Careers of Action on Climate Change: The evolution of practices throughout the life-course

Sarah Katharine Hards

PhD

University of York

Social Policy and Social Work

July 2011

Abstract

Climate change has become a major concern for research and policy in recent decades, and individual behaviour change has constituted a significant strand within UK Government responses to the problem. However, our understanding of how and why individuals become engaged in sustainable practices, and how their participation develops over time, remains patchy. Conventional psychological models have failed to resolve issues such as the "value-action gap"; however, new sociological approaches offer a more holistic understanding of sustainable practices. This study draws mainly on these "social practice" approaches to answer four questions: 1) How is "action on climate change" understood by the people performing it? 2) How does performance of these practices develop throughout the individual life-course? 3) What are the key processes that influence this development? 4) What lessons can we learn for the promotion of sustainable practices? It adopts an in-depth, experience-based approach and employs a narrative-life-course methodology that combines loosely-structured biographical interviews with visual techniques.

Findings suggest that action on climate change has multiple meanings for the people engaged in it, and encompasses diverse practices, often linked to broader life projects. While overall levels of action on climate change tend to increase throughout participants' lives, some specific practices, such as car use, follow more variable patterns. Change happens for several reasons; first, every performance of a practice shapes future practices. Secondly, practices must be co-ordinated and shared with others, and these demands change over time. Thirdly, practices are shaped by context, including biographical time, historical time and space. These processes entail elements of path dependency, but individuals also appear to have a degree of agency within their careers of practice. The thesis concludes that these findings have significant implications for theory and policy on sustainable practices, and makes recommendations for the design of effective interventions.

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Acknowledgements

First I would like to thank my supervisor Carolyn Snell, and also the members and associates of the "Social Change Climate Change" Working Party, for valuable feedback and advice. I am deeply grateful to all the participants who gave up their time to share their life-stories and for the ESRC funding that made the work possible. Finally, I would like to thank Sam Royston for his support throughout the project.

Author's Declaration

This research was conducted as part of an ESRC-funded PhD. The thesis is the work solely of the named author. Some of the results presented here have previously been presented by the author in the journal *Environmental Values* (Hards, 2011).

List of Acronyms

CBI	Confederation of British Industry
CO_2	Carbon dioxide
COI	Central Office for Information
DECC	Department of Energy and Climate Change
Defra	Department for the Environment, Food and Rural Affairs
DETR	Department for the Environment, Transport and the Regions
DfT	Department for Transport
DIY	Do-it-yourself
EAC	Environmental Audit Committee
EPC	Energy Performance Certificate
ESRC	Economic and Social Research Council
EST	Energy Saving Trust
FiT	Feed-in Tariff
G8	Group of Eight (highly-industrialised nations)
GDP	Gross Domestic Product
GM	Genetic Modification
IPCC	Inter-governmental Panel on Climate Change
MP	Member of Parliament
NGO	Non-Governmental Organisation
OCC	Office of Climate Change
POST	Parliamentary Office of Science and Technology
QUANGO	Quasi-autonomous Non-Governmental Organisation
SDC	Sustainable Development Commission
WWF	World Wildlife Fund

Part One
Background and Theory

This part of the thesis includes five chapters that introduce the study and set it in its policy and theoretical context. Chapter One sets out its aims, relevance, scope and Research Questions, and Chapter Two provides background to relevant policy. There follow two literature review chapters, reflecting two different approaches to the issue of action on climate change, which can loosely be classed as psychological and sociological. While these both consider work that addresses the issue of individual pro-environmental action, and how and why it changes, they do so from very different theoretical standpoints. For this reason, they are presented as separate chapters; but both are influential in the development of the Research Questions. Chapter Five then introduces two areas of practice which are used throughout this thesis as exemplars.

Chapter One

Introduction to the Thesis

"*Understanding and responding to climate change covers issues of great complexity… Above all, it requires an understanding and an involvement of citizens: their motives, their behaviour and their values*."

(Hulme and Turnpenny, 2004:112-3)

1. Background to this Study: the Policy Context

Climate change has been described by Sir David King, then the Government's chief scientific advisor, as *"the most severe problem that we are facing today - more serious even than the threat of terrorism*"(King, 2004:176). The Intergovernmental Panel on Climate Change (IPCC) predict a temperature increase of about 0.2°C per decade for the next two decades. After this, predictions for temperature rises increasingly depend on specific emissions scenarios, but could be up to 6.4°C by the end of the Century, resulting in serious impacts around the world (IPCC, 2007). Because of the potential impacts of these changes, the Stern Review (2006) on the economics of climate change estimates that if we do not act, the overall costs of climate change will be equivalent to losing between 5%-20% of global Gross Domestic Product (GDP) each year. In contrast, the review suggests that the cost of reducing emissions of carbon dioxide (CO_2) to avoid the worst impacts of climate change can be limited to around 1% of global GDP each year. It is clear that addressing climate change is a critical issue for policy in the 21st Century.

More specifically, climate change is an issue for UK social policy for three reasons. The first is the far-reaching and serious impacts that climatic disruption is likely to have on UK society. These include impacts on the economy, infrastructure, planning, agriculture, food supply and public health, as well as serious implications for social and environmental justice and deprivation. A report for the Economic and Social Research Council (ESRC) Global Environmental Change Programme (2000) found that the most vulnerable and socio-economically excluded people in the country suffer most from environmental degradation,

and climate change is predicted to exacerbate this; for example, with increased flooding and other hazards making insurance more costly (Association of British Insurers, 2009). Secondly, measures to address climate change form an increasingly important part of government policy, on national, regional and local scales. In its 2011 Carbon Plan the Government states that "*Becoming a low carbon economy will be one of the greatest changes our country has ever known*" (HM Government, 2011:3), representing "*a huge programme of change that will transform our economy and our way of life*" (*op cit*: 10). This will inevitably involve major changes to policy, at all levels. This is already evident, for example, in the Climate Change Levy, the Climate Change Act and many local authority policy changes. The Carbon Plan sets out tasks for every Government Department in reducing emissions, showing that this is not purely an environmental policy, but linked to budgets and fiscal policy, trade and industry policy, transport and planning policy, agricultural policy, waste policy and even international relations.

Thirdly, any measures taken to address climate change (by Government or other actors) are likely to have major effects on UK society; for example, on employment and industry, again, with the potential for negative effects on vulnerable communities. For example, certain forms of environmental taxation or other financial measures can have regressive effects on social equity. This is particularly important in the current context of rising unemployment and cuts in public spending. Therefore climate change is extremely relevant to many central themes within social policy, through its **direct effects**, through the **policies** adopted to address it, and through the **social repercussions** of these policies.

This study is concerned specifically with individual action on climate change, which can also be seen as a relevant concern for social policy. One reason for this is that over the last decade, Governments have made individual action a key part of their climate change strategies and it appears that the public will continue to play an important role in this policy field (albeit in different forms, as described in Chapter Two). The commitment of past Governments to this approach has resulted in a number of initiatives, including the high-profile "Act on CO_2" campaign, launched by the Department for the Environment, Food and Rural Affairs (Defra) in 2007. However, so far, many attempts to engage individuals with climate change have failed or only partially succeeded. A significant proportion of people remains unclear about the causes of the problem, or misunderstands the nature of its effects, and how their actions contribute to the problem (Lorenzoni and

Pidgeon, 2006). An even greater problem is a general lack of engagement; many people feel it is a distant issue, not relevant to their lives, and have little motivation to learn more or take action (Moser and Dilling, 2004). Some recent studies suggest that engagement may have declined in recent years (Defra 2009a; Defra, 2010a), perhaps due to factors including growing mistrust of scientists and "issue-fatigue" (Maibach *et al*, 2010).

This lack of engagement is a key issue for policy-makers. For example, over recent years Defra has supported a research theme called "Understanding and Influencing Pro-environmental Behaviour", aiming to provide a broad understanding of current behaviours, ways of promoting pro-environmental action, the motivations and barriers to change and how to best achieve change at a household level. Recent projects include a study of the role of "moments of change" in individuals' environmental action, and an investigation of how habits can be broken and re-formed (Defra, 2011). This study aims to complement Defra's current research agenda, and to contribute to the development of policy-relevant knowledge in this area.

2. Background to this Study: the Academic Context

This research has strong synergies with several topical research efforts. The Economic and Social Research Council currently has research themes on "Environment and Energy" and "Understanding Behaviour" (ESRC, 2011). As part of these it is currently funding two major research centres, including the Sustainable Practices Research Group which explores collective understandings, routines and material and social circumstances which constrain and facilitate sustainable ways of life and the Sustainable Lifestyles Research Group which addresses the relationships between people's lifestyles, technological systems and sustainability. Many other relevant projects relate to specific areas of practice; for example a series of studies on "Energy and Communities" is currently being funded by a partnership of research councils. A unifying theme in current research is the goal of understanding the practices of ordinary people that have impacts on the environment, how and why they change over time, and how they might be affected by interventions. This study aims to complement on-going work in this area, and the latest theoretical developments are discussed in Chapters Three and Four. In particular, the current research goals of both the ESRC and Defra also show that a particularly topical and important issue is how individual

environmental behaviour can be shaped by policy. This research will reflect this priority, and will aim to draw lessons for the promotion of pro-environmental practices.

This study aims to build on existing work, and to address some key unresolved issues around individual action on climate change. A review of literature in the field shows that to date there has been a considerable amount of quantitative work in the field of environmental behaviour. By using a detailed examination of individual motivations and experiences, rather than aggregate data, this research aims to contribute to the deepening of knowledge concerning these complex social processes, and to help interpret the existing quantitative results, so making them more relevant to policy. Also, much research so far has adopted fairly narrow definitions of the behaviours in question; for example, focussing only on cycling or purchasing behaviours. This research takes a holistic approach, exploring all the forms of action that people take with the aim of addressing climate change. It also recognises that participation in environmental action is a dynamic process, and explores how and why its nature may change over time. Responses to environmental problems are shaped by the complex interactions between individual-scale processes and the social, economic, technological, political and environmental context in which lives are embedded. For this reason, an in-depth analysis of individual experiences and motivations is required, but this must be situated within an understanding of the wider context.

This research is underpinned by the philosophical approach known as phronetic social science, developed by Bent Flyvbjerg. Within this approach, research aims to generate knowledge that is useful in bringing about changes that are desirable in the specific context. This kind of research involves evaluating the current situation and likely future developments, and their social implications. It explicitly asks "Is this situation or development desirable?" and "What can researchers and policy-makers do about it?". As such, it suggests an explicitly socially and politically engaged approach to research, that does not avoid questions about whether certain practices should be encouraged or discouraged (Flyvbjerg, 2008:153). An engaged approach of this kind forms the basis for this study, and is in keeping with the broader goal of social policy, as a discipline, to generate policy-relevant knowledge.

In summary, the relevance of this study centres on its contribution to both the theoretical understanding and practical promotion of individual action on climate change. Its holistic,

process-based approach is intended to shed new light on the controversial, but vitally important, topic of individuals' sustainable practices. By exploring in depth the action taken by certain people to mitigate climate change, this research aims to contribute to understandings of how engagement with sustainability can be promoted across the population.

3**. Scope of the Study**

The field of sustainable practices or environmental behaviours includes a wide range of topics and concepts, with controversial and shifting definitions. Therefore, it is important to establish the scope of this study, and especially what is meant by the term "action on climate change" as it is used here. A first key point is that policies to promote sustainable behaviour in general, and action on climate change in particular, can promote two forms of change: that motivated by concern about the issue, and that motivated by other interests (for example, saving money). The former is sometimes called a "deliberate" form of pro-environmental action (for example, by Thøgersen and Crompton, 2009). While both may have a role in addressing climate change, they are very different concepts, and this study has scope to address only one of them. For reasons discussed in Chapter Three, this study focuses on the former type of action; that motivated by environmental concern.

In this study, this conceptualisation includes *any* action taken with the aim of mitigating climate change. In the past, the links between personal, practical action (or lifestyle change) and political action (or campaigning) have rarely been addressed in research. The separation of the concepts may be an unhelpful distinction, as they often stem from the same motivation, and many people will take a mixture of both forms. The transitions between different forms of action are also an important and neglected area of study. For these reasons, this study includes lifestyle-based practices as well as political activities such as campaigning. It also recognises that the levels and forms of action that a person takes will vary throughout their life, due to internal and external factors. The difference between "active" and "non-active" should not be seen as a dichotomy, but rather a spectrum of action along which people may move throughout their lives - in both directions.

This study is concerned with individuals who are currently taking action on climate change, and so who are probably not typical of society in general. However, Benton (2008: 218) argues that;

> "*prefigurative work in establishing alternative ways of interacting with nature in the interstices of existing society can give some glimpses of what might be gained from larger scale social changes"*.

Studying cases in which practices that are "pro-environmental" or "sustainable" have emerged, which could be considered "success stories", can suggest lessons which, if tested widely, could support future engagement interventions. For example, if certain conditions or inputs are found to have played a part in promoting the sustainable practices of active people, policy measures could attempt to replicate these conditions or inputs. Equally, the obstacles which active people face may also be barriers to less engaged people, and lessons could be learned from the ways in which certain obstacles are overcome. For these reasons, people acting on climate change are a useful subject for research.

Another important consideration is whether individual action is conceptualised as "behaviour" or as "practice". This is an important theoretical distinction, as the terms epitomise two different paradigms for understanding individual action. The former represents an individualistic approach, stemming from psychological disciplines, while the latter represents a sociological approach that emphasises norms, interactions and shared routines. These two approaches are each discussed in this thesis, and both contribute to the context and design of this study. However, for reasons explained in Chapters Three and Four, the sociological or practice-based approach forms the key theoretical framework for this research.

Finally, it is very important to note that climate change is a relatively recent issue within public and political discourse, with mainstream awareness of the problem dating from the 1980s. However, this study is concerned with change in individuals' action over longer timescales; in fact, it aims to explore the precursors, roots and origins of action on climate change as far back in time as possible, limited only by the memories of participants. Since motives and meanings specifically associated with climate change are likely to be a recent phenomenon, it is essential to understand the data with this in mind. The study does not

aim to impose an artificial lens or theme of climate change on people's life stories, but rather to understand the complex and diverse routes by which they have eventually arrived at a point where they are taking action on the issue.

4. Research Questions and Aims

This research aims to respond to current needs and priorities within policy and research, as described above. Its primary aim is to advance understandings of individual action on climate change, including how and why it changes, with the goal of generating policy-relevant evidence. There are four steps needed to achieve this: The first step involves **understanding** what action on climate change means to the people who perform it. The second is **describing** the development of participation. The third is **explaining** the process through identification of factors affecting it, and exploration of their relative roles. Crucially, this includes analysis of context, and how transitions on this level relate to individual practices. The final step is comparing accounts to identify key cross-cutting themes and **drawing lessons** for policy in this area.

This process can be expressed as a series of research questions:

1. How is "action on climate change" understood by the people performing it?
2. How does performance of these practices develop throughout the individual life-course?
3. What are the key processes that influence this development?
4. What lessons can we learn for the promotion of sustainable practices?

Detailed studies of two areas of practice are used, as this study does not have scope to address all aspects of action on climate change in equal depth.

The study does not aim to represent any population, but rather aims for theoretical generalisability. Theoretical generalisation means drawing theoretical propositions, principles or statements from the findings of a study for more general application (Ritchie and Lewis, 2003:264). Flick states that this kind of generalisation within qualitative research involves "*the gradual transfer of findings from exemplars and their context to*

more general and abstract relations, for example, a typology" (1998:235). This is very different to the generalisation often used in quantitative research that involves representing a population (Ritchie and Lewis, 2003). Theoretical generalisability refers to the extent to which theoretical concepts can be applied across different contexts. It is important to be aware of the scope of the theory, so that concepts are only transferred to contexts or cases to which they are applicable (Smaling, 2003). It should be noted that this has implications for the policy relevance of this study. The results cannot be assumed to be typical of a population. However, the cross-cutting themes identified should suggest possible explanations for trends identified in other, broad-scale studies, and so could have implications for future policy.

5. Structure of the Thesis

This thesis consists of thirteen chapters, divided into three parts. Part One serves to introduce the study, and set it in its context regarding both policy and theory. Within this, Chapter Two introduces climate change as a policy problem and provides an overview of the role of individuals in recent UK responses to it. Chapter Three moves to the theoretical context, examining the concept of environmental behaviour, and how it has been understood throughout recent decades, within an individualistic or social-psychological paradigm. However, the chapter highlights some problems with this approach that suggest a need for a more social and contextual approach to individual action. Therefore, Chapter Four takes a different angle on the concept, drawing on more recent literature that sees individual activities as inseparable from broader social processes. It introduces Social Practice Theory and Time Geography and draws concepts from these approaches that guide this research. Chapter Five briefly provides some background to the exemplar areas of practice that are used throughout the study.

Part Two presents the methodology of the study. First, Chapter Six introduces Narrative Life-course methods, and explains why they are appropriate for this research. It also presents ethical and evaluative criteria for the study. Then, Chapter Seven describes how these methods are applied in this research and evaluates the process.

The thesis then turns to the presentation of results in Part Three. Chapter Eight addresses Research Question One by examining the nature of action on climate change as performed by participants. Chapter Nine addresses Research Question Two by discussing the ways in which this action has developed over time in participants' lives, and how this can be understood as a "career". Research Question Three is especially complex, and of key importance to research and policy and so answers to this question are considered over the course of three chapters. These start with the micro-scale; Chapter Ten explores in detail the ways in which an individual's performance of practice shapes their career of practice. Chapter Eleven turns to the ways in which practices are embedded within an individual's life and connected with immediate networks of other people, focusing on how practices are co-ordinated and shared. Chapter Twelve presents a final component of the answer, moving analysis to the wider scale of context, including biographical and historical time, and space/place. Finally, Chapter Thirteen provides a concluding discussion, which relates findings to the literature, and includes recommendations for policy; answering Research Question Four.

Chapter Two

The Role of Individuals in Policy on Climate Change

"*Individuals can play their part in making sustainable development a reality by making changes to their everyday lives. However, to do so requires an understanding of which everyday practices to change, the potential impacts of these changes and a means to exert the appropriate lifestyle choices… All behaviour change programmes are challenging*"
(Environmental Audit Committee, 2003: para 122-123)

1. Introduction

The aim of this chapter is to examine the role of individuals and "behaviour change" in UK climate change strategies over recent decades, in order to establish the policy context of this study. Section Two briefly sets out the historical background to policy in this area, including the first environmental behaviour change programmes of the 1990s. Section Three examines developments between 2000 and 2010; covering these in some detail because this was an important period for policy on behaviour change. It considers several key policy documents; the Stern Review (2006), UK Climate Change Programme (2006) and "Securing Our Future: the UK Sustainable Development Strategy" (2005) and the wide range of interventions that these generated. Section Four moves on to consider developments since the election of the Coalition Government in 2010; noting differences between pre- and post-2010 policy. This section considers new ideologies and public spending cuts, and their impacts on policy regarding individuals and climate change, as well as examining the current status of past programmes and outlining new and forthcoming ones.

The concluding discussion considers the implications of the past and present policy context for this study. It is clear that individual behaviour change has previously played an important role, alongside other instruments, in the UK's response to climate change, and this seems likely to continue, albeit in different forms. As such, this is an area that merits academic research, particularly if this can contribute to improving the effectiveness of policy. As mentioned in Chapter One, there are two main approaches to environmental

action; psychological and sociological. To date, there have been no UK Government interventions that have explicitly adopted a practice-based or sociological approach; all the relevant policy documents, grant programmes and plans have adopted the language of social-psychology or economics, especially the terms “behaviour” and “behaviour change”. For simplicity and consistency, these terms are used throughout this chapter.

2. Individuals in Environmental Policy before 2000

Climate change was first established on the UK Government’s agenda when Margaret Thatcher mentioned it in a speech to the Royal Society in 1988. However, “*UK environmental policy in the 1970s and 1980s tended to be informal, reactive, and often voluntary, based on negotiation between industry and Government.”* (Parliamentary Office of Science and Technology (POST), 2004:1). Environmental concerns became more prominent in public and media discourses in the 1990s, when sustainable development became a popular term; promising that economic development and environmental protection could be reconciled through “ecological modernisation” and “technical fixes” (Hajer, 1995). At the same time, attention began to be paid to the role of individuals and communities in delivering sustainable development. The Local Agenda 21 initiative, launched in 1992, emphasised the need to establish environmental policies within local authority structures and promote long-term processes of community participation (Blake, 1999). From the mid-1990s, the increased salience of the environment in general, and climate change in particular, was reflected in political discourses; when Tony Blair made his final speech to voters before the 1997 general election, he promised to put the environment at the heart of Government (Barry and Paterson, 2003).

In 1995 the Government launched Going for Green; a programme designed to promote personal lifestyle changes that would reduce individuals’ environmental impacts. Going for Green operated through various communication channels, including the media, service providers, retailers and community groups, to disseminate messages around resource use, pollution and the protection of local environments. An evaluation of Going for Green found that it was largely based on an “information-deficit model”; assuming that information alone would produce behavioural change (Blake, 1999). This model has been challenged, partly due to the often-observed phenomenon that people’s actions do not

always match their attitudes, which is known as the “value-action gap” (*ibid*). This difficulty in translating attitudes into behaviours remains a key policy issue and an important subject of research, and is discussed further in Chapter Three. When the House of Commons Environmental Audit Committee (EAC) later reviewed evidence on the impact of these engagement policies they suggested that Going for Green and other approaches at the time were diffuse, lacking in cohesion and clarity, and had failed to present an accessible message to the public (EAC, 2003).

In response to these criticisms of this kind, in 1997 the Department of the Environment, Transport and the Regions (DETR) launched "Are you doing your bit?"; a campaign to promote engagement with climate change, with a particular focus on transport. An evaluation found that while the campaign's brand recognition among its target audience was strong there had only been small changes in consumer attitudes or behaviour (DETR, 2000). Again, the campaign was criticised as being based on an information-deficit model and adopting a “one size fits all” approach. It had little impact on people not already engaged, failed to reinforce or reward positive behaviour, and was too general and unfocussed to bring about real behavioural change (EAC, 2003).

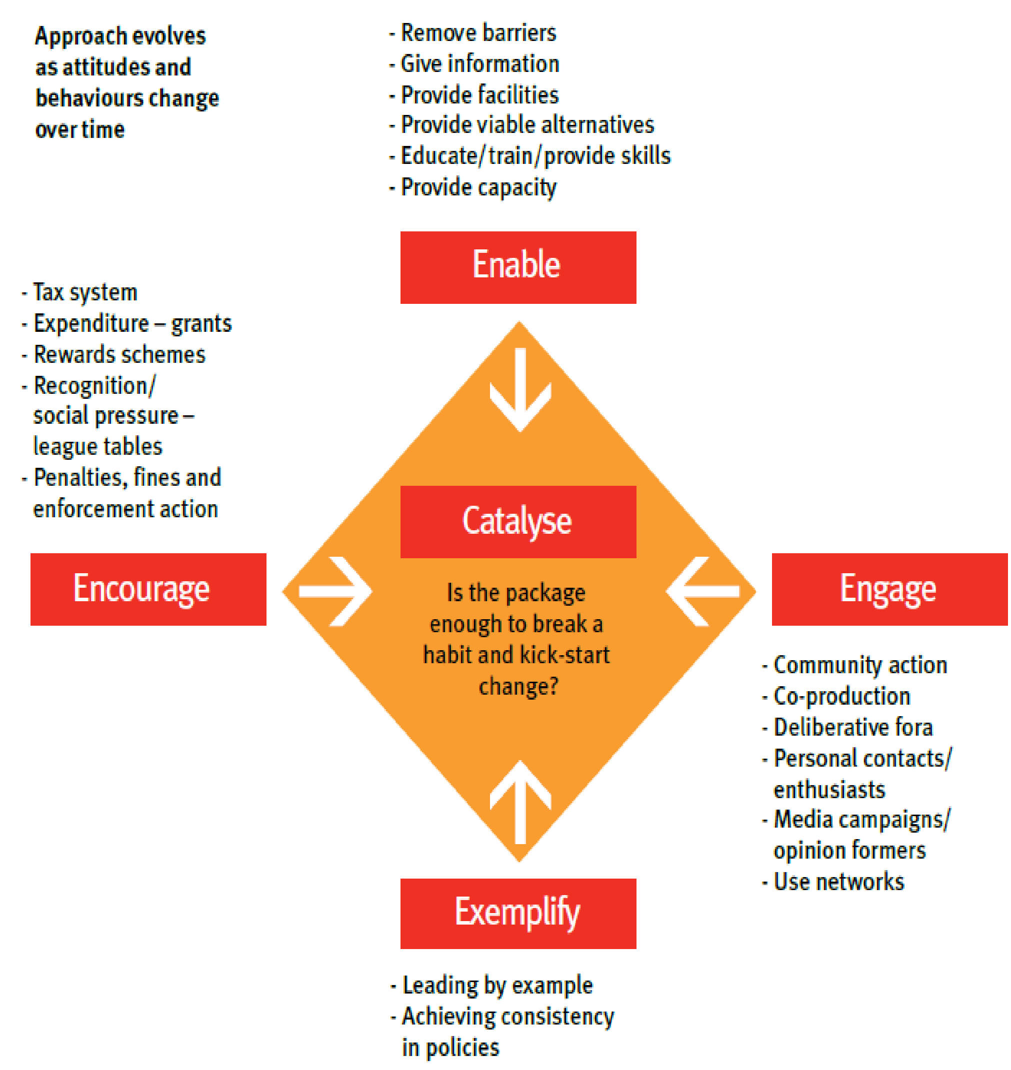
The EAC’s 2003 report said that some “*major awareness raising campaigns relating to sustainability to date have been less than half-hearted and ill-focussed*” (EAC, 2003:para 136) and suggested that large-scale, general awareness campaigns do not provide value for money. The committee called for better targeted and more effective activity, focussed on specific areas of behaviour, with a long-term, consistent programme of promotion (EAC, 2003). To an extent, such learning was taken into account in the development of the next generation of engagement campaigns. However, the basic principle of mass communication endured within policy, and the following decade saw a very large expansion of these campaigns, with increasing levels of sophistication in their design.

3. Individuals in Environmental Policy between 2000 and 2010

3.1 Introduction to behaviour change policy under the Labour Government

The decade from 2000 to 2010 saw considerable changes in approaches to environmental policy; notably the mainstreaming of the environmental movement, to the extent that it was sometimes described as "co-opted" or "too comfortable" (BBC News, 2005). The language of sustainability was certainly embedded in governmental strategies, including a key policy document; "Securing Our Future: the UK Sustainable Development Strategy" (HM Government, 2005). This strategic plan identified four forms of policy initiative to change individual behaviours: Engaging, Exemplifying, Encouraging and Enabling.

Figure One: Methods for achieving behavioural change - diagram based on "Securing the Future: the UK Sustainable Development Strategy" (HM Government, 2005:26)



Engagement means raising awareness of the problem, and changing attitudes towards it; this form of instrument became well-established in UK climate policy during the decade from 2000. For example, Ian Pearson (then Minister for Climate Change and the Environment) said, *" …engaging the public in tackling climate change is hugely important*" (Hansard, 2006a). It was argued in the Stern Review (2006) that the engagement strand of policy had dual aims: to make significant lifestyle change acceptable to the public; and to create support for further legislation. This argument was also adopted by Ministers; for example, Ian Pearson said soon after the Review's publication:

> *"We need a dynamic campaign to engage the public… to bring people with us, so that the more difficult decisions, which involve more difficult changes to people's lifestyles, will be more palatable, and the Government will be able to legislate for them"* (Hansard, 2006b).

Engagement approaches tended to stress the utility of small, simple actions, not large sacrifices, and the idea that quality of life could be maintained. For example, Phil Woolas (then Minister of State for the Environment) said:

> *"Our message to our people is not that they must stop doing things; it is a question of the type of fuel that we use, the type of vehicle that we use and the mix of transport that we use*" (Hansard, 2007a).

The idea of "stopping doing things" is a theme that is returned to later in this thesis.

Enabling and encouraging forms of initiative are closely linked. Enabling means creating an environment conducive to action and providing people with the capacity to act; while encouragement involves providing a system of incentives and disincentives to promote desired behaviours. Strategies aimed at enabling and encouraging action can be seen as a necessary follow-up to attitude change (to convert ideas into action) or as an alternative to attitude change (providing other incentives to act), and both approaches are visible in the policy discourses of the then Government. For example, a statement by the then Environment Minister Joan Ruddock (Defra, 2008b) speaks of enabling and encouraging measures as a way to address the value-action gap. However, the idea of using economic incentives (rather than attitudinal incentives) to behaviour change also appeared in several

governmental sources, and the two were not seen as mutually exclusive. Finally, exemplification involves the Government setting a good example by adopting sustainable practices itself where possible. This framework has strongly influenced subsequent policy thinking, and the design of specific policy instruments (as discussed further below).
The policy environment was also shaped by the Stern Review of the Economics of Climate Change (Stern, 2006), which was commissioned by the Government, and found that individual behaviour should play a key role in any solution to the problem:

> *"Dangerous climate change cannot be avoided solely through high level international agreements; it will take behavioural change by individuals and communities, particularly in relation to their housing, transport and food consumption decisions"* (Stern, 2006:395).

In the same year, the Government published the UK Climate Change Programme 2006, which set out their climate change strategy, saying, "*Individuals, households and communities have a crucial role in tackling climate change"* (HM Government, 2006a:117) and "*We will encourage individuals as citizens, consumers, motorists and business people to take the action needed"* (*op cit*:4). It included several measures aimed at enabling and encouraging action, discussed below. Another development in 2006 was the creation of the Office of Climate Change (OCC), a unit housed inside Defra but with cross-departmental governance; this aimed to break the "*logjam within Defra by bringing in new people who were not disillusioned by past failure"* and "*break through the normal adversarial approach to policy-making by giving Ministers across government access to a shared resource"* (Institute for Government, 2010:7).

In the same year, the Government published its Energy Review, which focussed on enabling and encouraging, and stated:

> "*The main obstacles to the take up of energy efficiency are lack of information about costs and benefits, absence of appropriate incentives, and lack of motivation among consumers."* (HM Government, 2006b:12).

