdoors, *'we don't want to be with hordes of tourists'*. Because of this, *'we choose the places we go to for the beauty of the landscape and also how many people are likely to be there. We like that feeling that we're alone as much as possible'*.

That said, he did enjoy the scene in photograph 2 of people enjoying the beach *'just walking along or looking for fossils'*.



Photograph 2

Depth 11: Male, aged 16-24

He visited Lyme Regis for an afternoon because it was close by and it is a place that he has been to several times before and which he always finds relaxing. He comments; *'when I go to Lyme, I feel far from everything, far from work and far from where I live so I find it more peaceful'*. He talks about the sense of relaxation and calm he gets from being by the coast which also reminds him of being home in Albania. Despite there being lots of people in Lyme, he still finds it relaxing, largely he thinks because *'it is the purpose of most people there to relax so it's a psychological state as well'*. He comments that *'always, not matter how many people or whatever the weather, you bring back that good energy'*.

His diary entry was a drawing of what he enjoyed most from this visit (image 1). He commented that being at the coast always made him feel so positive and *'the water, the sea, the people, the fresh air, it all makes me feel inspired, so basically, I feel like drawing'*. This image captures the rocks at Lyme which he notes *'are important because of the fossils'* and also the birds which he enjoys watching.



Image 1

He talked about the photographs that he took as being *'basically a composition of a number of things, firstly, it's about relaxation and secondly, it's about trying to find similarities of the best moments of my life which for me is childhood'*. Photograph 1 for example, shows a child playing on the beach which he said reminded him of *'my own childhood, when there was nothing to worry about, that kind of pureness, just enjoying everything and not thinking about anything'*.

Photograph 1



Depth 12: Female, aged 45-54

She was visiting the area around Burton Bradstock with her sister for four days. She had first visited the Dorset coast on a family holiday when she was 14 and she said that she felt *'at one'* with the area and *'I have been drawn back repeatedly'*. In particular, it is the *'stone and the sea here that I fell in love with and it fills me with peace'*. She talked about how the sea in particular makes her feel and how she likes to be by the coast and to know the coast is nearby which enables her to *'find my inner peace'*. It is both the sensory experiences of the sea which she enjoys most, the *'turquoise colour of the Jurassic sea and the sounds of the water as it comes in and goes out'*. She also talked about a spiritual connection she has with this coast and how it evokes a sense of perspective and inspires thoughts of the mystical nature of the sea;

'you look at the sea and you say to yourself, that sea has been all over the world, there is no controlling it, it is just like touching the moon almost, it sounds ridiculous, and I can't explain it. It does give you a sense of perspective and I feel in touch with things and you realise how very small we are and how very magical everything is'.

Photograph 1 is the view from her window on that trip and sitting outside and *'taking this in helps me to sift through my day to day worries'*.



Photograph 1

Her affinity with the sea and with nature in general extends further than the Jurassic Coast and she talked also of another trip to Scotland some time ago where she felt similar connections with the landscape which she describes as *'giving me strength, it was like someone had got hold of my shoulders and was pulling me up. It gave me enormous inner strength just looking at and being in that scenery'*.

Appendix 9: Regression Analysis Correlation Coefficients

Independent variable	Pearson Correlation (r)	N
Gender	-0.159*	514
Age	-0.087	510
Familiarity with case study site	-0.160*	509
Distance travelled to case study site	0.052	482
Survey location	0.119*	516
Company	-0.024	516
Activities	Univariate Analysis of Variance (f)	N undertaking activity
Walking	2.950**	404
Climbing	2.689	18
Swimming	1.252	98
Bird-watching	2.661	73
Sunbathing	0.950	136
Picnicking	0.079	169
Eating/drinking locally to case study site	1.774	154
Fossil hunting	4.260*	136
Dog walking	0.553	77
Fishing	0.450	15

*Statistically significant ($p < 0.05$)

** Statistically significant ($p < 0.10$)

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