The Energy White Paper which followed in 2007 proposed responding to this with better information, incentives and regulation, and removal of barriers to the take up of cost-

effective energy efficiency measures (Department of Trade and Industry, 2007:8). The Government's Annual Report on the progress of the Climate Change Programme continued this emphasis on encouraging and enabling, arguing that key obstacles to behaviour change were lack of information and the fact that people did not perceive a shared willingness to act. The report proposed better information, such as real-time feedback on energy use, raising awareness of smarter (eco) driving and an online carbon calculator (Defra, 2007a:22).

The Labour Government appeared to further express its recognition of the importance of climate change with the creation in 2008 of the Department for Energy and Climate Change (DECC) (which the OCC was subsumed within). This brought together the energy remit previously held by the Department for Business and Regulatory Reform and the climate change remit previously held by Defra, and was met by "*universal support*" according to a Cabinet Office Review (Cabinet Office, 2009:5). In the press, it was reported that the change was;

> "*widely welcomed as a sign that policy would finally become more joined up. Until now, environment issues have been developed and led in a fragmented way*." (The Guardian, 2008).

However, the closeness and occasional overlap between the work of Defra and DECC can still be a source of confusion. Another criticism levelled at DECC is that;

> *"When Climate Change was taken out of Defra, all "Social Research" capacity was left behind. Climate Change has become an "Energy Issue". It is dominated by Top-Down, Supply-Side solutions*" (Chatterton, 2010:10).

While DECC later gained a Customer Insight team of researchers, this is not as large or well-established as Defra's social research team.

Meanwhile, considerable research and policy development work was being conducted within Defra, especially within the Sustainable Behaviours Unit. The Four "E"s model described above formed the basis for Defra research, resulting in the "Framework for Pro-environmental Behaviours" (Defra, 2008a). This document set out twelve headline

behaviour goals, and outlined seven population segments, based on attitudes and behaviours, which could be used to design tailored interventions; this concept of segmentation is discussed further in Chapter Three. The framework also highlighted the importance of addressing habitual behaviour, and of considering "rebound effects"; for example, increases in consumption facilitated by savings in energy or water bills. Furthermore, it recognises that there are;

> "*locked-in behaviours through the built world, financial constraints or day to day lifestyles which will, for example, require a re-think of working patterns, building design or community*" (Defra, 2008a:28).

This document has been influential, guiding not only the many research and engagement projects commissioned by Defra, but also being used in the wider academic and non-academic literature.

A major landmark was the 2008 Climate Change Act, which included legally-binding targets of 80% cuts in UK emissions by 2050. It also established the Committee on Climate Change, an independent body to advise the Government on setting and meeting carbon budgets and on preparing for the impacts of climate change. In 2009 the Government published its Low Carbon Transition Plan which set out how it intended to meet the targets of the Climate Change Act. Like previous papers, it stressed encouraging and enabling measures, often involving information and incentives, alongside the development of an engagement programme called "Act on CO_2" (discussed below).

It is clear that this decade was an important period for the development of UK policy on climate change, including important plans such as Securing our Future, the Climate Change Programme and the Low Carbon Transition Plan. The rest of this section examines the ways in which these plans were implemented in practice. As in the previous decade, communication campaigns were important. However, there were also a wide range of new grant/subsidy schemes, and some infrastructural measures designed to promote sustainable behaviour.

3.2 The Labour Government's communication campaigns

By 2000, critiques of past communication campaigns were widespread. In response, Ian Pearson (then Minister for Climate Change and the Environment) said,

> *"We are looking at new and better ways to communicate the message on climate change ….we are looking at ways in which we can improve our websites and other mechanisms to get our message across. ....We need more communication, not less*." (Hansard, 2006a).

In accordance with this view, the decade from 2000-2010 saw a peak in the scale of mass communication campaigns to change environmental behaviour.

In 2005 Government initiatives to promote Engagement with climate change were united under the title of the Climate Change Communications Initiative. This was a cross-Governmental initiative, led by Defra, to change attitudes and to create a coherent "brand" for Engagement strategies. A central component was the website "www.climatechallenge.gov.uk", which aimed to provide easily accessible information about climate change and how best to communicate about it. The site provided free resources including a short film about climate change, a series of radio adverts, animations and a downloadable written guide about communicating climate change. Another element of the initiative was the selection of a number of young "climate change champions" to raise awareness in their local communities, and on the national scale (Climate Challenge, 2008).

From 2007 the Climate Communications Initiative was superseded by "Act on CO_2"; another cross-departmental programme with similar goals. It aimed both to engage and to enable and was supported by advertising to raise awareness of the link between personal behaviour and climate change. In June 2007 the Government launched the web-based "Act on CO_2 carbon calculator", which enabled people to calculate their own "footprint" in terms of the CO_2 emissions they generated, and provided "tailored recommendations" through a personalised Action Plan for emissions cuts. This also indicated where users could find further information on another Government website; the Greener Living Guide

on the Directgov web pages. This was intended as a comprehensive on-line guide to sustainable lifestyles (Defra, 2006).

The campaign was well-resourced; for example, just between April 2008 and December 2008, Defra spent approximately £6.7 million on Act on CO_2 (POST, 2010). Indications of the impact of the campaign on individuals' behaviours were mixed, and it is always problematic to attribute change to one communication source. However, between June 2007 and Summer 2008, there were over 1.2 million unique visitors to the Act on CO_2 calculator, and almost 500,000 of these users worked out their carbon footprint (Environmental Audit Committee, 2008). In research by the EAC in 2008, 62% of respondents claimed to have taken action or be planning to take action as a result of the campaign; an increase of 12% compared to summer 2007 (EAC, 2008). However, the methods and principles of carbon calculation were called into question (for example, by Smith, K., 2007).

The Labour government under Gordon Brown also supported some related non-governmental organisation (NGO) campaigns. Three Cabinet Ministers pledged their support to the TckTckTck campaign, a global alliance of NGOs, trade unions and faith groups calling for a "*fair, ambitious and binding climate change agreement*" at the Copenhagen climate change summit in December 2009 (DECC, 2009). Ed Miliband (then Energy and Climate Change Minister) also launched a website, "www.eds-pledge.com", which had the appearance of an NGO campaign site; people who signed up received campaign-style emails asking them to lobby other decision-makers prior to the Copenhagen summit.

It is clear that between 2000 and 2010 quite considerable resources were directed towards engagement, and also that this was probably the most high-profile part of Government climate strategy. It is difficult to measure the success of engagement initiatives, because there are many influences on people's attitudes. However, in the 2010 Survey of Public Attitudes and Behaviour toward the Environment (which polled 1700 people in England) more people saw being 'green' as the socially acceptable norm than saw it as an alternative lifestyle (Defra, 2010a). Despite this, such approaches have been widely critiqued; with Act on CO_2 being particularly singled out, perhaps due to its high profile. As well as the previously mentioned critiques of mass communication campaigns, the Act on CO_2

communications were criticised as relying on fear and guilt messages, which might be counterproductive (POST, 2010).

It is worth noting that a significant strand of government communication on climate change seemed aimed at raising awareness of the individual role in causing the problem and responsibility for addressing it; this message recurred in a wide range of communications. The emphasis on this message reflects the commitment in the UK Climate Change Programme to "*encourage individuals to understand their role and responsibility in tackling climate change*" (HM Government, 2006a:6). Government research suggested that feelings of responsibility were a strong motivation for action; a 2007 survey found that "*the main motivation for an environmentally friendly lifestyle is guilt about harming the environment*" (Defra, 2007b:2). The Environment Minister Joan Ruddock welcomed these results, saying;

> "*The most encouraging finding in this survey is the majority of people believing that it's up to individuals to accept responsibility by making lifestyle changes. This is vitally important…*" (*ibid*).

However, it could be suggested that this focus on individual responsibility also served to shift responsibility away from the Government itself.

3.3 Infrastructure measures under the Labour Government

It is not possible to discuss all the infrastructural measures that affected individual carbon footprints, as they are too numerous (covering transport, food, purchasing, work, buildings and many other policy domains). However, four key policies regarding technology and infrastructure stand out as especially significant: the introduction of Energy Performance Certificates (EPCs) for buildings, the light-bulb phase out, the introduction of Feed-in Tariffs (FiTs) and the smart-meter phase-in. Since 2008, EPCs have been required whenever a building is built, sold or rented, and provide 'A' to 'G' ratings for its energy efficiency. They are projected to save nearly one million tonnes of carbon per year in the UK by 2020 (DirectGov, 2007).

The phase-out of conventional light bulbs began on the 1st September 2009, with energy efficient ones replacing them. This was mandated by the European Union (EU); however, a voluntary initiative to phase out old-fashioned bulbs was initially started by the UK Government in 2007. The phase-out is expected to save one million tonnes of CO_2 per year across the EU by 2020 (DirectGov, 2009). Meanwhile, also in 2009 the Government announced plans to ensure that all UK homes had a smart meter by 2020. Smart meters enable readings to be taken remotely and together with a display device can give householders real-time information on their energy use. Evidence suggests that these could play an important part in domestic energy saving (Darby, 2006).

Another energy-related measure, FiTs were announced by the Labour Government in February 2010 and started in April 2010, aimed at encouraging low carbon electricity generation, particularly by organisations, businesses, communities and individuals who are not traditionally engaged in the electricity market. They aim to provide a "clean energy cashback", allowing many people to invest in small scale low carbon electricity, in return for a guaranteed payment for the electricity they generate and export (DECC, 2011a).

These four measures all fall into the category of enabling and encouraging approaches, and were all based on changes made by the Government to markets and socio-technical systems. However, the light-bulb phase-out was the only one that directly enforced behavioural change on consumers, and this was reflected in public and media responses to the measures. For instance, while EPCs received some criticism by landlords (for example; at "www.landlordzone.co.uk" in 2008) and smart meters raised some security concerns (for example, Jamieson, 2009), certain segments of the media reacted very strongly against the light-bulb phase-out (for example, the Daily Mail (Derbyshire, 2009), and the Express, which called it "barmy" (Clout, 2009)). The fact that the change was enforced on consumers may have led to this resentment, as the imposition of such regulation is often unpopular (Ockwell *et al*, 2009).

3.4 Other measures to engage, encourage and enable

Alongside these mass communication and infrastructure measures, the first decade of the 21st Century saw the introduction of a multitude of funding schemes designed to engage individuals with environmental issues, or to encourage and enable sustainable behaviour;

often these schemes involved several of the four “E”s. Table One lists the key policies that were introduced between 2000 and 2010, and also includes the Environmental Action Fund, as although this was introduced in the 1990s it continued until 2008[1].

[1] The schemes listed here apply either to the UK or to England; the complex boundaries and slight cross-national variations of the policies are not considered of sufficient relevance to warrant explanation here.

Table One: Funding programmes to promote individual environmental behaviour change between 2000 and 2010

Name	Outline	Dates
Environmental Action Fund	Defra grants of £25,000 to £250,000 for voluntary and community sector groups to further sustainable development objectives; it funded projects that focused on moving from awareness into action, breaking habitual “lock-in”, and building the capability of communities to act.	1991-2008
Warm Front	Large funding programme that provides a package of insulation and/or heating measures up to a maximum value for eligible people (those receiving certain benefits); its budget for 2008-11 was £959 million.	2000-2012
Community Renewables Initiative	Pilot programme that provided expert advice and support on installing renewable energy systems, such as solar panels on village halls and biomass heating for schools; it delivered over 150 exemplar community projects.	2002-2007
Carbon Emissions Reduction Target	Statutory obligation on energy suppliers to encourage households to take up energy efficiency measures, typically subsidised offers on insulation, high-efficiency lighting, heating systems, appliances and energy saving devices. (From 2002-2008 it was the Energy Efficiency Commitment.)	2002-2012
Sustainable Travel Towns	Department of Transport funding of £10 million for local authorities to implement “Smarter Choice” Programmes in Darlington, Peterborough and Worcester; these aimed to encourage more use of non-car options, in particular, bus use, cycling and walking.	2004-2009
Every Action Counts	Defra funding of £4 million to empower communities to take simple everyday action on the environment; it was delivered by a consortium of voluntary community sector bodies. It included a community resource bank and training of Community Champions.	2006-2009

Table One continued

Climate Challenge Fund	Defra fund to change attitudes to climate change; it allocated £8.5 million to 83 projects on a national, local or regional scale. Methods varied from one-off, 'passive' interventions such as radio adverts to face-to-face repeat contact over a long period.	2006-2008
Community Energy Efficiency Fund	£6.3 million in seed funding to mainly council-run projects that gave 300,000 vulnerable households energy saving advice, with a focus on alleviating fuel poverty.	2007-2008
Green Homes / Energy Saving Trust (EST) advice	Defra funding of £100 million to the EST to develop a pro-active service and network of regional centres to help individuals make their homes more sustainable; it offered a "green home health check", information on offers from energy companies for energy saving products, and other financial support packages. (The Green Homes name is no longer used).	2007-present
Green Communities	Initiative from the EST to support community based energy projects; it offered an integrated package of advice, support and funding, including free training and advice focused on project planning and funding, technical support and a website with resources. Before 2008 a similar scheme was known as Community Action for Energy.	2008 –2011
Greener Living Fund	Eight projects are sharing £6 million to help individuals and communities to live more sustainably. The following projects are being funded:	2009-2011
- Climate Outreach and Information Network	£698,000 programme to change the attitude of union members by and linking personal action, work-place programmes such as 'Greening the workplace', and the emissions reduction targets of employers.	
- Cooperatives UK	£350,000 programme to galvanise individual members and employees of co-operatives to change their daily behaviour to minimise their emissions.	

Table One continued

- Global Action Plan	£599,000 project to allow 20,000 households to become part of an "EcoTeam" that meets to share experiences and learn about sustainable living, in collaboration with EDF energy.	
- Marine Stewardship Council	£395,000 project to promote certified sustainable seafood in schools, universities and public sector and commercial offices; also using social marketing campaigns.	
- National Trust	£500,000 to increase by at least 20% the proportion of National Trust supporters eating more locally in-season food.	
- National Union of Students	£514,500 programme to embed behavioural change programmes in higher education institutions.	
- Sustrans	£1,119,000 project to reduce car use for short trips by upgrading Sustrans' online mapping/interactive website and establishing up to three "TravelSmart" projects targeting around 25,000 households.	
- Waterwise project	£698,000 project to deliver water efficiency retrofits and engage residents in a wider programme of pro-environmental behavio ur change; residents will be trained to act as eco-champions within their communities.	
Community Energy Saving Programme	£350 million spent by energy companies to target households to improve energy efficiency standards, and permanently reduce fuel bills; delivered through community-based partnerships involving Local Authorities, charities, energy suppliers and electricity generators, focussing on low income areas.	2009 – 2012
Low Carbon Communities Challenge	Project providing financial and advisory support to 20 'test-bed' communities to reduce home energy consumption using joined-up 'packages' of support; for example, smart meters, home energy audits, access to local demonstration homes and leadership from local schools, businesses and public buildings.	2010-2012

This is not an exhaustive list; there were various other measures, which cannot all be considered here. These include measures around energy in buildings, and financial instruments such as tax discounts on energy efficient materials; road tax measures; and fuel pricing. The table also does not include one policy announced by the Labour Government, but not implemented before the election: a £230 million scheme to subsidise electric cars; this is discussed in Section Four. However, the table clearly shows that the last ten years have seen a multitude of projects, many of which have overlapping goals and methods. There has been a strong emphasis on communities and on energy-related measures, and some of these initiatives have been relatively short-lived. While some, such as Warm Front and the Community Energy Saving Programme have focussed on low-income households, and not necessarily on people engaged with environmental issues, some of the "community action" projects have focussed on already-engaged groups.

These measures have received mixed responses and evaluations. Warm Front has been one of the most important and well-resourced schemes, and is widely seen as the Government's flagship programme on energy efficiency and fuel poverty (for example, Energy Choices, 2011). A review in 2009 suggested the scheme overall gave good value for money (National Audit Office, 2009). However, giving evidence to a Select Committee in 2010, the charity National Energy Action stated that;

> "*A fragmented approach in which individual households make individual applications for assistance followed by individual assessment and installation work represents grossly sub-optimal use of resources*" (Select Committee on Energy and Climate Change, 2010: para 38).

The Fuel Poverty Advisory Group also stated that, "*there is no doubt that the schemes we currently have, bearing in mind the task that we face, are unfit for purpose*" (*ibid*). Recently, a key problem for Warm Front has been meeting the public demand; all funds for 2010/2011 were allocated by December 2010, meaning that the scheme was forced to close to new applicants until April 2011.

The number of grants available for energy efficiency and microgeneration measures, and the frequency with which they change, have been a source of considerable confusion, as illustrated by many postings on discussion forums such as "moneysavingexpert.com" and

"forum.housingenergyadvisor.com", with some people even complaining that they have suffered financially due to unclear or changing schemes. A Which? online article in 2011 highlighted the high levels of confusion around domestic energy generation, reporting on a "ReEnergise Renewables" survey of 200 homeowners. Two-thirds of respondents said they did not know enough about the many microgeneration options to make an informed decision on whether any were worth the investment, despite 80% supporting the idea of renewable energy in general (Fenn, 2011).

However, the Energy Saving Trust (EST), which is largely government-funded, has made it a priority to address these problems. The organisation's annual report in 2010 stated that in that year they "*advised over 3.5 million people: our advice and information played a part in the majority of all energy saving installations*" (EST, 2010:3). In 2009, nearly 70% of customers said they were likely to take further action based on the information the EST provided (*op cit*). The organisation claimed in 2010 that it generated annual CO_2 savings of over 804,000 tonnes, largely through consumer advice. Overall EST funding by Government departments (excluding the Scottish Government) increased from £48.4 to £67.6 million between 2008/09 and 2009/10 (*op cit*).

An evaluation of the Every Action Counts programme was conducted by Defra, but never published. However, it is known that over 130,000 people visited the programme website, to access training materials, and the initiative trained over a thousand Community Champions (Defra, 2009b). An evaluation of the Environmental Action Fund found that at the project's end, participants were taking more action than they were prior to their involvement; however some behaviours were much more amenable to change than others. In particular, changes were achieved in the fields of recycling and energy and water conservation, though these were generally small. Little change was made in high-impact or high-commitment behaviours such as microgeneration and use of aeroplanes and cars. There was also relatively little evidence of "spillover effects"; whereby changes in one area of behaviour spread into other areas of life, and few projects had attempted to measure the longevity or durability of the behaviour changes they generated. However, the review highlighted the value of working with communities, social networks and peer-to-peer communication in engagement approaches (Defra/Brook Lyndhurst, 2009).

A positive conclusion was reached by an evaluation of the Smarter Choice Programmes for transport. This report concluded that the pilot projects supported economic growth, reduced carbon emissions and promoted quality of life, and that the reduction in congestion alone produced a benefit-cost ratio of around 4.5. It recommended that future programmes pay more attention to work travel, but concluded that the findings of the pilots justified the expansion of Smarter Choice Programmes (Sloman *et al*, 2010). An evaluation concluded that the Climate Challenge Fund was successful in communicating with large numbers of people and organisations, especially through conventional mass marketing channels such as print media and television; the number of communication opportunities created by funded projects is likely to have exceeded 50 million. However, it was less successful in ensuring that groups had the necessary skills to implement their projects, and in engaging people not already concerned about climate change (Brook Lyndhurst, 2008).

This problem of "preaching to the converted" is a recurrent theme of evaluations of the projects in Table One (p38). Furthermore, in some cases the same group or location benefited through several schemes; for example, the village of Hook Norton gained support both through a pilot programme called Green Neighbourhoods (a precursor to the Green Communities scheme) and later the Low Carbon Communities Challenge. This suggests a concentration of resources on already-engaged targets rather than engagement of new audiences.

In summary, the sheer number and changeability of schemes has sometimes been a problem for the public; furthermore, as shown in Table One (p38), that there has been considerable overlap between different programmes, potentially resulting in duplication of effort. However, this quantity of experimentation has also generated a useful body of evidence that has helped to refine engagement approaches. It can be seen from Table One that the most recent generation of projects is based on tailoring to specific audiences, and the use of trusted intermediaries and existing organisations, reflecting current best practice in the field. Another refinement is the use of joined-up packages of support, as applied in the Low Carbon Communities Challenge, which act to simultaneously enable, encourage and engage. This suggests that over this decade, approaches have become more sophisticated, and perhaps more effective (though future evaluations will be needed to test

this). The final strand of approaches applied between 2000 and 2010 relates to the fourth of Defra's four "E"s: exemplification.

3.5 Labour's initiatives to exemplify sustainable practice

Exemplifying refers to policies that involve Government action to set a positive example to other actors, especially individuals; this was highlighted in the Stern review as a key element of climate policy. This was reflected in Labour Government rhetoric; the then Defra Minister Phil Woolas said;

> *"We in the Department take very seriously our role as an exemplar of reducing carbon emissions. Clearly, if we are trying to influence public opinion, we must set a good example*" (Hansard, 2007a).

Tony Blair stated in the Sustainable Development Strategy, that;

> "*Government will lead by example....We want to ensure that we spend your money sustainably, starting with a commitment to buy cleaner cars and by our new offsetting scheme to reduce the carbon impacts of unavoidable air travel."* (HM Government, 2005:4).

The Energy Review (HM Government, 2006b) stated that Government-owned properties should be carbon neutral by 2012, and in 2007 eight departmental buildings complied with the "Lights out London" campaign to raise awareness of climate change (Hansard, 2007b).

However, it is questionable to what extent such actions were merely token gestures, and whether pro-environmental policies were applied across all branches and areas of Government. Some argued that by facilitating the rapid growth of aviation (for example, by allowing airport expansion and exemptions from fuel duty and value-added tax (Friends of the Earth, 2008)) the Government did not exemplify sustainable practice, but rather created an impression of inconsistency, and called into question the level of its commitment to tackling climate change. However, it can reasonably be suggested that the Government attempted to set a good example on the international stage, particularly with

the introduction of the world's first Climate Change Act in 2008, including legally binding emissions targets.

3.6 Discussion of policy under the Labour Government 2000-2010

During the period of the Labour Government between 2000 and 2010, some important advances were made towards addressing the problem of climate change; notably the Climate Change Act, the creation of national strategies explicitly designed to reduce emissions, Defra's development of a detailed theoretical and empirical base for behaviour change policy, and the provision of significant funds for a wide range of policy interventions. However, Carter and Ockwell argued in 2007 that the Government had failed to recognise the importance of behaviour change in environmental policy. They argued that large scale behaviour change requires changes to infrastructure and institutions that favour powerful business interests and that rather than encourage this behavioural revolution, the Labour Government had preferred to seek the "*silver bullet of a techno-fix solution*" (Carter and Ockwell, 2007:17), such as nuclear power or biofuels. They suggested that little attention was given to implementing a core principle which the Government had recognised in their 1998 Transport White Paper; moving car-drivers onto public transport, bicycles or foot.

Later, concerns were also raised regarding the environmental commitment of Gordon Brown's Government. In a Friends of the Earth Press Release following the Budget in 2008 the environmental organisation claimed that the Budget merely "tinkered in the margins" of addressing climate change, introducing tokenistic sustainability measures such as promoting the avoidance of plastic bags, while cutting the budget for the promotion of recycling (Friends of the Earth, 2008). The NGO also criticised the Government's cuts to Warm Front of £250 million over three years, and regarding transport policy, the organisation's director was quoted as saying, "*Another freeze in fuel duty will further undermine the Government's already weak green credentials*"(*ibid*). It was not just environmental groups that were unsatisfied with the Government's performance; a survey in 2007 found that, among business-people, "*Current environmental incentives in the tax system are seen as unclear, too complex and fail to motivate behavioural change*" (PriceWaterHouseCoopers, 2007).

A key criticism was that all the Labour Government's initiatives between 2000 and 2010 focused on a fairly narrow range of small and non-controversial behaviour changes , such as energy efficiency, and there were some important areas of policy that seemed to receive much less attention in behaviour-change strategies; including controversial areas such as transport (Carter and Ockwell, 2007). This is perhaps unsurprising, since measures to alter incentive/disincentive structures so as to reduce car use (including road pricing and fuel tax increases) tend to be unpopular with the electorate. As Carter and Ockwell explained,

> "*The fuel protests in 2000 profoundly shocked the Government, so although the Treasury has introduced some innovative tax measures, it has subsequently been extremely nervous about anything that might be construed as increasing the cost of motoring. The Government's 'predict and provide' approach to aviation and the lack of any substantive carbon reduction measures represents a serious policy failure."* (*op cit*: 12).

Despite this, when set in a long-term context, the period from 2000 to 2010 seems likely to be remembered as a time of relatively high commitment to, and progress in, environmental policy in general and the involvement of individuals in particular. This was achieved through a range of measures that addressed each of Defra's four "E"s, often in combination. The next section turns to the most recent period, and the policies of the Coalition Government.

4. Individuals in Environmental Policy since 2010

At the time of writing, the Coalition Government has been in power for approximately one year. For this reason, it is not possible to explore their policies in as much detail as those of the previous decade. Much of the new Government's policy is still under development or in its initial phases of implementation, and publications are rare. However, it is possible to identify some impacts of the new ideology, and the very different economic context; this is the subject of Section 4.1. This section then briefly considers the current status of the programmes mentioned in Section 3, before moving on to outline some newly introduced policies.

4.1 The new context

In May 2010 Prime Minister David Cameron said he wanted the new Coalition administration to be "*the greenest Government ever*" (Randerson, 2010). As well as a new political and economic context, perceptions of climate change may also have shifted slightly; some evidence even suggests that concern about climate change may have decreased. For example, in 2009, 25% of respondents agreed that 'the so-called 'environmental crisis' facing humanity has been greatly exaggerated' (Defra, 2009a); in 2010 the figure had increased to 38% (Defra, 2010a). This may be linked with problems of trust in governments and in scientists; for example, the controversy over leaked emails between climate scientists in 2009 may have played a part. At the same time, a more generalised sense of "issue fatigue" (Maibach *et al*, 2010) may be involved, with people simply bored of an issue that has received a great deal of exposure. The climate change "sceptic" movement has also remained active, with organisations such as the Association of British Drivers and individuals such as television producer Martin Durkin attempting to refute the dominant scientific theories. While the new Government officially recognises the problem of climate change, several Conservative Members of Parliament (MPs) are "sceptics", and the change in public opinion may reduce the pressure for governmental action.

Another important change in the context concerns the impacts of the recession and the public spending cuts announced in the Spending Review 2010, which has been described as "*particularly harsh from an environmental point of view"* (Porritt, 2011:7); Defra's budget was cut by 29% by 2014-15 (HM Treasury, 2010). DECC was less badly affected, with 5% annual cuts for four years (*ibid*). However, the Government placed a freeze on its advertising spending from June 2010, and during the financial year 2010/11 only essential new and existing campaigns were run; this did not include any climate change communication campaigns. The Central Office of Information (COI), responsible for Government advertising, reported in August 2010 that their turnover on marketing was around 52% lower than the same period in 2009, and "*the new government has made it clear that this reduction in spend should be expected to continue into the future*" (COI, 2010). Similarly, the Business Plan for the Department of Transport (DfT) for 2011-2015 states that "*The Department will no longer....waste money on ineffective national advertising and marketing campaigns*" (DfT, 2010:4). This anti-advertising stance marks a

strong contrast with the policies of the Labour Government before 2010, such as the Act on CO_2 campaign.

Both the Conservative and Liberal Democrat parties are currently expressing an ideology that involves "small Government" and a reduction in interventionist policies, whether these apply to businesses, councils or individuals. This includes behaviour change; Oliver Letwin said in 2011,

> "*Governments—of all persuasions and with the best of intentions—have set about the business of trying to achieve a particular change in the way people behave through legislating and administering. They have discovered, to their horror, that the effect that they sought to achieve has not been achieved, and that instead some other effect has occurred—perhaps benign, perhaps counterproductive* (House of Lords Select Committee on Science and Technology, 2011a:2).

However, this does not mean that behaviour change is no longer on the political agenda. A Behavioural Insights Team was set up by the Cabinet Office in July 2010, and is reportedly "*growing in influence inside No. 10*" (Chakrabortty, 2008:1). A subcommittee of the House of Lords Committee on Science and Technology is currently examining the use of behaviour change interventions as a means of achieving government policy goals, in an investigation launched in July 2010. The call for evidence stated that,

> "*Governments, therefore, are becoming increasingly interested in understanding how they can influence the way we behave using a range of different types of behaviour change policy interventions that rely on measures other than prohibition or the elimination of choice. Recent reports, such as the Cabinet Office issue paper Personal Responsibility and Behaviour Change (2003), the Government Social Research Unit's Behaviour Change Knowledge Review (2008) and the Cabinet Office and Institute for Government report MINDSPACE: Influencing behaviour through public policy (2010), are indicative of this growing interest*." (House of Lords Science and Technology Select Committee 2010:2).

One of the areas being considered is sustainable travel, and a report is expected in Summer 2011.

A behaviour change concept currently popular in policy circles is that of the "nudge", originally proposed by Thaler and Sunstein (2008). This approach recognises that people are influenced by their environments, habits and other people, and that behaviour can be shifted by small changes in the structures and systems of everyday life. This has recently become influential in Government thinking; Richard Thaler is an unpaid adviser to the Behavioural Insights Team and his book is referenced several times in their 2010 report on health behaviour. A recent press article suggested that;

> "*Nudge theory is an attempt to resolve a classic Conservative dilemma: since they believe in the small state and low taxation, should the Conservatives just leave us to our bad habits, and accept the undesirable social consequences that will follow, or use the levers of state to try to improve our behaviour*?" (McSmith, 2010).

"Nudging" is seen as a new compromise between these two approaches. The Cabinet Secretary, Oliver Letwin gave evidence before the aforementioned Select Committee in February 2011 and mentioned that "nudging" could be applied to sustainable transport and home energy efficiency. However, the Sub-Committee asked the Government to justify its use of 'nudge' principles, "*given the limited evidence that 'nudging' works*" (House of Lords Science and Technology Select Committee, 2011b) and one member, Lord Krebs, stated that:

> "*We have taken a lot of evidence over the last six months from experts, particularly in the area of obesity and transport, which have been our two focal areas. I think it is fair to summarise the expert view that we have heard: that nudging in the sense of not having regulation or taxation or restriction, on its own, simply does not work*" (House of Lords Science and Technology Select Committee, 2011a).

He added, regarding transport policy:

> "*We know what works: it is investing in infrastructure... We do know what works— it is just that we are not prepared to do it*" (*ibid*).

However, Oliver Letwin and other Government representatives defended the policy of trialling the approach. Evaluations of its success will be made over the next few years, but it currently remains controversial.

Another key policy idea at present is the "Big Society", explained by the Conservative's 2010 manifesto as involving; "*social responsibility, not state control; the Big Society, not big government*" (The Conservative Party, 2010:35) and "*redistributing power from the state to society; from the centre to local communities, giving people the opportunity to take more control over their lives*" (*op cit*: 37). However, the idea has prompted a range of criticisms in the media, including the charge that it is vague (the Daily Mail, 2011), incompatible with public spending cuts (BBC News, 2011), or even a "big con" (Beattie, 2010). It is not yet clear what the concept will mean for environmental policy. However, Section 4.2 below discusses a website promoting community energy projects that was hailed by a Minister as an example of the Big Society; the current status and quality of this particular project suggest that such endeavours are far from a priority for the Government. Concerns have also been raised about the risks of the Big Society ideology, and the potential for localisation to create a "tragedy of the commons" outcome, with each area concerned only with its own benefits, not shared responsibilities (Porritt, 2011):

> *"This could be particularly problematic in terms of the implementation of policies relating to key national and international obligations. Local authorities and communities have a greater incentive to focus on the immediate and narrowly local issues (such as litter and housing), rather than national issues like climate change. This is especially true in tough financial times, with councils being expected to deliver more for less." (Op cit:36).*

It remains to be seen whether the promotion of the Big Society will bring more challenges or opportunities for sustainability policy.

Despite the emphasis on "small Government", the idea of involving individuals in policy on sustainability seems to still have currency. For example, in September 2010, Chris Huhne, the Secretary of State for Energy and Climate Change, said,

> *"We must take action on energy saving. For too long, the debate around energy has focused on supply at the expense of demand. Practical, achievable energy savings have been neglected*" (Stephens, 2010).

Given the number of energy efficiency schemes listed in Table One (p38), it does not seem entirely accurate to accuse past administrations of "neglect". However, as various evaluation reports show, there is room for improvement; it remains to be seen whether the new Government will make better progress. Both the nudge approach and the Big Society involve changes in individual behaviour, though current discourses focus more on facilitating personal choice than on state-led attitude change campaigns; in other words, on enabling and encouraging rather than engaging. In summary, this overview suggests that despite changes in the economic, social and political context, individuals will continue to play a part in policy on climate change. The remainder of this section considers the specific ways in which policies are now attempting to shape individual behaviour; first considering the fate of measures introduced prior to 2010.

4.2 Coalition policy measures

As outlined in Table One (p38), a great number of policies, bodies and programmes were introduced between 2000 and 2010. Before considering the new policies introduced since then, it is useful to review the current status of these measures. The contrast between pre- and post-2010 policy is particularly highlighted by the fate of certain institutional bodies. As noted in Section Three, the Labour Government created several new environmental institutions; both quasi-autonomous non-governmental organisations (QUANGOs) and governmental bodies, including DECC, the Office of Climate Change, the Committee on Climate Change and the Sustainable Development Commission (SDC), which was founded in 2000 and later expanded to provide independent scrutiny of Government environmental policy. In contrast, in 2010 the Coalition withdrew funding from the SDC and also abolished the Royal Commission on Environmental Pollution, a longstanding environmental advisory QUANGO. These controversial decisions were justified mainly on the grounds of cost-cutting, with Environment Minister Caroline Spellman saying, "*Reducing the deficit is the priority for the Government*" (Defra, 2010b). However, she also mentioned increasing accountability, and said,

"*I am determined to play the lead role in driving the sustainability agenda across the whole of government and I am not willing to delegate this responsibility to an external body*" (*ibid)*.

This latter idea contrasts with the Coalition's general emphasis on decentralisation.

Turning to the projects listed in Table One (p38), the Climate Challenge Fund, Community Energy Efficiency Fund, Environmental Action Fund and Community Renewables Initiative are now closed. The Every Action Counts project has ended and the website has been renamed and is run by a non-governmental organisation (NGO). The DirectGov environment pages are still accessible, but the Climate Challenge website and leaflet are no longer available online, and the Act on CO_2 website has been replaced by a Facebook page (currently dominated by "sceptics"). The associated television and press advertisements are no longer running. Green Communities is currently run as a website by the EST, but its support service has closed. The Sustainable Travel Towns test projects have also ended.

The Carbon Emissions Reduction Target scheme period ends in 2011 and the Community Energy Saving Programme scheme period ends in 2012. DECC will continue to fund a smaller Warm Front programme until 2013, when it will be replaced by the Green Deal, discussed below. Some concerns have been raised about this change; for example, NGO Age UK suggests that it might worsen fuel poverty (Age UK, 2010). Funding to the EST to provide energy advice is ongoing, but DECC's contribution may be halved from 2011[2]. This announcement, which has been confirmed by the EST but not by DECC, has caused considerable criticism; for example by environmental campaigners and MPs, who see it as a very damaging cut to the important advice work of the EST (Carrington, 2011). The money for the Low Carbon Communities Challenge and the Greener Living Fund has all been allocated, and the projects are ongoing.

As noted in Section Three, the Labour Government announced that it would require all households to have smart meters installed by 2020, and this policy has been continued by the Coalition Government. Energy companies will start fitting smart meters in customer homes from mid-2012, and it is now expected that the roll out to all UK households will be

[2] The press in January 2011 reported that the EST had confirmed that their DECC funding was to be halved in 2011. However, in February DECC denied that this had been finalised.

completed before the original date. This is a good example of a "nudge" policy; smart meters provide information to consumers, which is likely to have an impact on their behaviour. However, it is their choice whether to change their behaviour or not. The Government will also retain Energy Performance Certificates. Section Three also noted the policy of Feed-in Tariffs; this has also been continued since 2010, and a DECC news release in 2011 claimed that the scheme has been a "*huge success at stimulating green growth, driving innovation, creating jobs and cutting carbon*" (DECC, 2011b). More than 21,000 installations have been registered; the majority of these are domestic installations, including solar panels, wind turbines and microhydro plants.

However, the Spending Review committed government to save 10% of the costs of FiTs in 2014-15, and a review of the system was announced in February 2011 because DECC was concerned that large solar installations might receive too much of the available subsidy (DECC, 2011b). This has led to concerns that the Government is creating a climate of uncertainty that may damage the future of renewable energy (for example, Reuters, 2011). Porritt's recent report (2011) on the environmental performance of the Coalition was highly critical of these changes. Some sources suggested that this was an example of environmental policy occupying a low position on the political agenda; the Guardian asked "*Has he (Minister Chris Huhne) allowed this green policy to be hijacked by the Treasury on a cost-saving basis?"* (Irranca-Davis, 2011). However, FiTs are another example of a policy that does not represent an intervention or limiting of choice in individuals' lives, but rather a use of market mechanisms to encourage certain behaviours, in keeping with a "nudge" or "Big Society" ideology.

It has also been noted that the Labour Government announced a policy of promoting electric cars. This has been continued since 2010, and the Coalition's plan has two main elements: Plug-in car grants and Plugged-in Places pilot projects. Plug-in Car grants is a scheme launched in January 2011 to subsidise electric car purchases. However, the scheme only has guaranteed funding for one year; representing £43 million or about 8,600 cars. To provide some perspective on this, the Committee on Climate Change has a target of 1.7 million electric cars in use in the UK by 2020 (Committee on Climate Change, 2011); the scheme will subsidise only 0.5% of these cars. The new scheme also contrasts with the original £230 million scheme announced in March 2010 by the Labour Government. One business representative said that the new policy on electric

vehicles was "*too small and short-term*" to encourage investment (Jha, 2011). Given that all the eligible cars cost over £20,000, and the subsidy is capped at £5,000 per car, the cost to the consumer remains high.

The Plugged-In Places scheme offers matched funding to local consortia of businesses and public sector partners to support the installation of electric vehicle recharging infrastructure. From 2010 the Government has supported three projects in London, Milton Keynes and the North East which are installing recharging points and trialling innovative technologies, operating models, incentives and marketing strategies; this funding will continue until March 2013. In December 2010 funding was allocated to five additional Plugged-In Places projects in Northern Ireland, Scotland, Greater Manchester, the Midlands and the East of England. These are all pilot schemes, which will provide data about how drivers use and recharge their electric vehicles, which will feed into the design of a national system of recharging infrastructure (DfT, 2011a). However, the 2011 Budget included several measures to limit the cost of conventional vehicle fuel, which were critiqued by environmental NGOs (for example, Friends of the Earth, 2011a). Furthermore, Porritt's (2011) report suggests that the Coalition has not only failed to meet its commitment to limit rail fares, but has also, by removing the cap on fares, ensured that they will rise very sharply in future.

The Coalition has also introduced several new policies relating to individuals and climate change. The remainder of this section discusses four key approaches; the Green Deal; infrastructure measures; Community Energy Online; and exemplification measures.

The Green Deal

The Government is establishing a framework to enable private firms to offer consumers energy efficiency improvements to their homes with no up-front cost; the cost will be recouped through a charge in instalments on the consumers' energy bill. This is a market mechanism, so the detail of the final Green Deal products will be decided by private providers, and the first Green Deals are expected to appear in Autumn 2012. A second strand to this policy is to replace the current obligations on energy suppliers (the Carbon Emissions Reduction Target and the Community Energy Saving Programme, as outlined in Table One (p38)) with the new Energy Company Obligation, which will focus on those with hard-to-treat homes, the vulnerable and the fuel poor.

However, these changes have prompted some criticism; for example, prominent environmentalist Jonathan Porritt said in 2010:

> *"The housing retrofit story is also more vexed than it seems. The coalition government's pledge to establish a major new 'pay-as-you-save' retrofit programme (or Green Deal) is honoured, but won't come into being for at least another two years. In the meantime, the Warm Front programme (targeted on those most in need from a fuel poverty perspective) is being cut back...Crazy stuff –this is the one bit of the wider green economy agenda that has the potential to help create tens of thousands of jobs quite quickly"* (Porritt, 2010).

Criticism also came from a very different source, the Confederation of British Industry (CBI). Their 2011 report on the planned changes

> "*warns that the Government's Green Deal risks failing to attract the businesses it needs to deliver its flagship energy efficiency scheme unless it provides greater clarity on how it will be financed and promoted*" (CBI, 2011).

While it is too soon to assess the probable impact of the scheme, this highlights the fact that approaches based on the private sector do have pitfalls, as did the past Government's approaches that were largely based on the voluntary and public sector.

Infrastructure policies

The Government also introduced several infrastructure policies that may support low-carbon lifestyles: the establishment of a high-speed rail network, the cancellation of the third runway at Heathrow and the refusal of additional runways at Gatwick and Stansted. These are all long-term policies, so no impacts can yet be identified. Also, in January 2011 the Government published plans for a Local Sustainable Transport Fund, for which £560 million has been set aside in the four-year period to 2014-15. Local transport authorities in England will be invited to apply for funding to support sustainable travel measures; for example, promoting walking and cycling, improving road safety and improving access and mobility for local communities. The 2011 Transport White Paper emphasises the devolution of power to the local level and also states that;

> "*Bids from local transport authorities will be particularly welcome if they can demonstrate support from, and the involvement of, voluntary and community organisations and the private sector*" (DfT, 2011b:9).

Again, this is a long-term measure; it remains to be seen how this Big Society approach will play out in national transport policy.

Community Energy Online

In November 2010 DECC launched a new information website called Community Energy Online. It aims to be a "*one stop shop for communities interested in generating energy on a community scale*" (DECC, 2010). Launching the site, Climate Change Minister Greg Barker described community energy as a perfect expression of the transformative power of the Big Society (*ibid*). However, in July 2011, many of the site's pages contain only the words "content coming soon". This is in strong contrast with the Green Communities website run by the Energy Saving Trust (as part of the Green Communities project mentioned in Section Three), which offers a wide range of resources, including an "action planning tool" that generates a tailored plan for any community, including behavioural, efficiency and renewable generation options. The contrast in the content and accessibility of the two sites is clear in Figures Two and Three. (However, as Figure Three shows, the services associated with the EST website have recently been reduced due to lack of funding.)

Figure Two: screen capture of Green Communities website, June 2011, www.energysavingtrust.org.uk/cafe

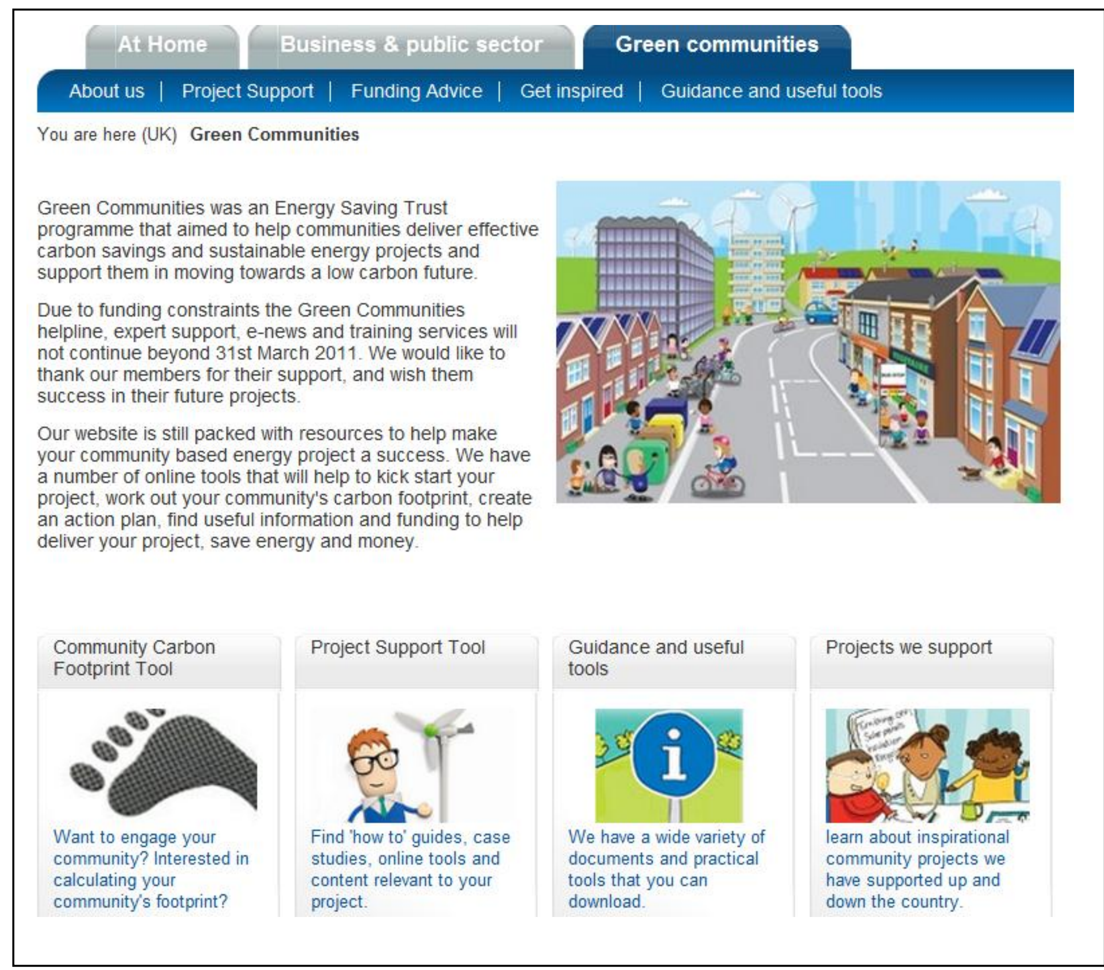
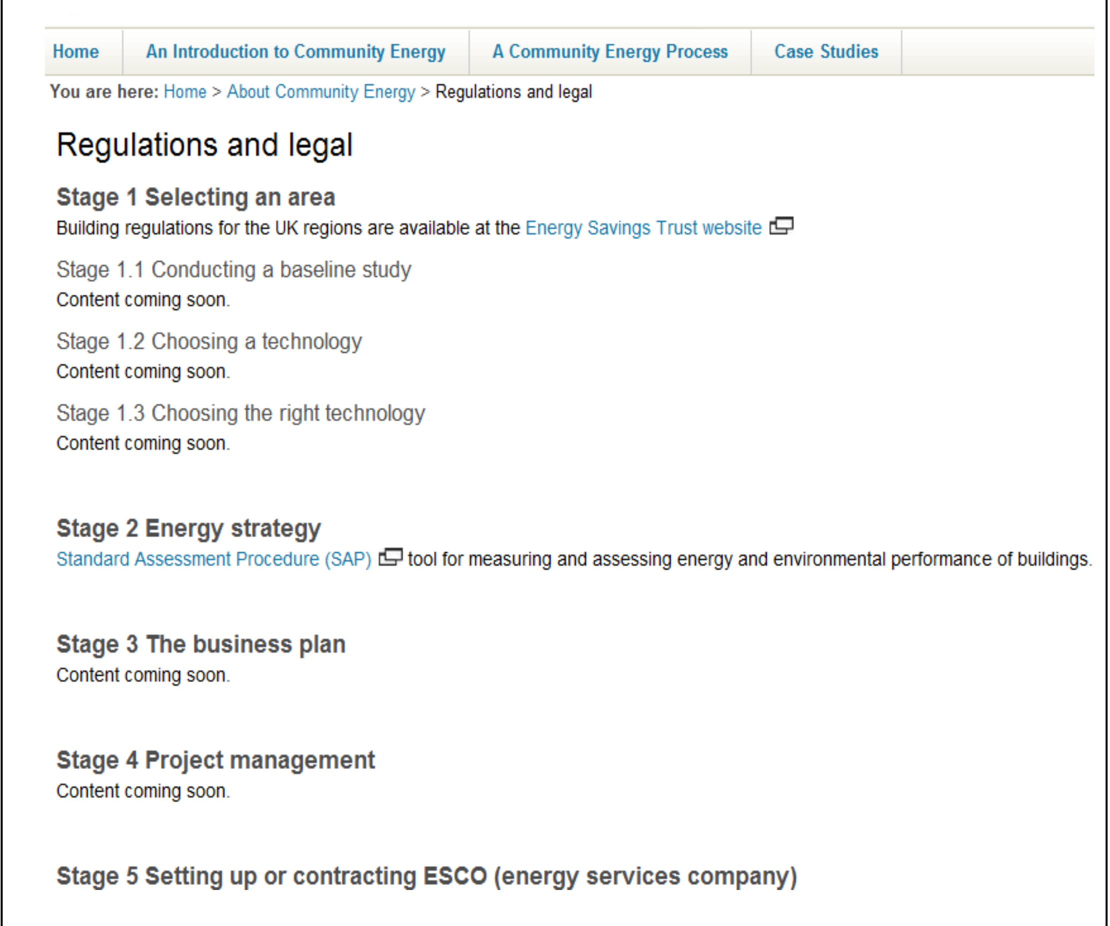


Figure Three: screen capture of Community Energy Online website in June 2011, http://ceo.decc.gov.uk



Despite the Coalition's emphasis on efficiency and transfer of functions away from Government, DECC here appears to be funding their own, lower-quality version of a successful NGO website. Furthermore, despite launching the site with a speech and press release in November 2010, they appear to have allocated insufficient resources to the project, so that seven months later it is not complete, and certainly not a "one-stop shop" for communities. If this is an example of the application of the "Big Society" concept to environmental policy, as Greg Barker suggested, and indicates the direction of future approaches, it may be expected that governmental funding for promoting sustainable lifestyles will be considerably lower than in the last decade. This would mean that the development of cost-effective and high-impact behaviour change policies would be especially important, in order to maximise the effect of the limited resources.

Exemplification

In May 2010, David Cameron committed central Government to cutting carbon emissions by 10% over the next twelve months, as part of the NGO-led 10:10 campaign, and as of December 2010 they appeared to be on track to achieve this (Government Data Online, 2010). Since August 2010, eighteen government headquarter buildings have been reporting real time energy consumption online and in October 2010 they ran an energy efficiency competition for one month. The aim was to cut energy use by as much as possible in October relative to September; the winning department achieved a 22% reduction. However, this policy has been criticised:

> "*Although the 10% target was welcomed by many in the Environment Movement at the time, the need to cut emissions so quickly meant diverting resources away from other sustainability projects, as well as undermining the hard-won mantra that investing in energy efficiency is always cost-effective. Many of the measures taken over the last year have not been*." (Porritt, 2011:43)

Such measures have been described as tokenistic (for example, by Labour candidate Alex Ross on his weblog (Ross, 2010)). However, the same criticism could equally be levelled at past Governments; in fact, the very concept of exemplification emphasises the visibility, rather than the impact, of measures taken. It could be argued that by signing up to a high profile NGO campaign, the Government made a reasonable effort to visibly exemplify sustainable behaviour. Alternatively, it could be argued that a Government may turn to high profile exemplification strategies in order to mask a lack of commitment to more substantive areas of policy. The implications of all these policies are considered in the next section.

5. Implications for this Study

The preceding discussion has shown how the involvement of individuals in environmental policies began with information-based mass communications in the 1990s, which were refined and expanded to produce a range of well-resourced engagement campaigns in the first decade of the 21st Century. However, these were increasingly complemented by measures to encourage, enable and exemplify, in accordance with Defra's model. They

also became increasingly sophisticated in their use of segmentation (dividing the audience into groups) and tailoring, with the more recent measures making use of existing networks and trusted intermediaries. However, early indications are that the new Government elected in 2010 may take a different approach, with little or no mass communications work, but rather an approach based on infrastructural, technological and economic measures. The one communications measure identified here; the Community Energy Online website seems more aimed at enabling people who are already engaged to act, than at engaging new audiences. This section considers the implications of the changes discussed above, and their relevance to this study.

While contexts and policy approaches have changed considerably over recent decades, some challenges stand out as recurring issues for policy. A key challenge for any engagement campaign is the value-action gap; even if measures do succeed in changing attitudes, actions will not necessarily follow (as discovered by the early communication campaigns). A related challenge involves moving people from small, low-effort actions to larger and higher-impact ones; while some measures have succeeded in promoting simple actions such as recycling, people may not progress any further. Some have critiqued past measures as falsely assuming that there is an "escalator" that automatically moves people from small to large actions, once they begin to take action (World Wildlife Fund (WWF), 2008). This relates to a third challenge; addressing the most high-impact, and often the most controversial areas of behaviour. As Carter and Ockwell (2007) note, Governments frequently shy away from tackling these issues; the interest shown by all political parties in electric cars may indicate an unwillingness to commit to the greater challenge of reducing car use. While the Coalition's decision to limit runway building seems a step away from "predict and provide" approaches to aviation, any significant attempts to change transport behaviour are notoriously controversial (Carter and Ockwell, 2007).

Another important challenge revealed by the discussion above is engaging non-engaged groups. The policy history highlights the fact that behaviour can be changed through measures that do not involve engagement, but rather promote sustainable behaviour using non-environmental motivations; for example Feed in Tariffs and the Green Deal use economic motivations. However, as discussed in Section Three, past administrations have found engagement valuable in building support for wider Government action on the environment. The concepts of spillover and rebound are also important here; the evidence

of past interventions suggests that without engagement, changes are unlikely to spread into new areas of behaviour, and the money saved may be spent on other resource-intensive or unsustainable behaviours. For these reasons, it is important that policy is based on the best evidence on deliberately pro-environmental behaviour. However, it is also be useful to be alert to the presence and role of other motives; evaluations of interventions suggest that multiple motives may exist simultaneously, and further understanding of how they interact could support effective programmes in future.

Another recurring problem revealed by this history is measuring effectiveness and understanding how and why behaviour is changing. In recent decades, the importance of evaluating interventions has been increasingly recognised, and in the current generation of engagement projects efforts have been made to embed evaluation in each intervention. Over £1 million is currently being spent by Government-funded research councils to evaluate the Low Carbon Communities programme (ESRC, 2010a). Evaluations of past projects have helped to improve policy, and move it from the information-deficit campaigns of the 1990s to the more community-based and tailored programmes of recent years. However, the links between research and interventions could be further improved, to the benefit of both fields. A key problem is that few interventions have monitored the long-term durability of any changes achieved, perhaps due to cost constraints and political short-termism. However, this is critical to any significant impact on greenhouse gas emissions. Furthermore, evaluations have often focussed on broad scale numerical data, such as numbers of people involved, or before-and-after opinion surveys. While these are important in gauging impact, they will not always reveal the true reasons for change, or factors obstructing it; these may be better assessed through more in-depth or qualitative methods.

This discussion of past policy also raises important points about the political realities of addressing climate change. It is clear that the design of policy measures needs to consider not only impacts on emissions, but also economic costs and benefits, the legal context, and likely responses from the public, businesses, and other stakeholders. Too often, the most effective policy options will be difficult to implement due to cost, lack of political will, or opposition (for example, Ockwell *et al*, 2009). Interdepartmental conflicts may obstruct effective policy-making (Environmental Audit Committee, 2007); Environment or Climate Change Ministers may have interests that compete with those of other departments, and in

the balancing of priorities, the environment may not always come first. Such considerations need to be taken into account when researchers are making policy recommendations. In particular, the current context of economic constraint and the less openly interventionist ideology of the Big Society and Nudge approaches, will strongly shape the impact of new knowledge.

This discussion raises some important issues for the development of Research Questions. First, it is clear that individual behaviour change warrants further research; as, in various forms, it continues to play an important part in environmental policy, but remains relatively poorly understood. Key questions concern the motivations and barriers to action; while some areas are relatively well-documented, such as the role of information, past evaluations suggest that a range of other factors may be important and have not yet been fully explored. These include habit, the role of communities and peer-to-peer interaction, and the broader impacts of the contexts within which behaviour occurs. An inductive approach, not based on a priori assumptions about behavioural influences, could help reveal such processes and factors that have previously been neglected. In particular, research should be attentive to structural factors such as infrastructures and incentives, especially as these may be playing an increasingly important part in policy approaches under the Coalition Government.

Evaluation of past policies also highlights the importance of "joined up packages" of measures that address multiple aspects of the complex behavioural system. To support the design of such packages, it is arguable that research needs to take a holistic view of behaviour, examining all the factors that affect it and their relations over time. In the past, policy assessments have rarely examined the impacts of interventions on specific individuals over time, generally focussing instead on aggregate data showing averaged values. Further knowledge of how and why behaviour changes, and why such changes may endure or revert, could contribute to a foundation for more effective policy-making. To do this, research approaches would need to include a long-term temporal dimension; either through a longitudinal or retrospective methodological design.

The conclusion drawn from this discussion is that individual behavioural change is an important topic for research in the field of climate change policy. To build on existing knowledge, particularly useful approaches to policy-relevant research would be in-depth

and individual-scale; holistic and contextual; and temporal. They would address the question of how and why behaviour changes over time, but rather than just focussing on informational factors, would pay attention to the roles of habits, social interaction and communities, multiple motivations and priorities and structural factors; adopting an inductive approach so as to generate innovative understandings. Finally, as noted in the introduction, all the policy approaches discussed in this history have been based on economic or social-psychological understandings of human behaviour. However, many issues raised in this chapter; especially concerning habits, social interaction, communities, contexts and structural factors, are echoed by the emerging literature on Social Practice Theory, which is increasingly challenging conventional approaches to policy and research. Two contrasting approaches to sustainable behaviour; social-psychological and practice-based, are explored in detail in the next two chapters. In particular, Chapter Five will show how practice-based approaches could help to address some of the policy challenges raised in this chapter.

6. Chapter Summary

This chapter has outlined the key developments in policy relating to individual sustainable behaviour over recent decades. Behaviour change efforts began with information-based mass communications in the 1990s, which were refined to produce the more sophisticated engagement campaigns of 2000 to 2010. These measures make use of existing networks, communities and trusted intermediaries, and attempt to deliver joined-up packages of support. However, early indications are that the new Government elected in 2010 may take a different approach, with little or no mass communications work, but rather an approach based on infrastructural, technological and economic measures. The chapter has concluded by drawing out implications for this study, including the need for an in-depth and individual-scale; inductive, holistic and contextual; and temporal approach to research on how and why behaviour changes in both the short and long term. The next two chapters review the relevant literature, drawing on two distinct fields; the first of which is known as the individualistic, cognitive, or social-psychological approach.

Chapter Three

Social-psychological Approaches to Environmental Behaviour

"The answer to the questions: 'Why do people act environmentally and what are the barriers to pro-environmental behavior?' is extremely complex… Although many hundreds of studies have been done, no definitive answers have been found."

(Kollmuss and Agyeman, 2002:240)

1. Introduction

There are two main approaches to understanding individual action with regard to the environment: social-psychological and sociological. Since this study aims to take a holistic approach to action on climate change, both of these fields of work need to be considered, and used to guide the research design. This chapter address social-psychological approaches, which have dominated research and policy for several decades. In these approaches, the focus has conventionally been on the individual, and action is conceptualised as "behaviour", which is the result of the individual's cognitive processes. However, this chapter will show that these approaches have recently begun to consider non-conscious processes such as habit, and to expand their focus beyond the individual to their social context; going some way towards bridging the gap with sociological approaches.

Even within the field of individual-focussed approaches, environmental behaviour has been understood in a variety of ways. Section Two discusses definitions of the term "environmental behaviour". Section Three considers the history of work in this field, including the dominant strand of approaches, which is model-based, and a related but slightly different strand of work, involving Significant Life Experience approaches. Section Four provides an overview of the factors that have been investigated as potentially affecting behaviour and Section Five considers segmentation approaches, which aim to describe how behaviour varies across the population. It is clear that there are certain areas that merit further exploration, and lessons that can be drawn from the literature, so Section Six provides a concluding discussion, examining the implications of the review for

the development of research questions and methods. Section Seven provides a chapter summary.

2. What is Environmental Behaviour?

Environmental behaviour has been a major issue for the social and psychological sciences since the 1970s. These disciplines have attempted to understand the nature of this behaviour in order to inform policy, to promote certain behaviours, and occasionally to profit from them. However, environmental behaviour is a contentious concept, and can be understood as comprising many dimensions (Blake *et al*, 1997). It should be noted that authors use a range of terms, with different authors frequently using a term in different ways. On the most basic level, environmental behaviour can be understood as referring to all behaviours that have an impact on the environment, with pro-environmental behaviour referring to that which involves minimising environmental impacts.

However, most authors distinguish between conscious or deliberate and unconscious or non-deliberate pro-environmental behaviour. For example, Stern (2000) divides pro-environmental behaviour into that which is “intent-oriented”, and related to people’s values, and that which is “impact-oriented”, which can be any behaviour that has an environmentally-positive outcome, whether deliberate or not. Kollmuss and Agyeman, in an influential article (2002), explain that by “pro-environmental behaviour” they mean behaviour that *consciously* seeks to minimise the negative impact of one’s actions on the natural and built world; similarly, Nye and Burgess (2008) use the term “environmentally responsible behaviour” to refer to this deliberate action. As will be shown by this literature review, most past work has focussed on deliberately pro-environmental behaviour. This distinction, and its implications for this research, are discussed in Section Six.

Beyond this dichotomy, environmental behaviour can also take a wide range of forms. Pickerill (2003) argues that it is important to examine all types of behaviour - personal, cultural and political - while Corning and Myers (2002) stress the importance of considering various forms of action, from low-risk, institutional forms, through to high-risk unconventional forms, so as not to neglect or devalue particular types of behaviour. A distinction is often made between “lifestyle” or “practical actions” and “political actions”.

For example, data from the poll company MORI from 1998 distinguishes "Political environmental activism" and "consumer environmental activism". Political environmental activism here includes supporting an environmental organisation, voting based on environmental policies and urging the Government to make environmental policy changes, while consumer environmental activism includes recycling, buying a green product or avoiding a product for environmental reasons (MORI, 1998). Similarly, in Kitchell *et al*'s (2000) framework, "citizen activists" are distinguished from "cultural reformers"; the latter are focused less on political activism and more on their personal lifestyles. Blake *et al* (1997) suggest that practical action generally costs little, requiring relatively minor changes to individual behaviour patterns, while activity aimed at influencing public policy or corporate behaviour can be costly in terms of time and money, and has social-scale rather than personal benefits.

Hunter *et al* (2004) use a slightly different terms for the lifestyle/political dichotomy; they distinguish "private" pro-environment behaviours (for example recycling), and community/society-oriented "public" pro-environment behaviours (for example protests). While this practical – political distinction is very widespread, some other broad classifications exist. Stern (2000) identified two kinds of environmental action: actions that are performed by the person directly, and actions that are indirect, such as donating money to environmental organisations. Bögeholz (2006) uses similar terminology, but with slightly different meanings; she describes direct action as occurring when the person performs a behaviour themselves, and "indirect action" as including motivating others to perform an action. However, the practical - political distinction seems the most widespread conceptualisation.

Within political action, different subsets of action can be identified; for example, Diani and Donati (1999) distinguish between disruptive and confrontational tactics and between conventional and traditional lobbying tactics. Corning and Myers (2002) define some forms of political action as "Conventional Activism", including participating in the electoral process, while others are defined as "High-Risk Activism", including physical confrontations with police officers, damaging public property or risking serious injury. Oliver and Marwell (1992) distinguish "giving money" from "giving time", with the latter requiring more commitment.

Within practical action, behaviours are often simply differentiated around specific activities, such as recycling, saving energy or saving water (Barr and Gilg, 2006), and this approach underlies the UK Sustainable Development Strategy (HM Government, 2005). In their key 2008 strategy document for sustainable behaviour, outlined in Chapter Two, Defra group their headline behaviour goals into five groups: personal transport; homes (waste); homes (energy); homes (water); and eco-products. However, Barr and Gilg (2006) challenge this type of approach, suggesting that people actually construct environmental action through everyday practices such as cooking and cleaning, which often involve several of Defra's categories. Sociologists have also suggested alternative ways of understanding behaviours, based around routines and tasks rather than abstract concepts such as "energy"; these ideas are discussed in Chapter Four. Having outlined dominant understandings of the term "environmental behaviour", it is useful to consider the historical development of theory in this area.

3. A Brief History of Social-psychological Approaches to Environmental Behaviour

For many decades, the study of environmental behaviour has been dominated by a strand of work focusing on the development of models to explain individual behaviour. These models are generally founded on the premise that attitude is a key determinant of behaviour, and that behaviour is a matter of individual choice. For this reason, they are sometimes known as "attitude-behaviour-choice" or ABC models (Shove, 2010). A comprehensive discussion of all these models is beyond the scope of this chapter, but this section summarises the key developments in this approach, to provide a context to this study.

The earliest models of environmental behaviour are known as rational choice models. These assume that people make decisions by calculating the costs and benefits of various courses of action and choosing the option that offers the best overall result, based on self-interest (Jackson, 2005). The main factor seen as determining behaviour is information; people must have sufficient knowledge to be able to make an informed choice about the available options. However, these approaches have been extensively criticised as overemphasising rational deliberation and self-interest and taking a simplistic view of behaviour (*ibid*), and these critiques have led to the development of more nuanced and

sophisticated approaches. An influential early development was Fishbein and Ajzen's (1975) "Theory of Reasoned Action", which suggests that a person's attitudes predict their behavioural intentions, but these do not always translate perfectly into actions. Ajzen's (1991) "Theory of Planned Behaviour" extended the Theory of Reasoned Action to incorporate the influence of people's perceptions about their own control over the situation.

Another group of models builds on these theories, but incorporates additional factors including morality, values and norms. For example, Cialdini *et al*'s (1991) Focus Theory of Normative Conduct suggests that people are constantly influenced by social norms that dictate whether actions are acceptable or not. Stern *et al*'s (1999) influential Value-Belief-Norm theory describes the influence of value sets and beliefs on the emergence of a personal norm to act in a certain way. Incorporating moral beliefs into behavioural models appears to improve their predictive power; however, these models still neglect aspects of behaviour such as habits and the social and interpersonal factors that shape and constrain people's preferences (Jackson, 2005). These problems with model-based approaches are a key reason for the emergence of the social approaches described in the following chapter.

However, it is clear that model-based approaches have developed considerably since the early rational-choice models. Within this field, it is now accepted that making sense of behaviour requires a multi-dimensional model; for example, Stern (2005) has noted that a useful model has to account for: 1) motivations, attitudes and values; 2) contextual or situational factors; 3) social influences; 4) personal capabilities; and 5) habits. Despite some efforts to create such holistic and integrated models, most models in the past have tended to either describe internal factors well, but neglect situational variables, or vice versa (McFarlane and Boxall, 2003). McFarlane and Boxall agree with Stern that the key task for current research in this area is to develop more complete models that consider the interplay between social psychological variables and macro-factors, such as the environmental movement, in shaping engagement.

It is also worth noting that these model-based approaches do not encompass all the social-psychological work on environmental behaviour. A parallel strand of work, which draws on similar assumptions but in a different form, concerns "significant life experiences". This field of research also focuses on changes in individual lives, but examines specifically the

impact of life experiences on environmental attitudes and behaviour. This work comes mainly from the environmental education literature, and gained particular attention in the 1990s. Key factors considered include positive and negative experiences of nature, role models, environmental organisations, education, books and media and job experience (Chawla, 1998). Chawla offers a summary of the Significant Life Experience literature: "*One conclusive finding on responsible environmental behaviour is that there is no single all-potent experience that produces environmentally informed and active citizens, but many together*" (Chawla, 1998:381).

It is interesting to note that this concurs with the conclusion of model-builders such as Stern; simplistic approaches that emphasise just one or two classes of variables are not adequate to model the complex system of human behaviour. The latest thinking across the field seems to be concerned with the development of more holistic and integrative frameworks. The implications of this shift are discussed in Section Six. Having outlined the key approaches in this field, it is now possible to focus on the specific variables that may affect environmental behaviour.

4. What Factors affect Environmental Behaviour?

4.1 Knowledge and attitudes

According to the rational choice models mentioned above, the key factor determining behaviour is information. Some evidence suggests a link between environmental knowledge and pro-environmental behaviour; for example, Bord *et al* (1998) found that knowledge of climate change correlates with support for policy measures to address it. Similarly, Rowlands *et al* (2000) found a significant correlation between certainty that climate change would occur and actions to reduce greenhouse gas emissions, and Carter (2000) found that participants implemented many personal behaviour changes after participation in an education programme that increased their environmental knowledge. Kearney (1994:41) asserts that without "*adequate knowledge an individual may not be confident enough to act or may not know how to achieve a goal*". However, some evidence suggests information is not the crucial factor determining environmental behaviour. For example, Dunlap (1998), found the link between information and action to

be tenuous, and in Grob's (1995) study, no effects on environmental behaviour stemming from factual knowledge were found. Therefore, many researchers have investigated other factors; prime among these has been attitude.

Environmental attitude is defined as '*'the collection of beliefs, affect, and behavioural intentions a person holds regarding environmentally related activities or issues''* (Schultz *et al*., 2004:31). Schultz (2000) distinguishes three basic types of attitude: egoistic, altruistic and biospheric concern. Each type of concern refers to a potential beneficiary of a more sustainable lifestyle; oneself, others or the biosphere. However, concepts and measures around environmental attitude are controversial and diverse (Dunlap and Van Liere, 1981). There is also a deeper debate about the nature of attitudes, with some, such as McNaughten and Urry (1998) arguing that they are contextual and culturally-constructed, as will be discussed in Chapter Four.

The exact nature and strength of the attitude-behaviour relationship has been the focus of intense debate over several decades. In support of the relationship, evidence suggests environmental attitude is related to environmental buying (Schlegelmilch *et al*, 1996), textile disposition method (Koch and Domina, 1997), environmental activism (Tarrant and Cordell, 1997), energy consumption (Brandon and Lewis, 1999), support for environmental management strategies (Poortinga *et al*, 2002; Rauwald and Moore, 2002) and environmental behaviour more generally (for example, Kaiser *et al*, 1996, Grob, 1995, Chan, 1998). However, many other studies have found only moderate, or qualified links between environmental attitudes and behaviour (for example Suchard and Polonsky, 1991; Nelissen and Scheepers, 1992, Hines *et al*; 1986/87, Cottrell, 2003, Scott and Willits (1994). As noted in Chapter Two, this phenomenon is known as the value-action gap (Blake, 1999), and has been a major issue for policy aimed at promoting pro-environmental behaviour.

Numerous theoretical frameworks have been employed to explain this gap. To an extent, the development of increasingly sophisticated models has helped to explain it; for example, Ajzen's (1991) Theory of Planned Behaviour (mentioned above) includes social norms and personal agency as mediators between attitudes and behaviours. Oskamp and Schulz (1996) suggest that effort is a strong moderator of the attitude-behaviour relationship, while Arbuthnot and Lingg (1975) suggest that knowledge may act as a mediating variable between attitude and behaviour. An alternative explanation is that "strong" attitudes,

which are developed through a thoughtful process and are consistent with emotions and values, are more likely to predict behaviour than "weak" ones (Kraus 1995; Petty and Krosnick 1995). Another potential explanation involves the distinction between specific and general attitudes/behaviours. As Scott argues,

> '*Reviews of the volume of work dedicated to assessing linkages between (general) environmental attitudes and proenvironmental behaviours have generally concluded that such relationships are rather tenuous'* (Scott, 1999:271).

However, more specific attitudes have often shown greater predictive value for the related environmental behaviours. For example, attitudes that are specifically related to the behaviour in question are more significant than general environmental attitudes for recycling (Schulz *et al*, 1995, Oskamp *et al*, 1991), green buying (Mainieri *et al* (1997) and energy actions (Rowlands *et al*, 2000).

Despite these attempts to explain the value-action gap, Kollmuss and Agyman (2002) conclude that no definitive explanation has yet been found. Some believe the problem may be a conceptual/methodological one; Gough (2002) argues that a problem with Kollmuss and Agyeman's work lies in their failure to account adequately for the role of the researcher in determining criteria for pro-environmental behaviour. Courtenay-Hall and Rogers (2002:283) highlight the conceptual, epistemological, methodological and practical 'gaps' that seem to be reproduced in successive attempts to understand the value-action gap, including the "*positivistic residues still present in the enterprise*". Furthermore, a study by Costarelli and Colloca (2004) suggests that the weak predictive power of environmental attitudes may be rooted in deficiencies in the study of their structure. So it is not only the attitude-behaviour relationship and the value-action gap which remain controversial; this debate touches on much deeper theoretical issues, which have yet to be resolved. Some implications of this are discussed further in Section Six.

A further challenge to conventional understandings comes from researchers who question the simplistic view that attitude affects behaviour in a one-way causal relationship, drawing on ideas from self-perception theory (for example, Bem, 1967). Behaviour can lead to a change in attitudes; for example, in a study of recycling, people's general environmental concern and specific attitudes regarding recycling became more favourable over time as

they continued to recycle (Vining and Ebreo, 1992). This has important implications for policy, because it suggests that behaviours can be changed without necessarily changing attitudes first. Moreover, these specific behaviour changes could be valuable in changing people's environmental behaviours more generally; once people begin to take pro-environmental action, for any reason, they may infer from their own actions that they must hold pro-environmental attitudes, and this could even "spill over" into new areas of behaviour (Jackson, 2005). In theoretical terms, this is a radical concept that challenges conventional views of the attitude-behaviour relationship as a one-way process. However, relatively little work has been conducted within social-psychological fields concerning these effects, perhaps partly because most studies do not monitor behaviour and attitudes over long time scales. Despite academic controversy, the influence of attitudes upon action remains a basic assumption of policy-making.

4.2 Emotion, values and identity

The controversy over attitudes has led to an exploration of other factors that may affect behaviour, including emotion, values and identity. There is some evidence for the importance of emotion and personal values in the field of environmental behaviour (for example, Grob, 1995; Pooley and O'Connor, 2000). Kals *et al* (1999) found that "emotional affinity", "indignation" and "interest in nature" are powerful factors, and together explain up to 47% of variance in behaviour. Conversely, Connell *et al* found that in their 1999 study, feelings of frustration and cynicism were linked to an ambivalent attitude towards environmental issues and "action paralysis". Environmentalists are more likely to be altruists (Karp, 1996) and to hold non-materialist values (Gilg *et al*, 2005), and ecocentric and biospheric values are linked with green consumption (Chan, 2001; Roberts, 1996), buying organic food (Makatouni (2002) and adopting green electricity (Clarke *et al*, 2003). Van Liere and Dunlap (1980) and Johnson *et al* (2004) found evidence that left/liberal views are associated with environmental concern.

Place identity has been found to be significant in shaping environmental behaviour in several studies. For example; Carrus *et al* (2005) found a positive role for regional identity in predicting support for protected areas in Italy. Drawing on a study of two neighbourhoods in Surrey, Uzzell *et al* (2002) suggest an important relationship between identity (especially place identification) and sustainable behaviour (Uzell *et al*, 2002). In a

study in a rural community in Norway, local attitudes toward a proposal of a major hydropower development, which would cause major environmental impacts, were examined. The results showed that place attachment explained more of the variance in attitudes than the sociodemographic variables all together (Vorkinn and Riese, 2001). However, identity has not so far been widely incorporated into behavioural models.

4.3 Morality, responsibility and agency

Many empirical studies stress the importance of social norms and morality for behaviours such as energy conservation (Black *et al* 1985), recycling (Guagnano *et al* 1995), travel mode choice (Hunecke *et al* 2001), pro-environmental buying (Thøgersen, 1999) and general pro-environmental behaviour (Hines *et al*. 1986/87). Norms may arise from an awareness of the consequences of one's behaviour, combined with an ability and willingness to take responsibility for those consequences (Schwartz, 1977), and fear of being stigmatised or excluded is a primary motive for obeying social norms (Bamberg and Moser, 2007). In the field of pro-environmental behaviour an awareness of and knowledge about environmental problems are probably important preconditions for developing moral norms (Bamberg and Moser, 2007). However, feelings of moral obligation can be decreased by beliefs about where responsibility lies. Bickerstaff (2004) found a widespread belief that governments and businesses, not individuals, are the main bearers of responsibility for air pollution and Barr *et al* (2003) found similar beliefs regarding recycling. Bickerstaff and Walker (2002) identify a range of "vocabularies of motive" or discourses, which are used to move responsibility away from the individual and onto others, and thus negate the need for individual action.

The related concept of agency refers to the extent to which people believe they have the capacity to bring about change, and evidence suggests it is strongly linked to environmental behaviour. For example, it is a key element of Ajzen's influential Theory of Planned Behaviour, mentioned above. Studies have shown that agency reflects power, status and alienation, and exclusion lowers agency (Bickerstaff, 2004). Agency may be a precondition for a sense of responsibility to act (Eden, 1993).

4.4 Experience

"Experience" refers to a group of variables that are rarely mentioned within modelling approaches, but are central to Significant Life Experience approaches. Chawla (1998) conducted a review of this literature, and suggests that in all the research considered, similar influences recur. These are: positive experiences in nature, adult role models, environmental organisations, education, experience of environmental degradation, books and other media and job experience. Corcoran (1999) confirms the overwhelming importance of experience of the outdoors when young, and in a study by Kals *et al* (1999), 39% of emotional affinity toward nature could be traced back to experiences in natural environments. Chawla (1998) suggests that the same influences apply regardless of the environmental issue concerned. However, not all the evidence is so clear; for example, Eagles and Demare (1999) report on one particular programme that implemented experiential measures that, based on these theories, would have been expected to generate attitudinal change, but did not produce any measurable differences. The role of different forms of experience, and their lasting impacts, remains relatively little understood.

4.5 Social context and structures

In recent years, model-based approaches have begun to pay attention to the impacts on behaviour of social context, and of the broader environments in which people live. A study by Olli *et al* (2001) found that social context was the only variable that significantly and consistently affected environmental behaviours. Similarly, Hormuth (1999) found that physical settings and social structures that allowed for social exchange and the establishment of social norms were better predictors of recycling compliance than individual environmental attitudes. On a larger scale, Dalton (2005) showed that that the combination of social and political conditions in advanced industrial democracies is a strong predictor of environmental group membership levels.

A particularly clear example of the impacts of social context is provided by Donald (1997), who Investigated volunteers in an environmental stewardship group in Toronto. The active members of the group were not substantially different from the inactive group upon first joining, but differences between the groups developed *after* joining. This suggests that

organisational and external factors, rather than any personal factors, may be the most important influences on environmental behaviour. However, some research methods (for example surveys) often fail to account for the social context within which individuals express environmental concerns and behaviours (Olli *et al*, 2001). Stern (2005:10785) concludes that "*interventions in the context are more effective than targeting attitudes or beliefs*"; this has important policy implications, and would challenge the efficacy of the engagement campaigns described in Chapter Two. Despite evidence that social factors are important in shaping environmental behaviour, relatively few models have incorporated such processes; perhaps because these models are generally centred on the individual (Shove, 2010), and because context is a broad concept that is hard to express as a numerical variable.

4.6 Overview of factors affecting behaviour

As noted in Section Two, current thinking in the field is that many variables, on various scales, need to be taken into account in any explanation of environmental behaviour. This section has outlined the key factors that have been explored by social-psychological approaches, and highlighted the fact that some factors, notably social and contextual factors, are relatively poorly-understood within this field. Another area which has been little studied within this field is habit; much behaviour involves very little conscious deliberation, but a considerable reliance on routines and automatic responses (Jackson, 2005). This can lead to behavioural "lock-in", and is a particular problem for policy on environmental behaviour, as many of the key behaviours are of a routine nature (*ibid*). The neglect of social and habitual aspects of behaviour may be because they are fundamentally difficult to encompass within an understanding of behaviour that is individualistic and tends to view behaviour as a one-off event, not a repeated process. These challenges are addressed by the social approaches discussed in Chapter Four.

While an important strand of social-psychological research has aimed to identify and explore these factors affecting environmental behaviour, another strand has focussed on the related question of how it varies across the population, and what variables can be used to classify individuals and predict their behaviour. This is of particular importance to policy because such "segmentation" is key to the design of interventions that are tailored to specific audiences; an important aspect of the design of policy to promote sustainable

behaviour (as discussed in Chapter Two). The next section examines the various approaches to segmentation that have been employed.

5. Segmentation Approaches

A key question for social-psychological research in this field concerns what factors can best be used to segment the population in order to distinguish different forms and levels of environmental behaviour. Segmentation means defining meaningful sub-groups of individuals or objects and reducing the number of entities being dealt with into a manageable number of groups that are mutually exclusive and share well defined characteristics (Anable, 2005). This can be useful in policymaking:

> "*One key benefit identified in using a segmentation model is that it assists tailoring interventions for specific groups. The likely issues and opportunities, based on our understanding of each segment's attitudes, barriers, motivations and current behaviours, can be identified*" (Rogerson *et al*, 2010:23).

One basic form of segmentation involves using pre-existing socio-demographic groups and variables, but other approaches involve values, behaviours, or a combination of all three.

5.1 Socio-demographic segmentation

Since the 1970s, a large body of research has examined the role of socio-demographic characteristics in predicting environmental attitudes and behaviour. Some of the most important variables are considered in this section.

Socio-economic group

Diamantopolous *et al*'s (2003) review found that half the studies that have explored the association between social class and environmental attitudes found significant positive relationships (and the majority of studies failing to establish significant linkages also found trends in this direction). One explanation for this trend, drawing on Maslow's (1943) "hierarchy of needs", suggests excluded people have immediate problems, so ignore distant, long-term issues. An alternative idea is proposed by Burningham and Thrush

(2001), who found that deprived communities were more concerned with local than global environmental issues, and largely unfamiliar with the language of environmentalism; meanwhile, their pro-environmental behaviour was low due to cost and lack of information.

Gender

Reviews by Zelezny *et al* (2000) and Diamantopoulos *et al* (2003) found that women report stronger environmental attitudes and behaviours than men. However, men tend to have better knowledge about environmental issues (Diamantopoulos *et al*, 2003) and be more involved in political environmental actions, while women are more involved in household-oriented environmental behaviours (Hunter *et al*,2004), as well as volunteering and donating to environmental causes (Caiazza and Barrett (2003). It has been suggested that females have higher levels of socialisation to be "other-oriented" and socially- responsible than males (Zelezny *et al*, 2000), which might explain their higher levels of pro-environmental behaviour. Personal constraints that present barriers to participation, such as the "double day" of paid and domestic work, may limit their political action (McAdam 1986). However, because many environmentally-friendly behaviours can be undertaken within domestic routines, this may not constrain their practical action (Tindall *et al*, 2003).

Ethnicity

Evidence around ethnicity is mixed; for example, studies by Parker and McDonough (1999) (in the US) and Wandersman *et al* (in the US and Israel) found few differences in environmental behaviour or participation in neighbourhood organisations across ethnic groups. However, in an American study by Johnson *et al* (2004) black people and foreign-born Latinos appeared less likely than white people to hold pro-environmental attitudes. Taylor (1993) argues that, historically, the British environmental movement has been devoid of minority participation (and some organisations may even have been unenthusiastic about minority involvement), but this is changing slowly, with the emergence of ethnic minority environmental groups, such as the Black Environment Network.

Age

Some researchers have found age to be a consistent predictor of environmental concern, with younger people more environmentally concerned than older people (Buttel, 1979, Van

Liere and Dunlap, 1980). However, Diamantopoulos *et al*'s (2003) review, suggests that most studies have not found significant relationships. The disparity may arise from the exact concept under consideration; while young people may be more environmentally-friendly in their intended behaviour (for example, Jackson, 1983; Zeidner and Shechter, 1988), older people seem to display higher levels of actual pro-environmental behaviour (for example, Van Liere and Dunlap, 1980; Schahn and Holzer, 1990; Vining and Ebreo, 1990; Scott and Willits, 1994). This may be due to a lack of resources among younger people. If young people have greater levels of concern, this may be because ageing can cause individuals to become more cautious and conservative (Cutler and Kaufman, 1975) or because of generational differences in experience (Buttel, 1979). However, while Defra recognises that *"motivators and barriers…may change over time according to life stage and other individual circumstances*" (2008a:7), there have been few studies that have observed such changes in the long-term.

Education

The better-educated tend to hold more pro-environmental attitudes and perform more pro-environmental behaviours, possibly reflecting the fact that ''*the very nature of ecology with its complex interactions between organisms and environment serves to make its subject matter difficult to understand and assimilate''* (Maloney and Ward, 1973:585). More highly-educated people may understand the issues involved more fully and, hence, be more concerned about environmental quality and more motivated to participate in environmentally responsible behaviours (Diamantopoulos *et al*, 2003). However, socio-economic factors may underlie the apparent educational differences.

Despite several decades of study, there is very little agreement over which socio-demographic factors are consistently important. For example, Johnson *et al* (2004) support the role of gender and age; Thompson and Gasteiger (1985) list income and gender; and Wall (1995) lists education and age. Furthermore, such variables explain only modest levels of variance; seldom over 10% (Jones and Dunlap, 1992; Buttel, 1987). Diamantopoulos *et al* (2003) also highlight the fact that explanatory power varies according to the attitude/behaviour variable considered; while their review suggested that environmental attitudes were affected by gender, education, and social class, none of these variables affected environmental knowledge and they had little connection with behaviour. The authors suggest that now that environmental concern is a mainstream norm, socio-

demographic distinctions in attitudes and behaviours may have become less clear. Due to these issues, there has been a recent move within policy and research away from purely socio-demographic segmentation and towards more sophisticated approaches, based on values and attitudes, or on actual behaviour, or a combination of variables.

5.2 Value-based and behaviour-based segmentation

A variety of value-based segmentation approaches have been suggested by researchers. For example, Inglehart's influential theory (1977) suggests that people can be characterised as either Postmaterialist, Materialist or mixed in their value orientation, with Postmaterialists placing higher priority on non-material goals such as freedom, equality and justice. In another widely-used work, Dunlap and Van Liere (1978) classify people according to whether they adopt a New Ecological Paradigm based on pro-environmental values, or follow the Dominant Social Paradigm. O'Riordan's (1981) concepts of ecocentrism and technocentrism form a similar framework, based on whether individuals believe environmental protection is achieved via working with nature or by changing it by the use of technology. Rose *et al* (2007) refer to the Value Modes model, which includes Settlers, Prospectors and Pioneers with different priorities and worldviews, which shape their environmental attitudes and behaviours. This latter model has been used by organisations including Friends of the Earth (Hounsham, 2006).

Another form of segmentation involves considering the behaviours that people currently undertake, and grouping them accordingly. Passey and Giugni (2001) define two axes of behaviour for participants in a social movement; participating sporadically versus frequently, and giving money versus giving time (with giving time seen as a higher level of involvement than giving money). Passey and Giugni then use this to distinguish three categories of participants: Subscribers are members who contribute financially to an organisation, Adherents are members who are active on an irregular basis, and Activists are members who are regularly active in an organisation. Similarly, Aronson (1993) identifies a group called "career activists", who have restructured their lives around environmental action. These are the most dedicated group within the range of people called "citizen activists" by Kitchell *et al* (2000). Dobson (2003) identifies a group of people called "Ecological Citizens", based on their pro-environmental attitudes and behaviours.

Frameworks have also been developed for specific lifestyle behaviours. For example, Anable (2005) discovered six groups within the population based on transport behaviour: Malcontented Motorists, Complacent Car Addicts, Aspiring Environmentalists, Die Hard Drivers, Car-less Crusaders and Reluctant Riders. A very similar framework was also developed by the Energy Saving Trust, who categorise company car drivers as "Eco-drivers", "Cash counters", "Responsible roadies", "High milers" and "Petrolheads" (Energy Saving Trust, 2009). Such segmentation models have the advantage of providing information on actual practices; which is extremely helpful in the design of tailored interventions. However, unlike simple socio-demographic segmentation, these value and behaviour-based approaches involve a preliminary stage in which people must be allocated to a category; this can itself be a time-consuming and complex task.

5.4 Combined segmentation approaches

Some approaches to environmental behaviour combine demographic and psychological/cultural approaches. For example, Skogen (1999) identified "middle-class cultures" that were linked to higher environmental concern than "working-class cultures". The key segmentation model using a combined approach is Defra's (2008a) Framework for Pro-environmental Behaviours", which divides the public into seven clusters, each sharing a distinct set of attitudes and beliefs towards the environment, environmental issues and behaviours. The model was developed through an extensive empirical research process and contains detailed profiles of people in each segment, including ecological worldview, socio-demographics, lifestyle, attitudes towards behaviours, current behaviours, motivations, barriers, knowledge and engagement. Each segment covers between 10% and 18% of the population; these are listed in Table Two. Segment profiles cover many factors, with considerable detail, including many value- and behaviour-related factors (which cannot all be covered here).

Table Two: Segment characteristics in Defra's model (Defra, 2008a)

Segment	Attitude and behaviour	Other characteristics
"Positive greens"	Highest levels of pro-environmental attitudes, reported pro-environmental behaviour and public-oriented behaviour (including activism)	In the highest socio-economic groups, tend to have a degree; many are middle-aged
"Waste watchers"	High levels of pro-environmental behaviour - but not for environmental motives. Attitudes are relatively pro-environmental	Often middle-aged or older, many on low incomes
"Concerned consumers"	Attitudes are slightly less pro-environmental than segments 1 and 2. Relatively pro-environmental habits	Bias towards higher socio-economic groups and people with a degree, many are 30-40, and have dependent children
"Sideline supporters"	Generally pro-environmental beliefs, but these are weakly held and do not translate into action	Under-30s are over-represented, incomes are average and fewer than average have a degree
"Cautious participants"	An environmental worldview close to the average; relatively low levels of pro-environmental behaviour	Younger than average, likely to have dependent children, and relatively likely to have a degree
"Stalled starters"	Confused views, but generally low levels of awareness and pro-environmental attitudes. Very low levels of deliberate pro-environmental behaviour	In the lowest income and socio-economic groups, fewest middle-aged people, least likely to have educational qualifications, and most likely to be unemployed; more than average numbers of black and minority ethnic people
"Honestly disengaged"	Very negative environmental attitudes and very low levels of pro-environmental behaviour	Under-30s are over-represented; slightly below average levels of income and numbers of people with degrees

Defra has used this framework as the basis for the development of policies to change environmental behaviour. For example, they have assessed the willingness and ability of each segment to take action on climate change, and have identified the policies that will be most effective in changing the behaviour of each segment, and the areas of their lives in which changes are most likely to be made. However, there are limits even to relatively sophisticated segmentation models such as this one; they inevitably represent a simplification of the complex patterns of attitudes and behaviours within the population. Furthermore, Defra aims "*to treat sustainable consumption and environmental behaviours as a **spectrum** along which we can move towards more sustainable patterns of living"* (Defra, 2008a:22), and has also stated that:

> "*we need to have a broad approach that includes the ways in which positive behaviours are adopted in the first place as well as how they can be maintained and reinforced over time. We should view behaviour formation and behaviour change as dynamic processes that evolve over time rather than being simple on-off switches*" (Defra, 2008a:20).

However, they have not to date published work concerning how people may move from one segment to another; this model is a static snapshot of behaviour.

6. Implications for this Study

Having reviewed the existing literature on environmental behaviour, it is possible to identify some areas meriting further attention, and to highlight some issues that should guide the development of this study. On the most basic level, it is clear that many questions remain unresolved in the field of environmental behaviour. While many studies have explored the subject, there are still many inconsistencies in results, and a lack of consensus on the underlying reasons for the trends that are observed. It was also concluded in Chapter Two that individuals are continuing to play an important role in UK climate change mitigation strategies, but that the new political and economic context present particular challenges to effective measures in this field. Together, these facts suggest that the question of how and why individual environmental behaviour changes is a key current concern for research.

In particular, this review shows that the factors shaping behaviour remain a complex and contentious issue. A key unresolved question here concerns the value-action gap; despite many studies over around twelve years the problem remains unresolved. With so many conflicting interpretations of this issue, adopting a pre-determined framework would seem an imposition of unnecessary and unjustifiable assumptions. This review suggests that there are myriad models that categorise behaviours and segment populations. However, to generate new insights into long-contested issues, it might be beneficial for research to avoid the imposition of *a priori* categories, whether for people, practices or factors causing change. Similarly, it may be useful for research to avoid initial assumptions about the relationships between behaviour and attitudes, values and so on. This could lead to new insights into the value-action gap and other related questions. Therefore an inductive approach appears justified.

It is also clear from the literature reviewed here that the majority of empirical work on environmental behaviour has been quantitative. In particular, the topic of the development of environmental behaviour has mainly been addressed through environmental education research, which has been overwhelmingly quantitative (Marcinowski, 1993). Such methods are ideally suited to large-scale descriptions of levels of concern and action, and comparisons of groups; however, there seems to be a lack of in-depth work to complement these broad-scale studies. Even work exploring formative influences on those taking environmental action has not generally used in-depth methods. For example, Tanner (1980) used open-ended surveys, while Palmer (1993) asked for a brief autobiographical statement. However, an in-depth approach, focusing on individual experience, may be valuable if we are fully to understand the motivators and barriers to environmental action.

This review also suggests a holistic approach to behaviour; researchers in both the modelling field and the Significant Life Experience field concur on this point. In this kind of approach, many different forms of action and influence can be explored, and attention can be paid to both internal, cognitive factors, and external, structural or social factors, as McFarlane and Boxall (2003) suggest. This seems important, since the focus of much past work on cognitive and individual-scale models appears to be a limitation on its utility, and increasing attention is now being paid to the role of social-scale processes (Jackson, 2005).

These ideas are discussed further in the next chapter, on social approaches to environmental action. The insights provided by segmentation work could be taken into account as part of a holistic approach. For example, the theories linked with socio-demographic approaches (including Hierarchy of Needs, socialisation, ageing effect, cohort effect and so on) may offer valuable tools for understanding the roots of individual attitudes and behaviours.

However, this holistic view is not without limitations, and this review highlights the fact that deliberate pro-environmental behaviour is often distinguished from non-deliberate environmental behaviour. As explained in Section Two, the latter refers to behaviour which is not consciously aimed at altering environmental impact, for example, choosing to conserve energy for economic reasons. While both deliberate (environmentally-motivated) and non-deliberate forms of environmental behaviour are worthy topics of research, they are very different concepts, and may have completely different sets of motivators and barriers (Thøgersen and Crompton, 2009; Nye and Burgess, 2008). Most researchers therefore choose to focus on one or the other, especially when attempting to formulate explanatory theories or models. Kollmuss and Agyeman (2002), for example, focus on deliberately 'pro-environmental behaviour'. The influential model they developed to explain this behaviour involves an extremely complex network of relationships between a large number of variables (as noted by O'Donaghue and Lotz-Sisitka, 2002). To attempt to incorporate non-deliberate and deliberate behaviour within a single framework would be a very complicated and time-consuming task.

The debate over whether deliberate or non-deliberate behaviour is more important as a policy tool is currently controversial (see, for example, WWF, 2008). However, deliberate pro-environmental behaviour is arguably an important topic for policy, because it involves the potential for promoting spillover and minimising rebound effects (as outlined in Chapter Two). It is also an area in which there are some important theoretical issues that are unresolved, as this chapter has shown. For these reasons, deliberate pro-environmental behaviour has been identified as the topic of this study, and non-deliberate behaviour is beyond its scope.

The review also highlights another unresolved issue in the literature; the need to conceptualise environmental behaviour as something dynamic; a process, rather than a

simple question of prior characteristics that may or may not dispose a person to go from being "inactive" to being "active". Many studies have focused on present attitudes and present actions as static phenomena, as do the segmentation models described here. Beyerlein and Hipp's (2006) conceptualisation of mobilisation within social movements as a two-stage process goes some way towards recognition of the dynamic nature of environmental behaviour, but the process may be more complex than they suggest. While some environmental education research has examined influential factors shaping the development of environmental behaviour, it has not examined in detail the actual process of change - how, when and why it occurs. This indicates an important gap in the literature; again, this is reinforced by the literature on social practices, discussed in the next chapter.

7. Chapter Summary

This chapter has introduced the concept of environmental behaviour, discussing meanings of the term and how it has been addressed by social psychological approaches over recent decades. It has also considered the various factors that potentially shape environmental behaviour, and the different segmentation approaches that are used to describe behaviour across the population. This discussion has suggested some implications for this study, including the value of an inductive approach; a focus on subjective individual experience; a holistic and contextual view of behaviour; and a dynamic, process-based approach. The next chapter discusses a field of work that embraces a more holistic, dynamic and social approach, and which has its roots in the sociological, not social-psychological literature. However, despite its theoretical differences, this work suggests implications for this research that complement those of this social-psychological review. Findings from both literature reviews are used to guide the Research Questions and method of this study.

Chapter Four

Social Approaches to Environmental Practices

"*If we contextualize the norms and environmental behaviors of individual human actors, we not only move away from overly individualistic accounts of environmental change, but at the same time open up a new research agenda for environmental sociology in studying environmental change from a life-world perspective*"

(Spaargaren, 2003:691)

1. Introduction

Chapter Three outlined a range of individual-based approaches to environmental behaviour. However, these approaches drawing on social-psychological models have been criticised, both by authors from other disciplines, such as sociology, but also by those within psychology (such as Dreier, 2009). Sociologist Haluza-Delay is one author who argues for a more "social" approach to environmental behaviour. In his paper: "A Theory of Practice for Social Movements: Environmentalism and Ecological Habitus", he argues that in the conventional approach;

> "*…analyses of environment-society associations and contemporary communication of environmental messages miss the link with "practice" – what do real people… do in real life, and **more importantly, why do they do what they do?**"* (2008:4, emphasis in original).

Conventional approaches to environmental behaviour have been critiqued as having "*static, individualistic, and rationalistic tendencies"* (Dolan, 2002:170), and as ignoring the fact that all individual engagement with the world is social; even when a person is alone their actions are shaped by social norms (Wenger, 1998). In response to such critiques, there has been a recent resurgence or development of interest in more social approaches to individual action. Schatzki *et al* suggest, in the title of their 2001 book, that there has been a "*practice turn in contemporary theory*" within the social sciences, and in recent

years, the new "Social Practice Theory" has had a major influence on the field of environment-society relations.

Social Practice Theory is influenced by Giddens' (1984) theory of structuration, which suggests that individual action is shaped by a framework of social structures, but that this framework is itself created and modified by human action. It is important to note that Social Practice Theory is not a coherent and unified framework, but rather a definable movement of thought (Røpke, 2009). Social Practice Theory focuses on the relationships between macro-scale structures or processes like technical innovation and the micro-scale detail of everyday lives (Southerton, 2009). Specifically, it explores how these are mediated by meso-scale structures called practices (defined below). A related area of work that has recently aroused interest amongst Social Practice theorists is Time Geography. In its reframed form (developed by Alan Pred), it is concerned with "…*the time-space choreography of the individual's existence at daily, yearly or lifetime (biographical) scales of observation*" (Pred, 1977:208), and especially "*the event sequences which constitute the days and life of each individual person*" (*op cit*:210). Recent work (for example in the edited volume by Shove *et al*, 2009) explores the intersections of Time Geography and Social Practice Theory, and this and other recent publications outline a new approach to individual action.

Recognising the importance of these developments, this chapter explores how social approaches to individual action can contribute to the theoretical framework of this research. Section Two introduces a range of concepts drawn from Social Practice Theory and Time Geography that are of relevance to this study. In Section Three, ideas are drawn from these two areas (and other key works) to contribute to a discussion of processes of change in individual practice; a central topic for this research. Finally, the concluding discussion highlights the implications of these social approaches for research, and specifically for the questions of this study. It is suggested that, while the study's focus on individual action reflects the cognitive or behavioural approach outlined in the previous chapter, concepts and ideas from practice-based approaches could provide a valuable complement to these theories.

It is important to note that this chapter discusses some specific concepts that will be used in later chapters to explain patterns in the data and to answer the research questions.

These include the concepts of habitus, project, career of practice, path dependency and community of practice. However, in keeping with the inductive approach of this study, these concepts were not explored in detail prior to data analysis. Rather, the literature review process continued throughout the research. If an emerging finding or theme from the data appeared to resonate with a particular concept or theory, then the relevant literature would be examined in depth. This helped to ensure that findings were linked to existing knowledge, and contributed to topical debates in the field. These concepts are introduced and explained in this chapter, rather than later chapters, for purposes of clarity.

Finally, one feature of practice-based approaches which distinguishes them from the social-psychological school is that they tend not to focus on actions that are consciously linked to any specific motive, such as "pro-environmental practices". Rather, they discuss practice as a general category, or focus on specific areas of activity such as walking or showering (for example, Hand *et al*, 2005; Shove and Pantzar, 2005). For this reason, this chapter presents ideas regarding practice in general, but relates this to climate change through examples where useful.

2. Concepts from Social Practice Theory and Time Geography

2.1 Practice

While this is clearly a central concept in Social Practice Theory, it is nonetheless difficult to precisely define a "practice". Broadly speaking, a practice is as an organised constellation of actions, or bundle of activities; a set of interconnected "*doings and sayings*" (Schatzki, 2001:50). For example, the practice of cooking a meal may involve a range of activities, such as reading a recipe (and understanding its terms), preparing ingredients, maintaining hygiene, using kitchen equipment and presenting finished dishes to others. However, "*each theorist has their own unique understanding of how practices are constituted and reproduced"* (Strengers, 2010; 6-7). A detailed discussion of these differences is not necessary to this study, but a brief overview will help to establish the study's theoretical context. Hargreaves (2011:83) provides this helpful summary of the various approaches to practices;

"…some theorists focus on the various components or elements that make up a practice (e.g. Reckwitz, 2002; Shove and Pantzar, 2005), others on the connections between these elements (e.g. Schatzki, 2002; Warde, 2005), and still others on the position of practices as a bridge between individuals' lifestyles and broader socio-technical systems of provision (e.g. Spaargaren and Van Vliet, 2000)".

Gram-Hanssen (2010) provides a more detailed discussion of differences and similarities between various leading practice theorists. She notes that Schatzki (1996) conceptualises a practice as a bundle of activities held together by certain elements; specifically, explicit rules, practical understandings such as (know-how or routines) and "teleoaffective structures" (such as goals and meanings). This view is drawn upon by Warde (2005) and by Shove and Pantzar (2005); however, these theorists rename and combine some of Schatzki's elements, and also include material elements. Such approaches have also influenced other writers, such as Halkier (2009). Crucially, however, Gram-Hanssen (2010) notes that all these approaches overlap to a large extent and that certain key elements recur.

Hargreaves (2011) suggests that an especially empirically helpful understanding of a practice is that of Shove and Pantzar (2005); this is also one of the most straightforward understandings of Practice Theory (Gram-Hanssen, 2010). This study aims to explore the development of an individual's practices over time, rather than to provide in-depth analysis of how multiple elements of each practice are integrated. For this reason, Shove and Pantzar's relatively simple and empirically-applicable framework is the main approach used in this study. In this view, a practice is a particular configuration of three elements: images (ideas, values and beliefs), skills (knowledge of how to do things, and abilities) and materials (elements of the physical world, including the body).

The category of images has some overlap with the variables around attitude, knowledge, values and morals discussed in Chapter Three. However, those psychological approaches often ignore the fact that performing any practice also usually requires various material objects (Røpke, 2009); "..*being a competent practitioner requires appropriate consumption of goods and services*" (Warde, 2005:145). (Of course, for certain practices it could also require abstaining from particular types of consumption). As well as having access to the materials, a competent practitioner must also have the skills to use these in the right way.

There are debates about exactly when an activity can be classed as a social practice; for example, Halkier (2009) explains that "environmentally-friendly food consumption" can be seen either as a practice in its own right, or alternatively as a part of food practices more generally. While such on-going debates are of value to the development of Practice Theory, the question of where the boundaries of specific practices lie is not directly relevant to the research questions of this project. This study adopts the position that, rather than involving strict categorisations, it is beneficial for concepts in Practice Theory to remain pluralistic and flexible (Warde, 2005).

Here, practices are understood as existing on a variety of scales, and as frequently overlapping with each other. For example, in certain contexts it might be helpful to refer to "food practices" and "energy practices", and in other contexts to refer to a cross-cutting category of "frugality practices". Equally, it may sometimes be helpful to refer to a pro-environmental activity (such as using biofuel in one's car) as a practice and sometimes to refer to car-use practices as a more general group, encompassing activities that are aimed at addressing climate change, and those that are not. As Halkier states, "*everyday life is not coherent*" (2009; paragraph 21) and this flexibility of definitions makes it easier to avoid the imposition of *a priori* structures and categories on activities and routines which are in fact inter-related on a range of scales.

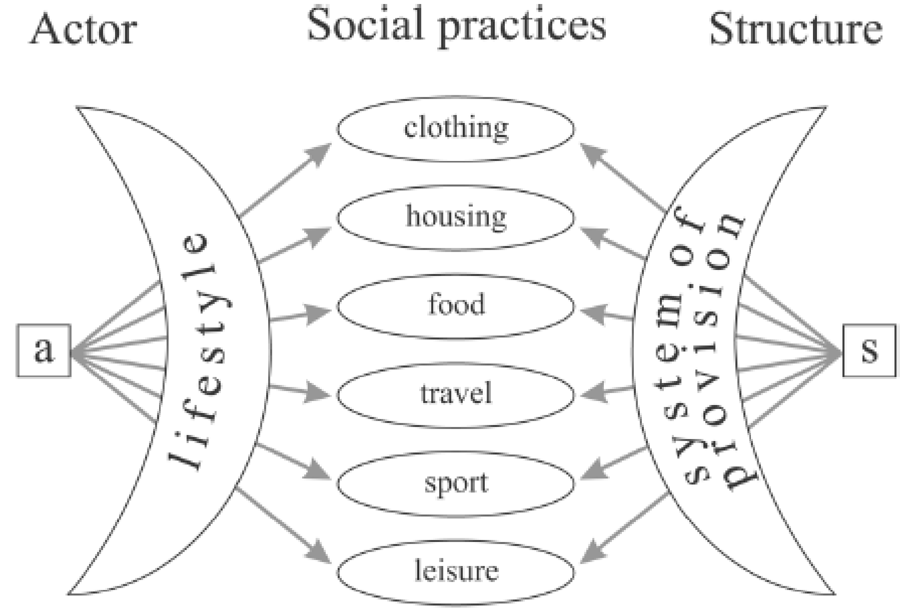
Within this approach, practices can be seen as relating to each other in clusters or complexes; for example, driving and maintaining a car. A practice can also be seen as a "sub-practice" of another practice if it forms a component part of that activity (Røpke, 2009); for example, sowing seeds might be a sub-practice of producing home-grown food. Practices are also in competition as they seek to capture recruits and resources (Shove, 2009a). Importantly, practices should be seen as "*internally differentiated and dynamic*" (Warde, 2005:131). Differentiation within a practice is partly caused by the fact that different people will have different levels of commitment to it, and a segment of a practice may also be linked with a particular sub-culture (*op cit*). A criticism of Practice Theory is that it makes it hard to account for change, but proponents refute this, arguing that "*Practices have a trajectory or path of development, a history"* (Warde, 2005:139) and that the dynamics of changing practices are attracting increasing interest (Røpke, 2009).

Social Practice Theory aims to move beyond dominant dualisms such as that of structure and agency (in which an emphasis on social institutions and rules is contrasted with an emphasis on individual choice). There is some diversity of thought within the field as to the precise level of individual agency. Some support a "strong" social practice approach in which the role of individuals as active players is seen as minimal, and they are metaphorically described as "creatures" that are "captured" by habits (Shove, 2009b). A slightly different view is held by those such as Spaargaren, who see changes in practice as "*the deliberate achievements of knowledgeable and capable agents who* ***make use of the possibilities offered to them in the context of specific systems of provision***" (2003:688, emphasis in original). As will be shown in later chapters, the findings of this study tend to support the latter view.

There is a common view however, that practices occupy a space between the individual and structural scale, and are the means by which agents shape structures and vice versa. Social systems have rules and resources that both enable and constrain agents, so individual actions are constituted by practices. At the same time it is individual participation in practices that creates social order, structures and institutions (Røpke, 2009) and innovative actions by agents can modify existing structures and create new ones (Crossley, 2003a). So social structures are simultaneously reproduced and transformed by practices (Røpke, 2009).

Spaargaren's influential model of social practice (Figure Four) shows how practices occupy a middle space between the realm of structure and social provision and the realm of actors and lifestyles.

Figure Four: A model of social practices, from Spaargaren (2003:689).



This model has important differences from the conventional psychological models discussed in Chapter Three. Social structures are no longer treated as external variables but are integrated into the model. The unit of analysis is not the isolated individual or their attitudes, but rather the practices that they perform.

Many practice theorists focus on “inconspicuous consumption” and ordinary routines (Røpke, 2009). Shove (2003) suggests that patterns of consumption of certain resources, especially energy and water, are largely determined by inconspicuous habits. These routines are shaped by social conventions of “normal practice”, which are focused around concepts such as comfort, cleanliness and convenience, and the practices seen as necessary to maintain them. These conventions change over time, but at present may be evolving or standardising in ways that are increasingly resource intensive. For example, the growing expectations that people will shower daily, and that offices will be air-conditioned both have resource implications (Shove, 2003). While some researchers emphasise individual routines and non-deliberative behaviour (Warde, 2005), others suggest that deliberate computation and habit are mutually reinforcing aspects of practice (Crossley, 2003a) or that people may at certain times be more or less reflective on the nature of their own practice (Wenger, 1998). Because of its broad scope and inductive, experience-based approach, this study is concerned with both deliberative and routine actions.

One theorist, De Certeau, suggests that everyday practices can be subversive, because they are performed by individual people in diverse and personal ways, which may challenge the larger social systems and institutions within which they are performed:

> *"users make (bricolent) innumerable and infinitesimal transformations of and within the dominant cultural economy in order to adapt it to their own interests and their own rules. We must determine the procedures, bases, effects and possibilities of this collective activity*" (1984:xiv)

While there is a range of views on the exact nature of everyday practice, the relations between structure and agency and the relative importance of habitual and deliberate action, theorists concur on one issue; the use of the term "practice" instead of the term "behaviour". Accordingly, individuals are often known as "practitioners". This distinction serves to represent and encompass all the theoretical differences between a social and an individual approach to action.

2.2 Baskets and projects

A "basket" of practices is defined here as a set of practices that are labelled as belonging to a particular category, though they may be diverse in the activities, images, skills, materials or time and space involved[3]. An example is Defra's Headline Behaviour Goals, outlined in Chapter Two; a varied group of practices that have been labelled by the Department as environmentally-significant. A basket of practices may be a grouping that has no particular meaning to ordinary practitioners. It can be defined by an external actor, such as a Government department or researcher, and will not necessarily be a category that practitioners have ever considered before. For example, policy-makers and researchers may be interested in "practices that affect cancer risk" or "anti-social behaviour". These are generally not labels that people use when thinking about their daily lives. Nevertheless, they may be able to identify practices that fall into such categories, if asked to do so. This thesis, by working with the concept of "action on climate change" is inevitably concerned with a basket of practices.

[3] This term, and the way it is defined here, have been developed by the author in conversation with members of the "Social Change, Climate Change Working Party" (see Lancaster University, 2011).

A related concept is that of a project, which originated in Time Geography. A "project" is a series of tasks or practices necessary to achieve a particular goal. Projects are "*significant devices deployed in bounding and in making sense of the temporal flow, and in actively orchestrating and interweaving complexes of practices*" (Shove *et al,* 2007:144). For example, cooking a meal can be seen as a project, as can building a house. Watson and Shove (2008) state that what people understand as a project varies greatly, but suggest that projects are:

> "*'made' by human actors who weave multiple practices together [....] Even if they take years to achieve, projects constitute 'orchestrating' forces, condensing diverse resources and energies around specific goals*." (Watson and Shove, 2008: 81).

Unlike a basket, a project is a set of practices linked by a goal that is important to a person, and is relevant to the ways they plan and understand their activities. For example, "practices that affect cancer risk" is a basket; it is a category used and understood by policy-makers, scientists and medical practitioners to refer to a range of practices around diet, exercise, drug use and so on. It is not necessarily a category used and understood by ordinary people. Rather, people may understand those practices in the context of their own personal goals and activities and organise them into personal projects, such as "losing a stone in weight" or "quitting smoking". While the distinction is a subtle one, it is important in understanding how people perceive and organise their practices, especially in fields where there may be a gap between public understandings and those of policy-makers and researchers.

Projects can exist on various scales, because goals can exist on a variety of scales. Within psychology there is a concept of major life goals, which Roberts and Robins (2000:1284) define as *"broad, far-reaching agendas for important life domains".* They add that:

> *"Major life goals involve a person's aspirations to shape their life context and establish general life structures such as having a career, a family, a certain kind of lifestyle, and so on. In contrast to midlevel motivational units, major life goals have a longer time line and influence an individual's life throughout years and decades rather than days and weeks"* (2000:1285).

They give an example of a typical life goal as having a high status career, while a midlevel goal would be getting a good mark in an exam. It could be suggested that mid-level projects are those with mid-level goals, while the set of practices aimed at achieving a major life goal could be called a major life project. This is a project that operates on the scale of years, perhaps spanning the whole life-course, or not having a defined endpoint.

2.3 Trajectories and careers

It is important to recognise that an individual's participation in a practice will naturally change over time. This changing pattern of action can be conceptualised as a path or trajectory. "*Across the life-course the personal trajectory of participation, the conduct of everyday life, and the self-understanding change*" (Dreier, 2009:200). The trajectory may also contain breaks or turning points; this relates to the idea of "Moments of Change", a term used by Defra to refer to times in a person's life when behavioural patterns are disrupted (for example, in Defra Research Project EV0506, Defra, 2011). Trajectories are shaped by context;

> "*…people obviously cannot just unfold their lives in whatever way they desire or aspire to do. They must forge personal trajectories of participation in relation to the existing structural arrangements and institutional trajectories of social practice*" (Dreier, 2009:198).

However, these arrangements and institutions do not fully determine personal trajectories, but rather create narrow or broad scopes of possibility for participation in various trajectories (*op cit*).

A related concept is that of a "career". The concept of a career in an occupation can easily be adapted to refer to a career in various other fields, activities or lifestyles (Becker, 1963), or a career in a practice: "*Individuals then have personal trajectories within practices and, once enrolled, subsequent immersion in a practice often has the features of a career*" (Warde, 2005:145). This will involve changes in the roles of images, skills and materials:

> "*A practitioner can be said to have a career with a practice, as experience and learning-by-doing develop the skills, attach new meaning to the activity, and maybe call for more advanced or supplementary equipment*" (Røpke, 2009:2494).

In Time Geography the term "path" has conventionally been used in a more specific manner, to refer to an individual's position and activities in time and space:

> *"...an individual's existence can be diagrammatically described as a trajectory, a "daily-" or "life-path" of movement – a weaving dance through time-space*" (Pred, 1977:208).

The daily path refers to movements and activities throughout each day, while the life path refers to broader patterns that span the entire life-course. Time Geography especially highlights the ways in which a daily path involves the co-ordination of activities; people must allocate time to their different practices so that they achieve all their goals.

> "*Because the path concept stresses the physical indivisibility and finite time resources of the individual, it forces us to recognize that participation alterations in one realm of practice invariably bring participation adjustments or changes in other realms of practice- both for self and others. It is thus possible to cast new light on the intimate, intricate interconnectedness of different biographies*" (Pred, 1981:10).

People must also co-ordinate their activities with the activities of others. Since many activities involve being in the same place as someone else at the same time (or other forms of co-ordination, such as a phone call or sequence of shared tasks), the paths of different people are interdependent. This need for co-ordination is a key factor shaping individuals' daily paths (Pred, 1977).

However, within practice approaches more generally, whether change is conceptualised as a path, a trajectory or a career largely depends on the writer's preference, and the terms have no fixed definitions. "Career" and "trajectory" are sometimes seen as implying a level of intentionality and progression towards a goal, though this is not necessarily the case. For example, Wenger (1998) uses the term trajectory not to imply a fixed course or fixed destination, but a continuous motion, with a momentum of its own and a coherence

through time. The term career is especially useful in drawing attention to the ways in which a person's capacities, identity, status and opportunities change as they participate in a practice over time. Furthermore, a career does not necessarily imply a uni-directional progress; it can involve tangents, diversions and regressions (Mishler, 1999).

When the data was analysed in this study, it became apparent that a central theme was the co-evolution of a person and their practices. Drawing on the work of Becker (1963), the term "career" is used in this study to refer to this process of co-evolutionary change in practices throughout an individual's life-course. The subject of careers of practice, conceptualised in this way, has received little attention with regard to sustainability. As discussed in later chapters, this study conceptualises pro-environmental practice as a career and uses this approach to gain new insights into the relations between practitioners and the practices they perform over time. The debate over the role of individuals in Social Practice Theory is controversial and on-going, and this study aims to contribute to this by developing a deeper understanding of careers of practice.

As will be discussed in later chapters, it emerged that there was a degree of path dependency in individual careers, because engagement in particular paths and projects has impacts on the mind and body. It has been noted by other writers that practices are "*influenced by their accumulated experiences and dispositions."* (Røpke, 2009:2493). However, paths are not entirely dependent on past actions and interactions:

> "***the ordinary individual is not only created by society****, or socialized,* ***but creates herself,*** *purposively or habitually adding action elements to her path by internally reflecting upon or in other ways drawing upon what she has been externally exposed to,* ***thereby contributing*** *(usually unknowingly)* ***to social reproduction and the perpetuation or transformation of society's structural relationships****" (*Pred, 1981:12, emphasis in original).

Pred's summary highlights the complex interactions between structure and agency, and between the micro- and macro-scales, that are a particular focus of these social practice-based approaches. While path dependency is an established concept, there has been relatively little work on how such dependencies affect pro-environmental behaviour or practices. It will be shown in Chapters Ten to Twelve that this study offers new insights

into the nature and operation of these dependencies; notably how they arise from people's experiences, from the ways practices are co-ordinated and shared with others, and also through contextual factors. However, it will also be shown that people are able to use strategies, to an extent, to mitigate or manage these dependencies.

2.4 Communities of practice

Another important concept is that of "communities of practice". Wenger (2006:1) defines these as "*groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly*". He suggests that three elements make up a community of practice. The first is the domain: unlike personal or social networks, a community of practice is defined by a shared domain of interest. Membership involves a commitment to this domain, and a degree of shared competence that distinguishes members from non-members. The second element is community: members engage in joint activities or discussions, support each other and share information. Geographic proximity is not essential but some form of on-going interaction is needed. The third defining element is practice: unlike in a purely-interest-based community, through their sustained interaction, members develop a shared practice, whether consciously or not (Wenger, 2006). Over time their mutual engagement in practice creates resources for negotiating meaning: a shared repertoire. The elements of this repertoire can be very heterogeneous, including: "*routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions or concepts*" that the community has produced or adopted as part of their practice (Wenger, 1998:83).

Communities of practice do not need to be explicit or formal, and may not perfectly overlap with "official" teams and groups. Examples could include employees in an office, the congregation of a church, or members of a campaign group. The members of a community of practice may be very diverse, and people can participate in multiple communities of practice. Wenger (1998) identifies four ways in which an individual can participate in a community of practice. As well as "full insider" and "outsider" there are states of "peripherality" and "marginality". Both peripherality and marginality denote that participation is limited; in peripherality, this is enabling (such as in an apprenticeship) but in marginality it is problematic. A community of practice is a place in which people develop, negotiate and share their ways of understanding the world; however, relations are not all

positive, and can involve conflict (Wenger, 1998). The concept of a community of practice will be used in this research to help understand individual engagement in climate-related activities.

Having outlined some key relevant concepts from these approaches, this chapter now turns to a deeper exploration of processes of change in individual careers of practice as these are understood within practice-based approaches.

3. Processes of Change in an Individual's Career of Practice

This section brings together ideas from Social Practice Theory and Time Geography, as well as key ideas from other fields, notably Becker's (1963) analysis of "careers" in various practices and Lave and Wenger's (1991) theory of situated learning. It considers in more detail the stages and processes involved in the development of a "career" in a practice. The initial "enrolment" in a particular practice can take many forms, including the introduction of practices in infancy, and later recruitment through formal associations, for example, for social and recreational activities (Warde 2005). The career then involves "*endless processes of recruitment and learning"* (Shove, 2009a:18) throughout the duration of participation. Various factors can act to promote or slow the progression of participation, and are discussed in this section.

3.1 Path dependency and entanglement

One factor shaping individual careers of practice is path dependency. As Time Geography suggests, there is a level of path dependency in all individual paths of activity. Once a particular path has been taken in one area of life, it may create conflicts or demands for other areas of life. These other paths may even become entangled with the first path, and shaped by it (Becker, 1963). This can occur through a process of commitment by which the individual becomes progressively involved in certain institutions and activities. Interests become bound up with carrying out certain actions to which they may not seem directly related. So as a consequence of their past actions, a person must adhere to certain forms of practice, because many other activities will be adversely affected if they do not. Becker notes this phenomenon particularly in relation to the trajectory of a conventional life-

course, which may involve education, an occupational career and a family; all of which may make certain other practices inconvenient or risky. However, it could also apply to more specific practices such as pro-environmental activities.

3.2 Habitus and the performance of practice

A factor which may shape an individual's career is "habitus". As developed by Pierre Bourdieu (1984), the term refers to a "system of dispositions" or a set of reflexes and forms of behaviour that people acquire through acting in society. Bourdieu suggests that these reflect an individual's upbringing, and are especially affected by their social class. An example of a form of habitus might be a disposition to enjoy a certain type of music, acquired through early exposure to it. Bourdieu suggests that a person's habitus serves to structure their practices throughout their life; however, Haluza-Delay (2008) emphasises the point that while habitus has a role in shaping individual actions, it does not entirely determine them.

While the meaning and utility of the concept of habitus have been the subject of intense theoretical debate (which there is not scope to cover here), many practice researchers believe it can be a useful concept (for example, Crossley, 2003a; Lau, 2004). However, it is important to note that this study does not take an existing definition of habitus from the literature and apply it strictly; for example, this study does not adopt Bourdieu's focus on class-based habitus. Rather, it follows the example of Mutch (2003), who sees habitus as a sensitising concept, rather than a rigid framework, using it as a conceptual tool to explore how the backgrounds of individuals shape their practices over time.

A key debate in the literature concerns the durability of habitus. Some critics have argued that Bourdieu had an overly static view of habitus (Gram-Hanssen, 2010), while other thinkers see habitus as continually evolving, for example, Wenger sees it as "*an emerging property of interacting practices"* (1998:96). As will be shown in later chapters, the findings of this study offer a contribution to this debate, suggesting that habitus should be conceptualised as continually evolving as part of a career of practice. Furthermore, this study adds support to the argument that habitus is a useful concept in Social Practice Theory, going beyond what is captured by the terms "habit", "social practice" or "images and skills". A person's habitus is understood here as an evolving set of dispositions that is

likely to have an impact on their practices across a wide range of life domains. Based on the findings of this study, this approach seems helpful in explaining how and why individuals' practices endure or change over time; this will be discussed in detail in Chapters Eight and Ten. It seems that, like the concept of a career, the concept of habitus can help to theorise the role of the individual within a social practice approach.

When the data was analysed, it appeared that two previously-identified forms of habitus were especially relevant. Ecological habitus, identified by Haluza-Delay (2008), is an acquired tendency to value and protect the environment, and involves knowledge of sustainable lifestyle practices, alongside beliefs about the problems caused by current unsustainable systems. Radical habitus, identified by Crossley (2003a) is an acquired tendency to challenge the status quo, combined with the political know-how to translate this into action, an ethos which promotes engagement and links it with personal meaning and worth, and a "feel" for activism that creates purpose and enjoyment, makes people "believe" in it and feel "at home" doing it. However, these forms of habitus have not been widely explored, and would benefit from further examination in the context of action on climate change; this study helps to further knowledge in this area. An additional contribution of this study is the identification of a new form of habitus, as is discussed in Chapter Eight.

While the development of habitus is a particular form of learning that may launch a career, more generally, learning is a crucial element of participation in any practice, changing a person's ability to engage in it, their understandings of it and the resources they have for it (Wenger, 1998). A key form of learning involves experience of the practice, whereby people develop ideas and motives associated with that activity. Becker (1963) suggests that instead of the motives leading to the behaviour, the behaviour produces the motivations. Becker identifies several steps in the development of motives and perceptions throughout one particular form of career: that of a marijuana user. First, the individual must learn the basic technique, then they must learn to perceive the effects, and finally they must learn to enjoy them. Overall, they must go through a process of learning to conceive of the object as something that can be used for pleasure. This occurs through direct experience of using the drug, often amongst other users. Through this process the individual develops a disposition or motivation to use it, which was not present when they began (*ibid*). Similarly, Warde (2005) suggests that an implication of the practice approach

to consumption is the idea that practice generates desires, not vice versa. This relates to the idea mentioned in Chapter Three that the relationship between attitude and behaviour may be two-directional.

This model is supported by work from the field of education, where cultural-historical approaches suggest that psychological processes evolve through participation in practical activity, which involves cultural practices and tools (Cole, 1996). Furthermore, Becker (1963) argues that marijuana use is a function of the individual's conception of the substance and the uses to which it can be put, and this conception develops as the individual's experience increases. This model is compatible with the idea of practices as composed of a configuration of images, skills and materials: a key material is the drug itself, while key skills include the basic techniques of its use, as well as the perception and enjoyment of its effects. A crucial image is the idea that marijuana can be used for pleasure. The development of the career can be seen as a process of evolving engagement with, and interlinking of, these three elements.

Experience of performing a practice may also be linked with the development of personal identity; Wenger (1998) argues that there is a profound connection between identity and practice. In a practice approach, identity is not seen as involving a sense of unchanging personal properties, but rather a sense of continuity of experience within a trajectory of participation (Dreier, 2009). Wenger (1998) argues that identity can be seen as a "learning trajectory"; we define who we are by where we have been and where we are going, and constantly renegotiate our identities through our participation in practice. These ideas suggest we should see identities as "*long term, living relations between persons and their place and participation in communities of practice*" (Lave and Wenger, 1991:53).

3.3 Trajectories within a community of practice

A vitally important factor shaping participation in practices is social or community processes. If people take part in a community of practice, their role in that community, and the way they participate, will change over time. Often this will take the form of a cycle: a newcomer enters, becomes a full participant, then takes on the task of sharing their knowledge with other newcomers (Lave and Wenger, 1991). Wenger (1998) argues that

any community of practice provides a set of models for trajectories that can be taken by members. These take the form not just of structured milestones such as career ladders, but also of actual people and composite stories. Exposure to these paradigmatic trajectories is often the strongest factor shaping newcomers' learning, though newcomers negotiate these creatively (*ibid*).

Lave and Wenger (1991) conceptualise learning as legitimate peripheral participation. Peripheral participation, as described above, means that a person is not a full participant in the practice, but that this serves to enable their participation. The term legitimate emphasises that this peripheral status is recognised and accepted by the community. Lave and Wenger use as examples a number of different forms of apprenticeship, in which new learners are able to play a part in a community while watching, learning and practising their skills. Often, learning will not occur through explicit teaching, but indirectly through encounters between "generations" (Wenger, 1998), with newcomers observing more experienced members (Becker, 1963). Often, newcomers will aim to become like the "masters" or most experienced members, who act as exemplars (Lave and Wenger, 1991).

In the early stages, a newcomer will develop a sketch of the community; for example, who is involved, what they do, how everyday life operates and what it means to be a full practitioner. Gradually they absorb and become absorbed in the culture of the practice (Lave and Wenger, 1991). Lave and Wenger suggest that this includes developing an understanding of what full participants enjoy, dislike and respect. Once again, there are clear parallels here with the concept of habitus. Lave and Wenger suggest that as they learn, newcomers start to derive satisfaction not only from the practice itself, but also from the sense of belonging and identity within the community. The result of this learning process is an inbound trajectory, driven by the growing value of the practice to the participant (as they become more skilled in the practice and integrated into the community) and also by their desire to become a full participant. However, not all communities of practice are equally open and conducive to learning, and in some cases there may be conflict between members (*ibid*).

3.4 Withdrawal

Equally important is withdrawal from a practice or resistance to recruitment in the first place (Warde, 2005). Becker (1963) examines how people break away from the conventional paths laid out by society and suggests that this can be achieved either by never getting entangled in a conventional life-path (which depends on the individual's upbringing), or through psychological processes that involve neutralising the force of conventional values in order to take a first step in an alternative "career". Participation in a practice may decline if key conceptions are changed, for example, through negative experiences (*ibid*). Relatively little attention has so far been paid to the process by which people withdraw from practices.

This section has drawn on ideas from several sociological fields to consider in some detail the concept of paths or careers of practice. These are shaped by processes such as path dependency, group dynamics and experience. Of course, they will also be strongly shaped by the broader landscape or context in which they occur; however, there is not scope to discuss here the myriad ways in which this could occur. Having introduced and discussed key aspects of Social Practice Theory and related fields, the concluding section focuses on the implications of practice-based approaches for this study of individual action on climate change.

4. Implications for this Study

This review suggests that the innovative approach known as Social Practice Theory, together with related fields such as Time Geography, could shed new light on environmental action, through concepts such as practice, project, career and community of practice. These new ideas could help to address some of the limitations of the cognitive approaches discussed in the previous chapter and advance knowledge on unresolved issues such as the value-action gap and the long-term durability of change. This is because they suggest a new approach to individual action; the key tenet of this approach is that the source of "behaviour change" is the relationship between individuals and social practices, rather than purely psychological processes on the individual scale. This sociological

literature also suggests some more specific implications for this study, which are discussed in this section.

It should be noted that the implications presented in this section are complementary to those highlighted in Chapter Three. This is because, as noted in the previous chapter, researchers within the social-psychological tradition have increasingly been recognising the limitations of purely micro-scale, deliberative and cognitive models. Their extensive empirical work has begun to highlight the importance of factors such as context, habit and social norms. Therefore, both fields of work may be drawn upon to elicit the following set of recommendations, that guide the questions and approach of this study.

One implication of this review concerns the fact that while practice approaches imply an attention to the social scale, they do not neglect the individual, but focus on the person-in-the-world (Lave and Wenger, 1991). Dreier suggests that there is a need for research to:

> "*study persons in structures of social practice in order to identify their scope of possibilities and their reason for participating in one way rather than another, including their reasons for taking part in changing those social practices*" (Dreier, 2009:207).

Warde (2005) has set out an agenda for practice-based research along similar lines:

> *"It becomes more important to ask what types of practices are prevalent, and what range of the available practices do different individuals engage in.... the question "what level of commitment is displayed to different practices?" becomes focal, and with it a grasp of how "careers" within practices take off, develop and end, of how people come to an understanding of what is required by the practice and their role within it"* (Warde, 2005:149).

On a related theme, as noted above, De Certeau suggests that research needs to understand the "*procedures, bases, effects and possibilities"* of people's everyday practices, and how they serve to modify and subvert dominant social structures and rules. This could be especially relevant in the field of action on climate change, where certain people may be attempting to subvert and adapt social practices that they see as unsustainable. All these

theorists are calling for research into the practices that individuals perform, why they do so, and what this means to them; these arguments are one factor guiding the Research Questions of this study. A more specific gap in knowledge concerns the concept of habitus; for example, Crossley (2003a) suggests that an unresolved issue is how habitus contributes to a movement's practices and its recruitment of particular groups. This review also suggests that it could be profitable to test the utility of the concepts of "radical" and "ecological" habitus. For example, does the climate change movement involve one or both of these phenomena, and how do they shape practices? Are other forms of habitus involved?

Another implication of this review concerns the idea that research may be more effective if based on real-life domains of activity, rather than on existing institutional fields such as Government departments; this has been called a life-world approach to practices (Spaargaren, 2003). Social practice approaches also suggest that segmentation (discussed in Chapter Three), while a useful tool, may be most valuable if based on actual practices rather than attitudes, values and sociodemographic factors (Martens and Spaargaren, 2005:40). These ideas resonate with the call for experience-based research, which was discussed in Chapter Three. Practice approaches also suggest that individual lives comprise many domains of activity (Spaargaren, 2003), and Time Geographic approaches highlight the need to examine the interrelations of these practices within everyday lives (Pred, 1981). These ideas suggest that a holistic approach may be the most appropriate way to understand the complex and varied practices, projects and paths that make up every life; again, this supports the findings of the social-psychological literature review.

A related issue is that, as noted in Section Two, the definition of the boundaries of a practice is notably imprecise. Practice approaches suggest that the distinction between practical and political action may not be a clear one and that these are certainly not the only dimensions by which activity can be categorised. In this approach, human activity is seen as a complex field, composed of many families of practice, which are all interrelated. Practice researchers generally take an inductive approach to the identification of boundaries and definitions of practices, basing categories on the understandings of participants (for example, Martens and Spaargaren (2005), Stock and Duhamel (2005)); this could be a useful lesson for this research.

The review of literature also highlights the value of a dynamic, temporal perspective, as clearly expressed in the concept of a "career". This can include exploration of the roots of current practices: *"...interesting light can be shed on practice by looking at the antecedents to practice" (*Mutch, 2003:396). In this approach, instead of seeing individual actions as isolated events, practices are understood as a flow of activities within a dynamic landscape of ongoing social processes (Røpke, 2009). This is an area warranting further research, for example, Crossley (2003a) suggests examining how social movement participants (such as environmentalists) sustain their commitment over time. This reinforces the idea, mentioned in the previous chapter, that the question of how and why action on climate change develops over time is a topical and theoretically interesting one.

Applying Social Practice Theory also means considering individual lives within the context of broader social processes, structures and institutions. This means examining the enabling and constraining role of social structures on individual lives (Spaargaren, 2003), and;

> "*how domestic practices co-evolve with changes in gender and family relations, scientific understandings, the meaning of progress, markets and supply chains, infrastructure and so on*" (Røpke, 2009:2494-2495).

A practice approach would strongly support the notion, now widespread in academic and policy circles, of a "whole system" approach to sustainability (POST, 2010). However, relatively few studies have taken a holistic and multi-scale approach to people's sustainable practices. This is clearly shown by the discussion of literature in Chapter Three, which focuses on individual-scale, cognitive processes. While the work highlighted in this chapter offers important insights into structures and systems of sustainable practice, this remains a new and emerging field. In particular, little attention has so far been paid to the ways in which individual practices, projects and careers of sustainability relate to wider contexts and systems; this is a gap in the literature that could be addressed by this study.
A final and important point is that the links between social practices and sustainability are a key research area at present. This is reflected in the ESRC's funding of a capacity building programme including a "Social Change Climate Change" working party, with an explicit focus on the application of Social Practice Theory to questions of climate change (see Lancaster University, 2011). It is also reflected by recent work such as that of Hargreaves (2011) on workplace sustainability and the many papers presented at a 2010 conference

under the session heading “Practices and the Environment: Performing Sustainability and doing Science and Technology Studies” (Rettie and Burchell, 2010). The ESRC is also now funding a Sustainable Practices Research Group across several UK universities. However, to date no research has examined deliberate, environmentally-motivated practices of action on climate change, or offered an in-depth exploration of how and why the sustainable practices of individuals change throughout their lives. Given the policy context, these are important gaps in this literature.

While sustainable practices are a key research topic, this review also shows that most practice-based approaches tend not to emphasise any particular motivation, including pro-environmental motivation, or use it as a starting point for inquiry. This is related to the idea that individual attitudes and choices have been over-emphasised in conventional approaches, and that research needs an approach that pays more attention to the routine, non-deliberate and norm-guided nature of much activity that affects the environment. Some practice researchers prefer not to approach the issue in terms of environmental outcomes or motives at all. They focus instead on an activity that affects the environment, such as laundering or car use, but then examine that area of practice in a holistic manner, considering all the different images, skills and materials involved, whether these are related to the environment or not (Røpke, 2009). However Practice Theory does not necessarily have to neglect deliberate, conscious or environmentally-motivated action. As noted in Section Two, deliberate and non-deliberate action can be seen as mutually reinforcing aspects of practice. As such, research on either form is likely to be of value.

Research on deliberately pro-environmental practices might be particularly useful because for some areas of practice, for some groups of practitioners, beliefs about protecting the environment will form an important set of “images”, and so will be a core element of the practice. It can be argued that there will be significant differences between practices aimed at protecting the environment and practices aimed at other goals. If two people engage in the same activity (such as cycling) and environmental protection forms a significant “image” within one person’s practice, but not the other’s, there may be important differences in the ways they perform the practice, and especially the ways their participation develops over time, and responds to any changes in contextual or personal circumstances. For this reason, it may be worthwhile to focus specifically on either

deliberate or non-deliberate pro-environmental practice. For reasons explained in Chapter Three, deliberately pro-environmental actions form the main topic of this study.

In conclusion, social practice approaches present a major challenge to conventional cognitive models of environmental action. However, as noted in Chapter Three, recent work within social psychology has also begun to recognise the limits of these models, and so has started to explore factors such as norms, networks and context. This means that there appears to be a degree of convergence between the two fields, which could be a very valuable development in terms of advancing understandings of sustainable practice. This research draws on both fields of work in its aims, questions and methods.

The two literature review chapters have revealed some important gaps in knowledge. This section has highlighted many of these gaps, including a need for a greater understanding of the relations between people and structures of social practice; how the environmental behaviour of individuals is shaped by a system involving wider social, political, technical and economic contexts. In addition, many authors highlights a need for research that focuses in detail on participation in specific practices, taking an experience-based, life-world approach and explaining how dominant practices are subverted in daily life and the role of habitus in shaping behaviour. An especially important task for research is to address these issues in the context of climate change, including by examining practices deliberately aimed at reducing climate impacts. This is a topic that has not previously received significant attention from practice theorists. Finally, there is a clear gap in knowledge around the temporal dimensions of individual careers of practice; the roots and durability of their participation. Again, this gap becomes particularly important when considered in the context of sustainable behaviour, and the need to bring about enduring changes in lifestyles.

Based on the two literature review chapters, the following Research Questions are adopted:

1. How is “action on climate change” understood by the people performing it?
2. How does performance of these practices develop throughout the individual life-course?
3. What are the key processes that influence this development?

4. What lessons can we learn for the promotion of sustainable practices?

Question One seems a necessary foundation for the following questions. However, this type of question has generally not been considered by social-psychological studies; this is the type of issue that is more likely to be considered by practice-based studies. In contrast, Questions Two and Three are the type of questions that are frequently asked by social-psychological studies, but have not been satisfactorily answered. However, they are phrased here in terms of practice, not behaviour, to represent the study's holistic and contextual approach to action. As noted above, many practice researchers agree that these questions concerning how and why practices change, especially when this has environmental impacts, are very important. Finally, Question Four spans disciplinary boundaries; many researchers within both fields believe it is vital to support evidence-based policy making on sustainability. This question is included because of the study's foundation in environmental social policy and its commitment to phronetic social research as outlined in Chapter One.

5. Chapter Summary

This chapter has introduced Social Practice Theory and the related field of Time Geography. It has shown that these approaches are of great relevance to this study, and offer valuable concepts such as career of practice, project, community of practice and habitus, that can be applied to the topic of individual action on climate change. Discussion of literature from these fields has suggested implications for this research; in particular, the value of exploring the dynamic nature of individual participation in practices and considering the way that this is linked to broader social processes. Such an approach seems to be necessary in order to generate a rich and multi-layered analysis, capable of reflecting the true complexity of individual action on climate change. These findings, which complement those of the social-psychological literature review, are an important influence on the Research Questions, and are returned to in Chapter Six, where lessons drawn from both literature reviews feed into the methodology.

Chapter Five
Introducing the Exemplars: Practices of Campaigning and Car use

"*Social movements are constituted by way of social practices and they can therefore be studied by way of the same tools as other social practices*"
(Crossley, 2003a:61)

"*...the car we might say is a way of life and not just a transport system*"
(Urry, 2007:115)

1. Introduction

The previous chapter explained social practice approaches, which form the main theoretical framework for this work. Having outlined theories on practices in general, it is now useful to consider some specific practices that fall within the category of "action on climate change". Therefore, this chapter introduces two areas of practice that will be used throughout this thesis as exemplars; campaigning and car use. The process by which exemplar practices were selected is discussed in Chapter Seven. However, it should be briefly noted here that these areas were identified on the basis of participants' accounts of their practices, as well as a judgement of the importance of these practices to policy on climate change mitigation. The value of considering a political and a practical form of action was also taken into account. This chapter aims to provide the necessary background to the analysis presented in later chapters, regarding both policy and theory in the exemplar areas. Section Two introduces practices of car use in the UK, and Section Three does the same for campaigning on climate change. Discussion focuses particularly on insights from past practice-based approaches to these topics.

2. Exemplar One: Car Use

Car use in the UK is a very significant issue for policy on climate change. The DfT's most recent statistics show that at the end of 2009, there were 34.3 million vehicles registered in Great Britain. This is an increase of about 52 thousand vehicles (0.1%), on the number licensed at the end of 2008 (DfT, 2011a). The proportion of households with access to at least one car increased from 52% to 75% between 1971 and 2007; the percentage of households with access to two cars increased from 7% to 26% in the same time (Office for National Statistics, 2011). These data suggest that Britain is a largely car-dependent society. However, at the end of 2009 there were only 114,000 hybrid, electric or gas-powered cars in Great Britain (DfT, 2011a).

For this reason, emissions from cars make a significant contribution to the UK's impact on the climate. In 2007, household use of private vehicles was responsible for 10% of all UK greenhouse gas emissions (DfT, undated), and carbon dioxide emissions from private cars increased by 13% between 1990 and 2007 (Defra, 2009c). While efforts have been made to change public attitudes and behaviours around car use, such as the Department for Transport's "Act on CO_2" campaign in 2009, it is a notoriously complex area of behaviour (Anable *et al*, 2006), and appears to be particularly difficult to change.

DfT research published in 2011 found that:

- Around half of respondents travelled by car at least once a day. How frequently respondents travelled by car appeared to be largely unrelated to how concerned they were about climate change, but higher earners seemed to use cars more often.
- The proportion of respondents who considered cars to be a major contributor to greenhouse gas emissions has fallen significantly, from 80% in 2006 to 70% in 2010.
- Almost half of respondents were willing to reduce their car use; however, among who were 'very concerned' about climate change, 64% were willing to do so.
- Of the actions to help limit climate change included in the survey, purchasing cars with lower CO_2 emissions was the action for which there was the greatest willingness; 85% of drivers were willing to do this (DfT, 2011c).

Defra's tracker survey of environmental attitudes and behaviours in 2009 also explored changes in car use, and found that:

- 78% of drivers said they were driving in a fuel efficient way.
- 62% of drivers said they had switched to walking or cycling instead of driving for short, regular journeys.
- 26% of drivers said they had switched to public transport instead of driving for regular journeys (Defra, 2009a).

Although many car-share schemes now exist, only one in ten people share a car more than once a week (The Automobile Association, 2008). This review of the evidence suggests a mixed picture of public attitudes and behaviours around car use. However, it is clear that car use is an important issue for climate change policy, with significant impacts on emissions, and that some individuals are adapting their car use in a variety of ways in response to climate change.

Discussion now turns to theoretical issues, and understandings of car use as a practice. Stock and Duhamel (2005) see car use as part of a broader category called mobility, which is a system of practices on different scales. On a social scale, there is a system composed of, among other things, places, actors, socio-economic processes, infrastructure and the social values of mobility. On the personal scale, there is also a system of mobility in which specific movements are linked together and interact; for example commuting can be a substitute for migration. They note that;

> "*This leads to the observation of very differentiated systems of mobility, characterized by more or less mobility, but also of different moments during an individual's lifetime, characterized by moments of immobility and hyper-mobility*" (Stock and Duhamel, 2005:62).

Although mobility is a practice in its own right, it also forms part of many other practices, such as leisure pursuits, work or shopping. It can also be seen as encompassing many other practices, for example, commuting or touring; or equally, the use of buses, bicycles or cars. As noted in Chapter Four, the boundaries of a practice can be defined in various ways, depending on the focus of research. This study is concerned with practices of car use, but

recognises that this encompasses other practices on a smaller scale (such as buying a car, or driving to work) and also fits into a larger scale system of mobility practices. Because car use is rarely performed for its own sake, it is highly entangled with a wide range of other practices.

Practices of car use, like all practices, vary between places and over time and between groups. The history of British car use involves social class differentiation: initially it was a form of entertainment for the upper classes, and then became popular with sections of the middle class in the interwar period (Warde, 2005). The successful establishment of cars as a dominant mode of transport was related to the class status of early car owners; through motoring organisations they were able to exert influence over traffic regulation and infrastructural provision (*ibid*). However, as car use has become more popular and widespread, it has still retained a high level of differentiation in how it is perceived and performed, mainly related to sub-cultural or lifestyle groupings (Warde, 2005). For example, among different groups, or communities of practice, cars may be used for commuting, hobby-restoration, racing or joyriding. For different individuals and groups, the practice of motoring has various meanings, including "*personal identity, family relationships and sociability*" and "*liberation, empowerment and social inclusion*" (Sheller, 2004:230). It also gives various different forms of pleasure or gratification. How car use practices are performed by a given individual will depend on factors including "*past experience, technical knowledge, learning, opportunities, available resources, previous encouragement by others, etc*" (Warde, 2005:138).

Car use practices have evolved over time, as technologies have developed, but also as cultural ideas about driving have changed. For example, the idea of off-road driving creates a demand for sports utility vehicles and the belief that people need more than one car (Warde, 2005). Practices of car use are also entwined in myriad and complex ways with other practices; for example, modern car design has been influenced by technical innovation in motor sports, and putting radios and CD players in cars has incorporated cultural consumption into the practice of motoring *(ibid*). Urry (2007) identifies a strong path-dependency in the development of car-based transport systems. Government policies of road building based on "predict and provide", combined with the aggressive policies of car manufacturers have led to the increasing dominance of cars over all other road users. Car use is locked-in to a wide range of other systems, whether industrial, legal,

socio-cultural or infrastructural. For example, housing, leisure and urban planning are organised around the needs of the car; "*automobility's restructurings of time and space generate the need for ever-more cars and its further expansion as a system*" (Urry, 2007:118).

This overview highlights the importance of car use as a practice worthy of exploration, because of its contribution to emissions and also its central role in modern society. However, Urry notes that; *"strangely the focus has almost entirely been upon [the car's] production and not the consumption and use aspects of automobility*" (Urry, 2007:115). For this reason, an in-depth exemplar on individual's practices of car use will form a useful contribution of this research. In particular, exploring the ways in which cars are used by people who are trying to take action on climate change may give useful insights into how more sustainable forms of car use might operate, and the barriers to their adoption. While the primary focus will be on car use, other modes of transport will also have to be considered, because they form a closely-related part of a system of mobility, especially since they can act as "sustainable" alternatives to car use.

3. Exemplar Two: Campaigning on Climate Change

The climate change movement in the UK is diverse, and involves a range of Non Governmental Organisations (NGOs), including large environmental organisations such as Friends of the Earth, Greenpeace and the World Wildlife Fund (WWF), as well as more specialised and smaller organisations such as the Campaign for Action on Climate Change. Climate change campaigning is generally seen as closely linked to environmental campaigning, but development NGOs such as Oxfam, Christian Aid and the World Development Movement have played an increasing role in the movement over recent years. All the aforementioned organisations are members of the Stop Climate Chaos Coalition, an umbrella network of UK NGOs working on climate change, which was launched in 2005. Within the key NGOs, membership levels are relatively high; in 2011 Friends of the Earth (England, Wales and Northern Ireland) has approximately 100,000 financial supporters and about 75,000 campaigners (Friends of the Earth, 2011b), and Greenpeace UK has 130,000 supporters (Greenpeace, 2011). Meanwhile, WWF UK has over 530,000 supporters (WWF website). Nonetheless, this represents a small proportion

of the UK population, and it has been argued that it consists mainly of white, middle class people (for example, by Abbott, 2008). This reflects the findings of the empirical studies mentioned in Chapter Three regarding socio-demographic correlates of environmental behaviour.

In 2005, 2006 and 2007, much NGO work focussed on pressuring the Government to introduce a Climate Change Bill. Campaigning often involved public awareness-raising, for example, Friends of the Earth's "Big Ask" campaign involved rock concerts, information at music festivals, a cinema advertisement, and ''viral marketing'' to disseminate short films by email. This, and other campaign and political efforts, contributed to the passage of the Climate Change Act in 2008. Hall and Taplin (2007) suggest that during the last decade, UK NGOs have enjoyed considerable political and bureaucratic access, with environmental NGOs particularly valued for their perceived independent scientific evidence. For example, WWF has such good political access that the former Environment Minister, Michael Meacher, described the organisation as his ''*alternative civil service''* (Rootes, 2007).

However, recent years have also seen the emergence of a direct action movement around climate change, largely through an event originally called Climate Camp, and now called the Camp for Climate Action. The first UK Climate Camp was organised in 2006, and built on previous campaigns such as the protests against the summit of the G8 (group of eight nations) in Scotland in 2005, which had brought together experienced activists (with links to the anti-roads and anti-genetic modification (GM) campaigns of the 1990s and the anti-globalisation movement) with a new generation of young activists (Plows, 2008). The 2006 Climate Camp aimed to shut down the power station Drax, and was attended by around 600 people (Camp for Climate Action, 2011). Over the following years, larger camps and protests were held in various locations; for example a camp in 2007 took place near the site of the proposed third runway at Heathrow, attended by around 2000 people. The group has recently ceased organising campaign events, however, similar actions are continuing through organisations such as Plane Stupid (an anti-aviation direct action group founded in 2005) and Rising Tide (a network of groups taking direct action on climate change, founded in 2000).

Another recent development is the rise of the Transition movement, which aims to promote a shift towards a low-carbon, sustainable society. This was originally launched in

2006 as "Transition Town Totnes", but soon developed into the broader "Transition Network". Its aim is "*to inspire, encourage, connect, support and train communities as they self-organise around the transition model, creating initiatives that rebuild resilience and reduce CO_2 emissions*." (Transition Network, 2011). It differs from other environmental NGOs in its emphasis on community engagement, independent local groups, co-operation with local authorities, and the promotion of practical, local and often lifestyle-based responses to climate change and resource depletion. From 2007 onwards, groups were formed across the UK and around the world, facilitated by the publication of the Transition Handbook by Rob Hopkins in 2008 and a series of training courses provided by the organising charity. The website currently lists 309 initiatives in the UK (Transition Network, 2011).

Various strands of the climate change movement were brought together at the time of the international climate negotiations in Copenhagen in December 2009. While the larger NGOs had representatives inside the conference centre, many also organised campaign actions outside it, alongside smaller and more radical organisations. A demonstration in London prior to the conference attracted up to 50 000 people; the UK's largest climate change demonstration (Stop Climate Chaos, 2011). However, the conference was generally perceived within the movement as a failure, and its political outcomes widely criticised (for example, Vaughan and Adam, 2009). At present, reviewing NGO projects suggests that climate change campaigns are not focussed around a single theme or demand, but rather include a wide range of projects mainly opposing unsustainable energy sources, promoting renewable ones and encouraging energy efficiency. Current discourses seem to focus on human dimensions such as "green jobs", fuel poverty and global justice.

Turning to theoretical considerations, there is a rich literature on social movements, including much work on the environmental movement (which is where climate change campaigning is generally situated by researchers). A key concept of relevance to this study is the repertoire of action; the stock of strategies, tactics, techniques and tools used by a campaigner or organisation. The extensive literature on this subject (such as Dalton *et al*, 2003; Carmin and Blaser, 2002) suggests that the environmental movement employs diverse tactics, from violence and direct action at one extreme, to electoral participation and co-option by policy institutions at the other. Selection of techniques is guided by

factors including ideology, available resources and political contexts. A repertoire of action could equally be called a repertoire of practice.

Another relevant concept from the social movement literature is that of biographical availability; the "*absence of personal constraints that may increase the costs and risks of movement participation, such as full-time employment, marriage and family responsibilities*" (McAdam 1986:70). For example, women with children are often seen as having low biographical availability, and this is used to explain why they may be less active in social movements than other groups (*op cit*). Other work suggests that young people have the fewest barriers to protest activity because they are more likely to be free from the obligations of careers and families (for example Schussman and Soule, 2005). As with the socio-demographic segmentation approaches described in Chapter Three, this concept suggests paying attention to the biographical characteristics of participants, and their effects on practice.

It is notable that Social Practice Theory has not been applied to climate change campaigning specifically, but has been applied to environmental campaigning (Haluza-Delay, 2008), and to campaigning more generally (Crossley, 2003b). Crossley argues that a theory of practice is the best framework for understanding social movements, and that we need to consider the ways in which protest repertoires are developed and disseminated. He argues that environmental campaigning is often entangled with other practices, including lifestyle practices; living a green lifestyle is a major activity of the environmental movement. "*Part of the "movement" in social movements is a transformation in the habits, including linguistic and basic domestic habits, that shape our everyday lives*." (Crossley, 2003b:8). Participating in a movement affects not only a person's engagement with campaign activities, but also other areas of life, such as dress and physical appearance: "*activists tend to perceive their lifestyles in political terms and arrange them accordingly*" (*op cit*:53), partly to express their solidarity with the movement. The careers of activists are often not limited to a single movement; many move serially between them, or simultaneously participate in two or more (*op cit*).

Research from social movement studies suggests that activism has roots in the socialisation experiences of individuals (Klandermans, 1997; Snow and Oliver, 1995). Crossley (2003a) links this to the idea of radical habitus, discussed in Chapter Four. First, some people have

the right biographical exposure to certain formative experiences that increase the probability of acquiring the disposition to get involved. The initial exposure to social movement activities, which may kick-start a career, often involves family or higher education, and can be strongly affected by socio-demographic factors such as social class (Crossley, 2003a). Then, throughout life, participation in social movement activities tends to lead to further participation in such activities. For example, one longitudinal study found a "*dramatic and durable politicizing effect*" of participation in campaigning (Crossley, 2003a:50). This and many other studies suggest that "*participation in protest events or movements, whatever unrelated contingencies bring it about in the first instance, often creates a disposition towards further political activism"* (Crossley, 2003a:50). This is very similar to Becker's (1963) framework for a career, based on the development of skills, conceptions and dispositions, as outlined in Chapter Four.

McAdam (1986) suggests that social movements are a context in which dispositions and worldviews may be remade in three ways: 1) Participants meet new activists, so broaden movement contacts; 2) Through interaction and exposure to messages they develop a better and more sympathetic understanding of the movement; 3) They experience being an activist and gradually come to adopt this identity. A wish to maintain an activist identity, and rediscover the ecstasy and togetherness of the collective action may impact on campaigners' later biographies (McAdam, 1988). McAdam (1986) proposes that the result of these processes is a circular reinforcement and amplification; each successive act of involvement commits the agent towards more costly and risky forms of activism, by increasing their network integration, ideological affinity, identity commitment and receptivity to more costly forms of participation. This has clear parallels with Lave and Wenger's (1991) theory of the centripetal trajectory of a participant within a community of practice. This theme of communities and interactions is an important finding of this study, which has not been fully recognised in the literature on climate change and environmental behaviour.

To deliberately promote learning, movements have "*a variety of mechanisms for educating neophyte radicals; affording them knowledge of struggles and issues, as well as "training" (formal and informal) in the skills of protest*" (Crossley, 2003a:59). These include teach-ins, training camps, seminars and bookshops (*op cit*). This clearly resonates with Lave and

Wenger's (1991) theory of learning in communities of practice. Crossley argues that the individual may also deliberately try to change their own habitus. Movement participants;

> "*seek social change, in part, through self-change. Their activism entails an on-going attempt to change their habitual ways of being-in-the-world: that is, "habit-busting habits*"" (Crossley, 2003a:56).

Of course, all of these processes will be affected by the context in which they occur, including dominant social attitudes (Haluza-Delay, 2008). Social movements themselves are also not static, but dynamic and have their own "paths". These include "issue-attention cycles" whereby public and political interest in issues rises and falls over time (Downs, 1972). It will therefore be important to consider the history of the climate change movement when exploring the careers of individuals within it. However, based on the literature, campaigning does not appear to be quite so thoroughly embedded in other practices, institutions and infrastructures as car use. This is an interesting issue for consideration in this research.

Crossley highlights a range of research questions concerning campaigning as a social practice, which have not previously been addressed. He argues that a useful research aim would be to map a particular "field of contention" (such as climate change campaigning), addressing questions such as,

> "*What are the cultural and symbolic resources sanctioned by and distributed within the field? How are agents recruited into the field? What shapes the habitus of these agents and what shape does that habitus have? What impact do other fields, including other fields of contention and such fields as the media and the economy, have upon this field?"* (Crossley, 2003a:63).

He also suggests examining how activists sustain their own commitment (or, to put it another way, how practices sustain participants' commitment). These questions all complement the research questions of this study. It may be concluded from this discussion that a practice-based study of campaigning on climate change would be a useful contribution to knowledge in this field.

4. Discussion: The Role of the Exemplars in this Research

The above discussion shows that these are two very different areas of practice, which are both of interest to a study of action on climate change, though for different reasons. The review suggests that in their own right, both are worthy of further research because of their social significance and role in addressing climate change, and both could benefit from practice-based empirical exploration. However, in this study they are not considered purely for the sake of gaining further knowledge of car use and campaigning; they also contribute in more specific ways to the answering of the Research Questions. First, they are a practical and a political form of action; therefore, focussing on these as exemplars will help generate findings that do not apply narrowly to one form of behaviour. Furthermore, a exemplar on campaigning should complement one on car use, because these are practices with a very different status and meaning in modern society. One is seen as very "normal" and is embedded in many shared routines in everyday life, and so might have to be adapted or resisted in order to pursue a goal of addressing climate change. The other is not "normal" but relatively unconventional; pursuing action on climate change through adopting this practice might mean taking on a new set of activities, developing new networks, and even a new identity.

Therefore, because these are two very different areas of practice, any themes which emerge as important for both cases can be interpreted as having quite broad significance. These could relate to what action means, how it changes, and why it does so. This will mean that there will be scope for cautious theoretical generalisation to a range of practices. This will be aided by a less in-depth analysis of all practices associated with action on climate change; these issues are discussed further in Part Two: Methodology. At the same time, differences between the two cases will also be instructive, and will suggest limits to the generalisability of findings. They may indicate where differences lie between practical and political forms of action more generally, as well as between the modification of conventional practice and the adoption of unconventional practice. These will help provide a rich and full answer to the questions of what action on climate change means and how and why it changes. All of these contributions will strengthen the quality of the findings, and also help in the development of policy recommendations, since these must be sensitive to differences between areas of practice and should focus on the most clearly-supported insights. Therefore, the two exemplars are drawn upon throughout Part Three:

Results and Discussion to reveal theoretically valuable divergences and convergences between different areas of practice. They are also used to provide sensitising detail of participants' lives and illustrations of key themes.

5. Chapter Summary

This chapter has introduced the two exemplars; specific domains of practice that will be focussed on in the data-collection and analysis. It has provided background information on the way each practice is currently performed in the UK, and has drawn upon theoretical literature to show how they can be understood within a practice-based approach. Finally, it has discussed how these exemplars can contribute to answering the Research Questions of the study. The next chapter introduces a new part of the thesis; the methodology.

Part Two:
Methodology

This short part of the thesis is comprised of two chapters which present the methodology of the study. The first chapter explains how past literature (as outlined in the two literature reviews) was drawn upon in making fundamental methodological decisions, such as the choice to use qualitative methods, and introduces the hybrid biographical approach that was selected. A chapter is devoted to introducing the methodology because this study adopts a relatively innovative approach, which requires justification, and because reflections on this method form part of the contribution of this study. The next chapter then takes a "step-by-step" approach, explaining how and why certain tools and techniques were used at each stage of the research process, and evaluating their effects.

Chapter Six

Introducing Narrative and Life-Course Methods

"A decade ago narrative research could be described as a field characterised by a 'state of near-anarchy' (Mishler, 1995), and the field has continued to flourish"
(Herlof Anderson, 2008:57)

1. Introduction

Chapters Two to Four of this thesis have highlighted some important gaps in our understanding of individual action on climate change, and Chapter Five has identified two areas of practice that especially warrant focussed study, and could also serve to illuminate broader themes. It has been established that this research aims to address these gaps by answering four broad research questions:

1. How is "action on climate change" understood by the people performing it?
2. How does performance of these practices develop throughout the individual life-course?
3. What are the key processes that influence this development?
4. What lessons can we learn for the promotion of sustainable practices?

This chapter introduces the methodological approach used to answer these questions. The methodology is a relatively novel one, based mainly on narrative inquiry, but adopting certain techniques drawn from life-course methods. Therefore, particular attention is paid to explaining the assumptions, advantages and evaluative criteria of this combined approach. Since narrative inquiry forms the foundation of the methodological approach, the chapter focuses mainly on this topic, including the history of narrative approaches. Life-course research is used as a source of supplementary tools and techniques, so the chapter discusses these specific methods, rather than the whole field of life-course studies.

Section Two explains the criteria that were used to choose a methodology; these were drawn from the two literature reviews (Chapters Three and Four). Despite their different

theoretical perspectives, both sociological and social-psychological approaches seem to suggest a similar set of lessons for new research. Section Three explains why a qualitative approach was adopted, based on these criteria and the Research Questions. Section Four then explains why a narrative life-course methodology was used, while Section Five addresses some of the limitations and challenges of this approach. Section Six summarises relevant ethical considerations, and recent developments in the evaluation of this kind of work, before setting out the evaluative and ethical criteria guiding this research. Since a key evaluative criterion is critical subjectivity, Section Seven discusses issues around researcher positionality and its implications for this research.

2. Criteria for the Development of the Methodology

As has been noted in Chapter One, it was decided early on that this research should adopt an inductive approach, in order to generate new findings that better reflect people's experiences of action on climate change and address gaps in the literature. The reviews of the literature, presented in Chapters Three and Four, also suggest several further considerations for the methodology of this study. Here, four key requirements for the methodology are identified based on these reviews; an in-depth, experience-based approach; a holistic, contextual approach; a dynamic approach; and a sample encompassing diverse people and practices. These formed the criteria by which a methodology was selected.

An in depth, experience-based approach

The review of the social-psychological literature suggested that much previous research has taken a broad-scale approach to the description of environmental behaviour, rather than an in-depth approach to its explanation. However, an in-depth approach, focusing on individual experience, seems necessary if we are fully to understand the motivators and barriers to environmental action, and especially the value-action gap. This review also suggested that research needs to move beyond simplistic models and *a priori* categorisations of behaviour, and explore what environmental behaviours mean to individuals. This suggested that the methods of this study should be grounded in participant's perceptions, rather than pre-conceived frameworks.

The review of the sociological literature suggested a similar conclusion; researchers such as Dolan (2002) and De Certeau (1984) have argued that work should address what people really do, how they do it, and why. A practice approach is normally based on real-life domains of activity, rather than on existing institutional fields such as government departments (Spaargaren, 2003). This can be acheived by asking people about their everyday activities; "*Practices are meaningful to people, and if asked about their everyday life, they will usually describe the practices they are engaged in"* (Røpke, 2009:2490). As part of this, practice researchers generally take an inductive approach to the identification of boundaries and definitions of practices, basing categories on the understandings of participants. Based on these insights, it was determined that the methodology needed to offer an in-depth, experience-based approach. This also reflects the research questions, which focus on individual experiences, memories and meanings, and so demand an approach based on depth, not breadth of focus.

A holistic and contextual approach

Chapter Three showed that researchers in both the behavioural modelling field and the Significant Life Experience field concur on the need to consider environmental behaviour as a multidimensional phenomenon, affected by many variables. To achieve this, a holistic approach is valuable because it means that many different forms of action can be explored (both political and practical), and many different influences. As noted in Chapter Four, practice approaches similarly suggest that individual lives comprise many domains of activity and attend to their interrelations (Spaargaren, 2003), and Time Geographic approaches highlight the need to examine the co-ordination of these different practices within everyday lives (Pred, 1981). Crucially, Chapter Three suggested that methodological approaches should consider both internal, cognitive factors, and external, structural or social factors. Furthermore, as Chapter Four explained, applying Social Practice Theory necessarily means considering individual lives within the context of broader social processes, structures and institutions (Spaargaren, 2003) and taking a "whole system" approach to sustainability (POST, 2010). This suggests that research could benefit from a two-level approach that considers the individual career, the social context and the relations between them. Therefore, it was decided that the methodology needed to be able to consider individual practices in their contexts, and to do so in a holistic manner.

A dynamic approach

The review in Chapter Three also highlights another unresolved issue in the social-psychological literature; the need to understand environmental behaviour as a process. Many studies in the past have focused on present attitudes and actions as if they were static. Furthermore, most of the literature on the development of environmental behaviour reviewed by Chawla (1998) focuses very heavily on childhood experiences, neglecting experiences in adult life. The methods of this research could address this gap, by considering practices as they evolve throughout the whole life-course. Sociological researchers concur that instead of seeing individual actions as isolated events, practice should be understood as a flow of activities within a dynamic landscape of ongoing social processes (Røpke, 2009). This includes exploration of the roots of current practices: *"...interesting light can be shed on practice by looking at the antecedents to practice" (*Mutch, 2003:396). It also entails the recognition that social systems are evolving over time; for example, Dolan critiques a "*neglect of process and time that hinders the potential of presentist solutions"* (2002:176). This argument influenced the development of the Research Questions, which emphasise change over time. Accordingly, it also means that the study should adopt a dynamic, process-based methodology.

A sample that encompasses diverse people and practices

Chapter Three indicated that the general literature on environmental behaviour has considered a wide range of different groups and individuals. However, literature specifically on how that behaviour develops has been surprisingly narrow in focus. Most of the literature discussed in Chawla's (1998) review of this research does not concern "ordinary people" taking action on environmental issues, but rather on environmental professionals, such as conservation organisation employees, and especially environmental educators. Haluza-DeLay argues that to date, too few studies "*have focused on the everyday practices of environmentally-active people",* and that "*we need research in the lived experience of "regular" environmentalism – that of environmentally involved people, not merely the most activist oriented"* (2008:16). This research aims to help to address this gap by sampling anyone taking action on climate change, not only environmental professionals or the most committed activists. The review in Chapter Three also showed that there are a range of frameworks that can be used to classify or typify different forms

of environmental behaviour and segment populations. However, these are not appropriate for use as an initial framework within an inductive approach. Based on this review, it was determined that this study would not apply segmentation strategies in sampling, but would pay attention to participants' socio-demographic characteristics, values and types of practice. Furthermore, it would use a diverse sample of people and forms of practice in order to generate results that were as rich and theoretically generalisable as possible.

3. Why a Qualitative Approach?

As noted in Chapter Three, much past work on environmental behaviour has been quantitative (as argued by, for example, Marcinowksi, 1993). Despite several decades of work, these conventional methods have failed to adequately explain variation across populations, and the value-action gap (Kollmuss and Agyeman, 2002). However, the criteria outlined above, together with the nature of the Research Questions, suggest that a qualitative methodology is appropriate for this study. This section explains the reasons for this decision in more detail. The first reason is that one of the criteria set out above is the need for an in-depth view of practices, with an emphasis on individual experience. A related reason is that Research Question One specifically concerns personal meanings of action on climate change. Martens and Spaargaren (2005) suggest that some quantitative methods do not adequately address the motives and meanings associated with practices, and Smith makes a similar point:

> *"we know relatively little about how people construct and live their routines, let alone how they use them to challenge, sustain or mediate the structures of society in which they are embedded. . . Subjective understanding will not conform to a priori categories, much less settle comfortably into the coding boxes of a questionnaire''* (Smith 1988:20).

These arguments suggest that a qualitative approach is most appropriate, given the focus of this study (Flick, 1998; Silverman, 2005).

Another reason for choosing a qualitative approach, which is closely related to these arguments, is the need for a holistic approach, as explained above. Some model-based

quantitative approaches have attempted to incorporate a wide range of different variables (for example McFarlane and Boxall, 2003). However, Gutiérrez and Rogoff propose that it helps to treat participants' lives as a constellation of factors, rather than try to isolate or "control" independent variables to determine which causes an outcome.

> "*Rather than trying to hold all "factors" but one or a few constant, cultural research requires focus on the dynamically changing configuration of relevant aspects of people's lives*" (Gutiérrez and Rogoff, 2003:23).

Qualitative approaches may even have benefits relating to the need, explained above, for a dynamic approach. For example, De Certeau (1984) argues that statistics are inadequate if a researcher wishes to trace individuals' trajectories of practice over time, as they oversimplify and fragment patterns and may impose inappropriate categories. This is especially significant to this study because Research Questions Two and Three concern how and why change happens. A related reason for choosing qualitative methods is that Research Question Three concerns explanation; the question of what causes behaviour change is very difficult to answer through quantitative methods, partly because there are so many potential factors to examine, including many inter-dependent variables. Many important factors, such as individual psychology and social context, are extremely difficult to quantify. The question of causation is also particularly problematic for quantitative methods, especially as it is not always clear which variable is the cause and which is the effect (see, for example, Voils *et al*, 2008).

Another reason for choosing qualitative methods concerns the specific topic of study. It has been suggested that qualitative approaches are especially suitable when environmental attitudes are the topic of study, and these are an important subject within this study. MacNaghten and Urry (1998) argue that simplistic survey methods have failed to encompass the complex, dynamic and contextual nature of environmental attitudes. In another relevant field, that of mobility research, Røe suggests that work has been dominated by "*quantitative approaches based on the paradigm of the economic man*" (Røe, 2000:103), and argues for an interpretive, qualitative approach to investigate how routines are constructed. Finally, qualitative approaches would be less appropriate than quantitative approaches if a key aim were to represent, or generalise to, a population. However, these are not the objectives of this research, which aims for theoretical

generalisation, as explained in Chapter One. Qualitative approaches often use purposive, rather than representative sampling; this would facilitate the use of the diverse sample which is needed in this study.

4. Why a Narrative Life-course Method?

Having established that qualitative methods were appropriate, it was still necessary to develop a specific methodological approach that would meet the criteria outlined above. This section outlines why a narrative life-course method was developed to fulfil these criteria. It first discusses narrative inquiry, and its advantages, before turning to life-course methods, and then the hybrid approach that was used in this study.

4.1 The advantages of narrative methods

The narrative approach rests on the assumption that people make sense of their experiences through the imposition of story structures (Bell, 2002:207). It entails:

> "*the recognition that people make sense of their lives according to the narratives available to them, that stories are constantly being restructured in the light of new events, and that stories do not exist in a vacuum but are shaped by lifelong personal and community narratives"* (Bell, 2002:208).

Building on this recognition, narrative inquiry uses story-based techniques to explore life experiences and their meanings for the individuals concerned. Advocates often claim that a key reason for adopting a narrative approach is that storytelling is a universal and natural human activity. Bruner claims that narrative comprehension is one of the earliest powers of mind a child develops, and among the most widely used forms of organising human experience and memory (Bruner, 1991). "*People use the narrative form as a kind of heuristic device to sort out the relevant facts and arrange them in some kind of logical order."* (Gudmundsdottir, 1996:296). This is not only true of interactions in daily life, but also of interactions within a research context.

> *"Narrative structures are readily available in our culture and people automatically draw on them in most meaning-making activities. The research interview is one of many such activities"* (Gudmundsdottir, 1996:293).

Interviewees are likely to spontaneously produce narratives about their experiences, and for many people storytelling will be a particularly natural, accessible way of participating in research; "*Most people like telling stories*" (Elliott, 2005:29).

Narrative work originated in literary criticism (Bell, 2002), but the explicit interest in narrative in the social sciences can be traced to the early 1980s (Elliott, 2005). Interest in the approach crystallised with the publication of a collection of essays entitled "On Narrative" (Mitchell, 1981), and another entitled "Biography and Society" (Bertaux, 1991) which offered a manifesto for the use of stories in research. The trend gathered momentum in the early 1990s (Elliott, 2005), and debates about narrative research reached a crescendo during the early years of the new millennium (Mello, 2002). Following the *"rapid emergence and growing pervasiveness of qualitative forms of inquiry that use narrative*" (Hart, 2002:141), some now consider narrative to be "*the new language of the qualitative method"* (Mello, 2002:232). Brett Smith (2007) suggests that there is a consensus that a "narrative turn" has occurred. It has also been suggested that we are now entering a "second wave" of narrative analysis, or a "new narrative turn" (Georgakopoulou, 2006:128).

There is now huge diversity within the field of narrative inquiry: "*there is no single narrative method but rather a multitude of different ways in which researchers can engage with the narrative properties of their data*" (Elliott, 2005:37). Narrative techniques range from highly technical linguistic analysis (such as Gee, 1991) to much more unstructured, interpretive approaches (such as much work on significant life experiences, discussed in Chapter Three). A key divergence is between analysis that focuses on content and that which focuses on structure (Riessman, 2008). The approach of this research focuses primarily on the content of narratives rather than on the structural, linguistic characteristics. This is because the research questions are primarily concerned with individual experiences, rather than the ways people choose to represent these experiences. Narrative analysis not only covers a wide range of procedures, it has also been informed by numerous interpretive or theoretical orientations (including hermeneutics, existentialism, phenomenology and

interactionism) (Roberts, 2004). It is often considered to be linked to broader movements within the social sciences, such as the shift towards reflexive, post-modern research (Squire, 2005).

In addition to the universality of the narrative form, narrative inquiry has several key advantages that make it especially suitable for this research. The first key advantage of narrative inquiry is its holistic approach. Connelly and Clandinin (1990) state that the holistic quality of narrative is one of the reasons why narrative is used within many disciplines. "*Narratives allow researchers to present experience holistically in all its complexity and richness"* (Bell, 2002:209). It is impossible to disentangle and isolate all the possible factors that can affect an individual's performance of practices. Individual attitudes, motivations, experiences and actions can have myriad interrelated causes and effects. Narrative offers an opportunity for the participant to make sense of these processes in a way that is both coherent and meaningful to them, without imposing artificial categories or distinctions on their account.

This holistic approach also takes into account the contexts in which narratives exist. *"…in narrative thinking, context is ever present*" (Clandinin and Connelly, 2000:32). Individual autobiographies are always located within a social and historical context (Bruner, 1991), and narratives can provide ways to understand the interactions between individuals, groups and societies (Fraser, 2004). As McNaghten and Urry (1998) show, responses to the environment are inevitably context-dependent, so this research needs to take into account of the social, cultural, economic and political contexts in which participants' narratives are sited. As noted above, this holistic, contextual approach is vital in addressing the Research Questions.

A second advantage of narrative methods for this research is their emphasis on temporality, and especially the ways that people and their lives change over time: *"…in narrative thinking, temporality is a central feature*" (Clandinin and Connelly, 2000:29). A narrative normally contains a plot – a sequence of causally-related events (Riessman, 2008). Bell (2002) argues that other research methods can illuminate certain points in time, but only narrative methods can encompass the dynamic nature of experiences and interpretations. This is exactly what is required by the research questions, which aim to discover the sequence of events that make up a person's history of action, and the reasons

for any changes. Associated with the concept of plot are the concepts of turning points and "complicating actions" (Labov and Waletzky, 1967) i.e. disruptions to normality. These concepts are also key to answering the Research Questions of this study, which include identifying key experiences or other inputs that shape people's participation over time.

A related advantage of the narrative approach over other qualitative methods is its ability to treat an entire interview as a single unit for analysis. This preserves the temporal sequence of events and experiences, and facilitates the exploration of changes over time. Narrative, unlike coding methods, does not fragment data (Hollway and Jefferson, 2000). Mello (2002) questions this practice (common in qualitative work) and argues that;

> *"Using cohesive narrative sections, or even stories in their entirety, allows the researcher to preserve the integrity of the narrative while at the same time offering greater opportunities for understanding*" (Mello, 2002:241).

Some suggest that the explosion of interest in narrative evidence in the social sciences is partly due to dissatisfaction with rigid interviews that artificially fragment individuals' experiences (Elliott, 2005). As noted above, this temporal approach is important to addressing Research Questions Two and Three, concerning how and why change in practices occurs.

A third advantage of the narrative approach for this research is its focus on understanding individual experience (Bell, 2002) through an in-depth and experience-based approach. Connelly and Clandinin argue that *"…the principal attraction of narrative as method is its capacity to render life experiences, both personal and social, in relevant and meaningful ways*" (1990:10). In particular, Ramirez-Valles suggests that *"Personal changes and the events that precipitate them are often told in a form of narrative"* (1999:25). Narrative methods are also especially useful in offering insights into individuals' understandings of their own identities, because narratives have an important role in the individual construction of self and identity (Smith, B., 2007). Clandinin and Connelly describe narrative inquiry as *"the best way we believe, to think about experience*" (2000:80). Hart concurs, calling it "*…perhaps the best window into how we think*" (2002:142).

In particular, narrative inquiry emphasises participants' voices and knowledge. For Elliott (2005), a key feature of narrative inquiry is the desire to empower participants and allow them to contribute to determining key themes. Narrative approaches recognise the significance of the stories ordinary people tell, and provide ways to make sense of language. A narrative researcher can also pay attention to what is not spoken (Levitt, 2002) - for example, the issues or words that a participant appears to avoid may be significant. *"By entering into dialogue with others, narrative interviewers may unearth hidden or subordinated ideas*" (Fraser, 2004:184). These are important as they may challenge established theories and result in the development of new theories that better reflect people's experiences (Worthington, 1996). Spoken stories are often full of hesitations, qualifications, and overlapping, messy utterances (Coates, 1996). But these are not treated as inferior to other forms of speech – in fact they can be a rich source of understanding. Awareness of the significance of such fragmented speech is particularly important when interviews touch on personal matters (Fraser, 2004). Narrative inquiry, Bell (2002) argues, even allows researchers to access information people do not consciously know themselves. This emphasis on participants' experiences and voices underlies the whole study, and will help to answer all the Research Questions. Finally, sampling strategies in narrative inquiry are often purposive (for example, Shankar *et al*, 2001; Hall and Kiesners, 2005), as required in this study. Based on these advantages, narrative methods seem to meet all the criteria laid out in Section Two.

4.2 The advantages of life-course methods

An additional source of methods that could be used to help meet the above criteria is life-course studies. As noted above, some specific tools are taken from this approach, so it is not necessary to discuss the field as a whole; however, it is useful briefly to establish its background and approach. The origins of the life-course approach can traced to the 1950s and 1960s. After World War Two, the discipline of history began focusing on daily life, while sociology and psychology began focusing on human development and ageing as a continuous process (Giele and Elder 1998a). Together with methodological advances, such as the use of panel studies and large surveys, these changes led to the emergence of a new approach to the study of lives, which focused on the constant process of development throughout an individual's life (Colby, 1998). This new life-course approach suggested that a person's development is historically and culturally contingent, and that adaptation takes

different forms depending on the social context. The approach was controversial during the 1960s, and remained so for some time, largely due to debates about the nature of individual development. However, thinking in psychology has since shifted and the approach now provides an accepted set of background assumptions to much sociological research (*ibid*).

There are three main ways to conduct life-course research: taking a retrospective biographical history at one point in time; resurveying people already surveyed; and using archive data (Colby, 1998). In this study, the first method is appropriate because of its applicability to the research questions and its compatibility with a narrative approach (discussed further below). Retrospective accounts were originally an important element of life-course methodologies, but were neglected when surveys became the dominant research tool. However, there has been a resurgence of interest in these techniques (Giele and Elder 1998b). A particularly influential and useful technique within this approach is the life grid, which Parry *et al* (1998) describe as an accepted and accurate method for gathering retrospective data. The method was first used in Britain for *The Social Change and Economic Life Study* (Gallie, 1988). Since then the life grid method has been extensively developed and tested.

The method involves asking the participant to help fill in a grid or table which represents their life. Time is represented in the first column, either using calendar dates or the participant's age. A number of other columns represent aspects or "domains" of the participant's life. Often, one or two will represent aspects of the key topic of the research. Other columns may represent core life domains such as work and family, as these may affect the specific domain of interest. Prompted by the researcher, the participant helps to fill in the grid with events and experiences in their life. These can also include episodes, turning points and transitions. This exercise can be carried out as part of an interview, maintaining a flexible approach so that events and issues can be discussed as they arise. Participants can also be asked to draw graphs representing certain aspects of their life. Age can be represented on the horizontal axis, and a relevant variable on the vertical, for example, happiness or level of action on climate change. Participants are then asked to discuss the reasons for the shape of the graph (Settersten and Mayer, 1997). As in a narrative approach, a retrospective life-course interview allows respondents to reflect on their lives and interpret their experiences.

Life-course methods share many of the advantages of narrative approaches. The life-course paradigm, as described by Giele and Elder (1998a) emphasises four key concepts: Location (the context in which people live); linked lives (relationships with other people, groups and institutions); human agency (individual choices and subjective experience); and timing (the chronological order of events). Life-course researchers aim to collect data on each of these topics, in order to fully understand an individual biography. They also take a holistic approach to the individual life:

> *"Any point in the life span must be viewed dynamically as the consequence of past experience and future expectation as well as the integration of individual motive with external constraint"* (Giele and Elder 1998b:19).

So it is clear that the underlying principles are very similar to those of narrative inquiry, with both emphasising temporality, context, subjective experience and a holistic approach to an individual's life. This compatibility of fundamental assumptions is vital to the success of a hybrid methodology such as a narrative life-course approach.

However, as well as these similarities, life-course methods also have some further advantages, which will assist in answering the research questions. The life grid technique, in particular, has several advantages for this research. First, the technique is especially useful for exploring links between a specific domain of behaviour and other domains or external events, making it particularly appropriate for the aims of this study, especially Research Question Three (which explores the reasons for changes in behaviour). Secondly, the method is very useful in helping people remember events in a specific area of their life, by referencing them with other events and experiences (Parry *et al*, 1999). Reference to other meaningful personal or public events is a way for participants to recall less memorable aspects of their lives (Brown, 1990).

Thirdly, as the grid is filled in, it provides the researcher with detailed biographical information which they can easily refer to during the interview. When discussion moves across topics and time periods, this will help the researcher follow the account (Parry *et al*, 1999). The grid can also be completed in any order, allowing flexibility in the interview. If participants struggle to remember the timing or ordering of events, the grid can help them clarify these (*ibid*). Finally, this method allows participants to take some control over the

data-collection process. Parry *et al* (1999) found that during the exercise, participants often discovered associations between events or experiences that they had not previously noticed, which they were able to discuss with the researcher. This idea of the interview as a way of co-constructing data, and the valuing of the participant's own analytical input are very complementary to a narrative approach.

The life grid method can be rewarding for participants, because, while challenging, completing the activity can also be very satisfying. This sense of joint accomplishment can be very beneficial to rapport (Parry *et al*, 1999). In addition, drawing graphs can have advantages, helping to show how the participant visualises the trajectories within their life. Finally, in contrast to a purely narrative interview, a life-course interview allows the researcher to ask clarifying questions, and gather further details on certain elements of the account. While a narrative interview may allow the participant to express themselves more freely, and give greater insights into how they understand their experiences, a life-course interview may provide a more clear and coherent picture of the person's life.

4.3 The advantages of a hybrid narrative life-course method

It is clear that both narrative and life-course methods have their separate advantages. However, it could be productive to take elements from both, to create a hybrid methodology which gives the participant a chance to express their own ideas while also allowing the researcher to build a clear picture of events. In hybrid approaches it is particularly important to carefully consider the methodological design, to ensure that the different techniques are complementary. It is important to note that both narrative and life-course approaches encompass a broad diversity of methods. Some narrative research takes a highly technical linguistic approach, while some life-course research uses large longitudinal data-sets. It would therefore be inaccurate to suggest that all narrative techniques are compatible with all life-course techniques. Despite this, there are elements within the two approaches which have clear similarities; notably, retrospective life-course methods have considerable overlap with narrative methods. Elements of narrative and life-course methods have been combined, in various ways, by researchers including Siren and Hakamies-Blomqvist (2005) and contributors to Hatch and Wisniewski (1995) and Priestley (2001).

Here, the ordering of the two parts of the data-collection method is important, since a narrative account would be strongly influenced by an initial life grid exercise, losing the relatively spontaneous flow of ideas that is the goal of narrative inquiry. However, if the narrative section came first, and was followed by a life-course section, the narrative would not be influenced, and the life-course section might actually benefit. The participant would have had a chance to think about their life before completing the grid, so would probably find it easier to begin the exercise. The goal of this study is to answer the Research Questions by eliciting retrospective accounts of a particular aspect of life, with an emphasis on temporal sequences, social context and the meaning of personal experience, within a holistic approach to individual lives. As explained above, both narrative methods and life-course methods can be appropriate ways to achieve this. However, if they are carefully combined, the resulting hybrid methodology could be even more useful than either method alone. The way in which the hybrid methodology is implemented is described in Chapter Seven.

5. Limitations and Challenges of Narrative Life-course Methods

Some criticise narrative-based methods, like many other qualitative methods, for appearing subjective and relying too heavily on the researcher's own interpretations. Doyle recognises a "*strong challenge by epistemologists concerning the problem of truth in narrative research*" (1997:98). Hart describes the *"beguiling nature of narrative inquiry as a window into consciousness",* warning that *"it may merely be a mirror to our own"* (2002:143). Bell states that:

> *"Stories are inherently multi-layered and ambiguous, so the constructed nature of truth and the subjectivity of the researcher (Peshkin, 1988) are particularly evident in this work"* (2002:210).

However, Bell's choice of words is significant – subjectivity is indeed particularly evident in narrative research. But this does not mean that greater subjectivity actually exists in narrative than in other methods, but merely that it is more visible. Life-course methods appear to attract less of this kind of criticism, perhaps due to their greater emphasis on factual data about events and experiences, and their use of tools such as timelines, tables

and graphs. The use of such techniques, as part of a hybrid method, could go some way towards reducing the need for researcher interpretation and enabling conclusions to be clearly linked to the data.

However, there is also a more fundamental issue around the alleged subjectivity of certain qualitative methods. In recent decades there has been an increasing recognition that complete objectivity in research may never be possible.

> *"...objectivity is a chimera: a mythological creature that never existed, save in the imaginations of those who believe that knowing can be separated from the knower"* (Lincoln and Guba, 2005:208).

Doyle (1997) argues that all research is fundamentally subjective and that researchers need to be aware of their own subjectivity. One way of addressing this problem is known as "Critical subjectivity". Critical subjectivity means that the researcher does not try to suppress or deny their own subjectivity, but also that they are not overwhelmed by it. It is consciously recognised, and explicitly dealt with throughout the research process (Reason, 1988). For example, at the start of a research project, a researcher can consider how their own personality and interests might affect the research. They can also keep a journal throughout the research process, to record their experiences and reflect on them (Watt, 2007). When presenting conclusions and evaluating the work, they can discuss any impacts of their identity and positionality.

A criticism sometimes levelled at both narrative and retrospective life-course approaches is that participants may distort the actual facts in their accounts. Freeman (1998) argues that not only does this argument assume (perhaps falsely) that "actual facts" can ever be discovered, but that it also ignores the possibility that narration can remove distortion. Providing a retrospective account forces participants to reflect on their experiences, select salient aspects and order them into a coherent whole – this could be an important advantage of narrative and retrospective life-course methods. Compared to other methods, a narrative-based approach may give a better understanding of the perspective and life world of the participant (Elliott, 2005). Hollway and Jefferson suggest that;

"*While stories are obviously not providing a transparent account through which we learn truths, story-telling stays closer to actual life events than methods that elicit explanations*" (2000:32).

Aside from deliberate distortion, there are also issues around the accuracy and precision of recall (Dex 1991). This criticism, however, can apply to any kind of autobiographical data, regardless of research design. Settersten and Mayer (1997) argue that one-time retrospective life-course approaches offer an excellent alternative to longitudinal designs, especially for those interested in the life-course as a whole. As described above, the life grid technique can be particularly beneficial in promoting recall, even of less memorable aspects of life (Parry *et al*, 1999). Some also claim that internal validity is improved by the use of narrative-based methods because;

"*participants are empowered to provide more concrete and specific details about the topics discussed and to use their own vocabulary and conceptual framework to describe life experiences*" (Elliott, 2005:23).

So combining narrative and life-course methods may help promote both accurate recall and the free expression of personal experience.

Connelly and Clandinin (1990) state that a frequent criticism of narrative-based work is its focus on the individual over the social context. However, much recent narrative work does focus heavily on the contexts in which narratives are placed. "*Narrative researchers retain an awareness of social conditions as they consider how culture, and social structures, surface in the stories participants and researchers tell"* (Fraser, 2004:182). Life-course research, similarly, stresses "location" or social context as a fundamental underlying principle. There are also practical challenges associated with a narrative-based approach, for example, Bell (2002) notes that the time required means this work cannot involve a large number of participants. However, this is not an issue for this study, which aims to draw in-depth understanding from a small number of cases.

6. Ethical and Evaluative Issues in Narrative Life-course Research

While ethics and evaluation have conventionally been seen as two separate issues, recent debates about quality in qualitative research have challenged this dichotomy. For example, Lincoln (1995) blurs the boundaries of ethics and evaluation, and offers seven new standards for qualitative research, including (among others) awareness of positionality, voice, critical subjectivity and reciprocity. The standards of ethics and evaluation adopted by this research are discussed below. However, it is useful to first consider some key issues around ethics in narrative work, and then issues around its evaluation.

The ESRC's Research Ethics Framework (ESRC, 2010b) sets out ethical standards applicable to all social science research, and forms the underlying ethical framework of this research. However, narrative-based research requires particularly careful consideration of ethical issues, because it involves close collaboration with participants, and often the development of a trusting relationship between researcher and participant (Bell, 2002). The interview can feel like a friendly conversation, leading people to open up, sometimes on very personal issues (Elliott, 2005). Because sharing stories can be a personal experience, disengagement after the research can be hard (Bell, 2002). Issues arise not just in interviewing, but also in analysis – the researcher's interpretation might challenge a participant's understandings (Elliott, 2005). However effectively participants are able to feed back, the end result will always be the researcher's interpretation of their experiences (Bell, 2002). Researchers need to carefully consider the extent to which they are imposing meanings that the participants might not accept, and find ways to manage this tension.

Furthermore, participants might be surprised to find the research discussing issues around structure and identity, especially if they had initially believed it would focus on the content of their accounts. It might be hard to explain this beforehand, especially since narrative-based research often evolves over time (Elliott, 2005). Elliott also points out that it is important to remember that having people as more active participants does not automatically make a more ethical method – it means greater sensitivity is needed to ethical issues. Hollway and Jefferson (2000) suggest three ethical principles for narrative-based research: honesty, sympathy and respect.

The evaluation of narrative-based research is an area of academic contention. Some suggest that conventional evaluative criteria such as validity, generalisability and reliability can be re-theorised so as to be relevant to qualitative and narrative inquiry (Hart, 2002). Those who suggest conventional criteria can be reformulated have suggested two criteria for methodological rigour in qualitative research, including narrative inquiry: trustworthiness and authenticity. Trustworthiness criteria are applied to the quality of the results, while authenticity criteria refer to the nature and quality of the research process. Trustworthiness includes credibility, transferability, dependability and confirmability, and these criteria are used to assess the truth value, applicability, consistency and neutrality of findings (Lincoln and Guba, 1985). Authenticity covers issues of representation such as inquirer bias, multivocal balance, respect, complexity and potential for change and empowerment (Guba and Lincoln, 2000).

However, others strongly argue for the inapplicability of conventional standards. For example, Mishler (1990) claims that the standard approach to validity assessment is largely irrelevant to "inquiry-guided" or qualitative research, and argues that conventional criteria should not be applied to such research. Hart argues that, for interpretive approaches such as narrative, "*Questions about hypotheses, random samples, data analyses and conclusions are inappropriate, naive and perhaps even ignorant*" (2002:155). Some argue that the "paradigmatic differences" are too great – qualitative approaches such as narrative rest on entirely different ontological and epistemological foundations (Hart, 2002:149), in other words, qualitative approaches are relativist and interpretive rather than objectivist and positivist. Narrative-based methods have been described as *"…always exploratory, conversational, tentative and indeterminate"* (Hart, 2002:142). This means that;

> *"…stories don't seem to lead to warrants in the conventional sense that we have come to associate with "science". They lead, rather, to insight and interpretation within a multiplicity of renderings and meanings*" (Doyle, 1997:95).

Because of these differences, Doyle (1997) suggests narrative-based research should aim for "provisional models" that generalise within limits, and remain rooted in particular contexts. Others aim for "thick" or "rich" descriptions (Fraser, 2004).

> *"…narrative researchers are not tempted to sanitize research by appealing to scientific facts and linear trajectories…This means that we do not use the language of certainty but instead present ideas in ways that are more tentative, circular and multiple"* (Fraser, 2004:183).

Bruner (1991) argues that narrative constructions should aim to achieve verisimilitude, not empirical verification. This is related to the concept of theoretical generalisation (Ritchie and Lewis, 2003), as previously discussed.

Mishler (1990) stresses the importance of transparency – data should be available to other researchers, methods should be made explicit, and direct linkages should be shown between data, findings and interpretation. Connelly and Clandinin (1990) state that researchers should always remain conscious of the interpretive choices they make, and discuss these openly, alongside other possible interpretations. Some also suggest that narrative research should aim to challenge existing models and theories: "*Narrative research should not only reflect "reality" but also challenge taken-for-granted beliefs, assertions and assumptions, including those made by revered social theorists"* (Fraser, 2004:182)

Bell (2002) states that definitive criteria for evaluating narrative-based research are still under discussion. Others, such as Bochner (2001), argue that it is impossible to develop a single standard set of criteria. Hart suggests that;

> "*It is more productive to approach quality issues in research, from the perspective that a multiplicity of goals imply multiple ways of assessing quality. There is no one right way to do research"* (2002:154).

Mishler claims that the process of validation, in practice, does not rely on formal rules or standardised procedures, but rather on researchers' "*tacit understanding of actual situated practices in a field of enquiry"* (1990:415).

Since the debate between those advocating revised conventional criteria and those arguing for entirely new criteria (or none) is still continuing, it seems reasonable to adopt relevant concepts from both schools of thought. Connelly and Clandinin offer a practical and helpful

recommendation: "*Currently in narrative inquiry it is important for each researcher to set forth the criteria that govern the study and by which it may be judged*" (1999:139). (However, they also point out that others may legitimately adopt other criteria by which to judge the work). In accordance with this recommendation, concepts were drawn from various authors to develop the following ethical and evaluative criteria, which were adopted for this study. While using some concepts from the conventional "validity" approach, such as triangulation, these standards are mainly drawn from the literature on new criteria for qualitative research. These criteria are adopted in addition to those set out in the ESRC Research Ethics Framework (ESRC, 2010b).

Ethical and Evaluative Criteria

1. **Respect for participants**
   Be open about the research, and their role. Ensure confidentiality is maintained, and that participants freely consent to each stage. Invite feedback throughout the process, explaining how it will be used. Be sensitive to potential impacts on participants, especially at the end of the study. Treat them as active collaborators in the research process.

2. **Critical subjectivity**
   Be transparent about researcher positionality and discuss how this may affect the research.

3. **Transparency of data**
   Retain tapes and transcripts. Explain transcription choices. Carefully number lines, sections and transcripts. Present sections of verbatim text in the results, explaining the context.

Continued overleaf

4. Transparency of method and sampling

Record methodological decisions and discuss them. In particular, discuss limitations, sources of bias and other possible alternatives. Make it explicit that sampling is purposive, not representative. Explain how sampling is theoretically justified, and discuss the implications of the sampling method for the results.

5. Transparency of conclusions

Explain how each conclusion is grounded in the data, using examples. Discuss alternative interpretations.

6. Quality of conclusions

Conclusions should include meaningful overarching themes, but remain grounded in context.

7. Participant evaluation

Use participant feedback to evaluate the quality of results. Results should resonate with participants' own experiences and ideas. Any divergence between the researcher's and participants' interpretations should be discussed. Present the results of this evaluation in the final report.

8. Triangulation with literature

Compare results to existing literature, and discuss any divergence.

9. Implications and relevance

Discuss whether findings challenge any existing theories. Explain any policy implications.

These criteria are discussed further in the following chapter, which explains the research methods in detail. However, the issue of critical subjectivity and researcher positionality should be addressed prior to any further discussion, as it is fundamental to every aspect of the research.

7. Researcher Positionality

The most relevant aspect of researcher positionality for this study concerns my participation in environmental activism. As I have been involved in action on environmental issues since the age of thirteen, the research topic has considerable personal interest and significance. I have been an active member of several groups, both conservation-focused and campaign-focused, and worked as a volunteer for a national environmental organisation. This concern for the environment has guided my academic work to date, and was a key motivating factor in the initiation of this research. The principle of critical subjectivity means that it is important to consider the implications of this positionality for this research, and to be transparent about the relationship between activism and research in this study. This section sets out my approach, after first discussing the risks and limitations, and the advantages and opportunities that are presented by this positionality.

7.1 Risks and limitations

There are a range of risks and limitations associated with any "insider" research, including difficulties associated with balancing an insider role and a role as a researcher (Breen, 2007). The potentially personal nature of the data can result in difficulty in focusing on the interview process (Kanuha, 2000). Furthermore, the process of interviewing can be complicated by the assumption among participants that the researcher already knows the answers (Breen, 2007). Kanuha (2000) found, when reading her interview transcripts, that much of her interactions with participants had gone unsaid, with meaning being communicated through a shared understanding of vague comments and incomplete sentences. Such a lack of clarity may lead to problems during the analysis and presentation stages of the study.

Other problems may arise during interviews. For example, it is important that the interviewer does not present themselves as very knowledgeable about the issues, or extremely active and environmentally-friendly. This may result in the participant feeling insecure and less able to talk freely about their own attitudes, actions and experiences. There are also risks associated with the interviewer expressing any of their own opinions. Firstly, if the participant disagrees, they may feel unable to say so. Secondly, even if the

interviewer believes they are simply supporting the participant's own views, they may be making unfounded assumptions. Also, expressing such opinions may affect other parts of the interview - the participant may make assumptions about what the interviewer wants to hear (Butz and Besio, 2004).

In general, it is vital to remember that there is no single universal set of environmentalist attitudes and experiences. Familiarity can provide an "illusion of sameness" with potentially damaging results (Pitman, 2002:285), so it is important that the researcher does not make incorrect assumptions based on their own background knowledge or experience (Breen, 2007). The same principle applies to analysis as well as to fieldwork. The researcher must be especially vigilant when interpreting data, to ensure they do not become complacent and assume they automatically know what the text means. They must ensure every conclusion is grounded in the data, and use rigorous participant evaluation to check their interpretations. Finally, if the researcher is using their existing networks of contacts as the basis of sampling, it is important that they ensure the sample meets the theoretical needs of the research, and is not determined solely by convenience. They should consider whether they can achieve the required diversity through such a strategy, as well as considering the implications of using participants who know each other, or who may know the researcher themselves.

7.2 Advantages and opportunities

Malone (2006) argues that in research by activists, personal experiences can be a valuable asset to the research process. As mentioned above, the researcher may have existing networks of contacts which could be used as a starting point for sampling. If the strategy is carefully planned and implemented, these contacts could be an advantage. An in-depth knowledge of relevant groups and individuals could actually result in a more diverse sample, as the researcher may have access to a greater range of initial contacts than a newcomer to the field. The fact that they are recognised, or perceived as an insider, may result in people being more willing to participate and to pass on their own contacts.

There may also be advantages during the interview itself. Bonner and Tolhurst (2002) suggest that key advantages of being an "insider-researcher" include a superior understanding of the culture of participants and the ability to interact naturally with them.

In narrative research it is particularly important to establish a rapport with participants - this may be easier if the researcher has some shared values and experiences. This may also make it easier for the participant to express personal feelings (perhaps feelings which they fear might be misunderstood or denigrated by non-environmentalists). In past research, participants have trusted me enough to talk about their illegal activities as environmental activists, even on record, perhaps because I was seen as "on their side".

Some suggest it is important that the researcher feel sympathy with the participant (Hollway and Jefferson, 2000) - this might come more naturally if they share some values and experiences. If the researcher has personal experience of the topics in question, they may be in a good position to engage actively with the participant's account. Their personal background knowledge might help them identify which elements of the account would be useful to develop and explore. As noted above, what is left unsaid in narrative interviews can be very important, but the researcher must have some degree of understanding in order to be aware that something is being left unsaid. Having some shared values and experiences might also help in the interpretation of data - bearing in mind the risks mentioned above.

7.3 Implications

The above discussion has highlighted several risks which must be taken into account during the research process - in particular, it is vital not to make assumptions about participants based on a perceived "universal environmentalism". However, if the research is carried out in a reflexive and sensitive manner, there could be advantages associated with a familiarity with the field. A key task is to find the right level of openness about the researcher's position, and in this study, skills and tactics in this area were developed through training and pilot interviews.

It is also important to clarify the relationship between research and activism in this study. Conventionally, research and activism have been seen as entirely separate activities, with any overlap being seen as a problem, and a threat to validity. This separation has resulted in a lack of analysis from the perspectives of those participating in social and environmental action, with activists feeling a sense of alienation from the "ivory tower" of academia (Heaney, 1996). Building bridges between action and research could have benefits for both

sectors - those engaging in environmental action, or trying to engage others, may benefit from academic insights into environmental behaviour. At the same time, the academic field could greatly benefit from a greater recognition of and engagement with grassroots perspectives. Work conducted by researchers with an "insider" perspective on environmental activism could contribute to this exchange of knowledge.

While some have been calling for greater interaction between academia and activism, others have taken the argument further, suggesting that the conventional distinction between them may be misleading. In recent years there has been a growing interest in the links between activism and research, with many suggesting that they should not be seen as separate activities: "*Earlier assumptions that academic endeavours and activism were quite distinctive and separate pursuits which had to be forcefully and problematically combined have been dispelled"* (Pain, 2003:652). Some even suggest that activism is embedded, to an extent, in all academic activities (Maxey, 1999).

This focus on academics as "professional activists" has been accompanied by an exploration of new approaches to research (Fuller and Kitchin, 2004). Recent theoretical and empirical work has covered a spectrum from policy critiques through to research that is more collaborative, participatory and activist in nature (Pain, 2003). Pain suggests that much work combines several of these different elements, for example, developing "*critical commentaries on policy which are informed by deeper engagement*" (2003:654). This echoes the idea of phronetic research mentioned in Chapter One. So there are a range of possible approaches, from those maintaining a conventional "academic distance" from the research subject, through to those in which activism and research are joint goals.

This research does not adopt Malone's (2006) approach of merging research and activism and participating in both simultaneously. The approach here is more similar to that adopted by a special issue of the *Journal of Social Issues* in 2000, on "Promoting Environmentalism". The editors state that the issue aims to *"provide a variety of approaches for understanding, predicting and changing environmentally significant behaviour, all with the goal of promoting environmentalism"* (Zelezny and Schultz, 2000:370-371). This study, similarly, has the aim of generating knowledge that may contribute to the development of policy - not of generating change through the research process itself. In this study, I aim to employ rigorous research methods, recognising the

risks and opportunities associated with my positionality as an activist, in order to produce results that both meet high academic standards and contribute to the promotion of action on climate change.

8. Chapter Summary

This chapter has outlined four criteria by which the methodology was selected, based on the literature reviews and Research Questions. It has explained why qualitative methods are appropriate to this study, and introduced the narrative life-course approach, a methodology that invites participants to tell stories about their lives as a means of exploring individual experiences and their meanings. Key advantages of this approach for this research are its holistic approach, its emphasis on temporality, its focus on individual behaviour and experience and its commitment to participants' voices and knowledge. An important challenge for any qualitative researcher is dealing with issues of "objectivity". Critical subjectivity offers a means of managing the inevitably subjective nature of the research process. While evaluative criteria for this kind of research are still a subject of debate, a reasonable approach is to adopt appropriate criteria from the literature, and make those criteria explicit. Nine criteria are laid out here, which guide this research, and which are suggested as evaluative criteria by which others may judge this work. Finally, in accordance with these criteria, the issue of researcher positionality has been discussed, together with its implications for this research. The next chapter explains how these methods were implemented in this research.

Chapter Seven

Implementing Narrative Life-Course Methods

"...there is no single narrative method but rather a multitude of different ways in which researchers can engage with the narrative properties of their data"

(Elliott, 2005:37)

1. Introduction

The previous chapter introduced narrative and life-course approaches and explained their suitability to answering the research questions of this study, which are:

1 How is "action on climate change" understood by the people performing it?
2 How dos performance of these practices develop throughout the individual life-course?
3 What are the key processes that influence this development?
4 What lessons can we learn for the promotion of sustainable practices?

This chapter describes how the combined method was applied at each stage of the research process. It is important to note that the research design used on-going, iterative phases of data collection and analysis. This was because in narrative research the results of each strand of analysis often suggest directions for further exploration (Fraser, 2004). Glaser and Strauss (1967) also suggest that on-going analysis and data-collection mean that findings grounded in the data can guide and inform future fieldwork, so the analytical process is driven by the researcher's developing understanding. This iterative design means that the different research tasks did not occur in a simple sequence. However, for simplicity, this chapter divides the process according to the type of task or methodological issue, using a roughly chronological order. It explains the gaining of ethical approval and selection of participants in Section Two, then the gathering of data in Section Three. This section also explains why it was decided that exemplars should be used; this decision was a modification of the research design that occurred during the data collection phase. The

chapter then considers the analysis in Section Four, evaluation in Section Five and presentation of the findings in Section Six.

2. Ethical Approval and Sampling Strategy

The first step in the research methodology was to gain approval from the University of York's Ethics Committee. This involved providing information on all stages of the study, with a focus on issues of potential harm, confidentiality and data protection. Based on these plans, the Committee asked for further assurances or information on a few minor issues, and then approved the work.

The next step was to design a sampling strategy. Narrative-based methods almost never use representative sampling; the focus is normally on depth of understanding and building theory, not generalisation to a population (Onwuegbuzi and Leech, 2007; Flick, 1998). In this study, sampling was purposive and theoretical, aiming to include a diverse range of people, as noted in Chapter Six. However, a decision had to be made regarding the precise forms of diversity that would be sought, and that would be used to select participants for the sample. The key forms identified were those involving age, gender and forms of action. Age and gender were used because they were identified in the literature review (see Chapter Three) as potentially important socio-demographic characteristics linked to environmental behaviour. These are also simple and non-intrusive to use as sampling criteria, because they do not involve asking any potentially sensitive and personal questions, such as enquiries about ethnicity, socio-economic class or income, marital status or religious/political affiliation. In some cases, no questions need to be asked in order to ascertain gender and approximate age; a researcher can sometimes judge the gender of a potential participant simply from their name, and in certain cases can estimate their approximate age based on an online photograph or profile, or a prior meeting. (Of course, such inferences should be made with caution). Also, in the snowball sampling process (described below), participants are generally willing and able to provide these basic details about the contacts they suggest. Diverse types of action were needed to generate rich data, and fully answer the research questions.

Another important decision concerned the number of participants that could be included.

It was decided that this study should use a small number of cases, but analyse each case in considerable depth. This was necessary in order to gather the holistic, contextual, temporal and experience-based data which was needed to address gaps in the literature and answer the Research Questions. If the study were to encompass all forms of action that people defined as relating to climate change, and also to cover their whole lives, this breadth of scope would not be tenable across a large number of cases. Therefore it was decided that sixteen participants would be sampled; this would provide an adequate number of cases so that diverse ages, both genders, and various forms of action could be included. At the same time, it would still allow the necessary depth of analysis. If a larger sample had been used, the methodology would have had to be adjusted accordingly; for example, using shorter interviews. After consideration, it was decided that this would be unduly detrimental to data quality. Small samples are common in narrative inquiry (Chase, 2005), and are appropriate for exploratory studies such as this. However, it is important to note that if this study were to be repeated, with more time and resources, a larger sample size would be a way to improve the rigour and generalisability of findings.

Reflecting on the data gathered, it is clear that these sixteen cases generated a large number of relevant concepts; in fact, the analysis presented in Part Three of this thesis is just a small fraction of the useful work that could be based on this data. Many potential directions of inquiry could not be pursued simply due to constraints of time and thesis length. These facts suggest that the small number of cases is justified, and does not limit the value of the work. However, it is important to treat the findings appropriately; they do not represent any given population. Rather, in the tradition of much small-scale, qualitative work (Butler-Kisber, 2010), the study intends to raise questions, suggest some possible answers, and inform further work. As noted in Chapter One, it aims for theoretical generalisability (Ritchie and Lewis, 2003); this means it is concerned with the utility and relevance of ideas, not with representation of a population.

There were three criteria for inclusion in the sample; these were 1) that participants must be over eighteen, 2) live in the sample area, and 3) define themselves as doing something to address climate change. Criterion one, that participants should be over eighteen years old, was introduced for practical and ethical reasons and also because younger people would not be able to provide the same quantity of life-course information. Criterion two meant that all participants must live within a fairly small geographic region. This was

necessary because of the small sample size; with only sixteen participants, including participants of both genders and a range of ages and forms of action, it was important to minimise other sources of variability. Selecting people in one area helped to provide a certain degree of commonality. For example, to some extent they would share a political context, be exposed to the same media, and share experiences relating to the area, such as the experience of local flooding.

There were no significant reasons why any particular area should be used, because the aim was not to represent any specific population. Therefore, the particular area that was selected was chosen mainly for reasons of convenience. The area for the fieldwork was defined as a city in Northern England and its surroundings; it should be noted that an urban rather than a rural area was used, which may influence findings. Certain characteristics of the study site might also affect the results. For example, it has a relatively good cycling infrastructure, and many participants had reduced their car use since moving to the city. This suggests that if the study were repeated in other locations, some practices might be different.

Regarding criterion three, it was noted in Chapter One that studying cases in which practices that are “pro-environmental” or “sustainable” have emerged (which could be considered “success stories”) can suggest lessons which, if tested widely, could support future engagement interventions. For these reasons, a strategy based on sampling people acting on climate change was adopted. However, it is important to recognise that their trajectories of change, and the processes driving them, will be different to those of people who are less environmentally-aware (as discussed in Chapter Three, where segmentation approaches were outlined). For this reason, results cannot simply be extrapolated to the general population. In particular, the types of behaviour which these people engage in tends to involve higher levels of time, energy and commitment, than actions generally taken by the public to address climate change. Less-engaged people tend to focus on consumer-based actions or household efficiency measures when they do engage in environmentally-responsible behaviour, while political action is associated with high levels of engagement (Defra, 2008a). Therefore, the careers experienced by less-engaged people could take different forms to those of participants.

However, Chawla (1999) suggests that similar processes occur in the biographies of people taking “large” and “small” forms of environmentally-responsible behaviour, and it could plausibly be hypothesised that the type of processes highlighted here might also play a part in the environmentally-responsible practices of less-engaged people. This suggestion seems reasonable, given that similar factors seem to have significance in affecting behaviour across a range of population groups and domains of practice; for example, health (such as Booth *et al*, 2000), safety (such as Nelson and Moffit, 1988) and consumption (such as Evans *et al*, 1996). This hypothesis could be tested using broader-scale research methods, or repeating the study with less-engaged groups. Another related limitation is that in this study there were few narrated occurrences of regression or decline in levels of action; probably due to the sampling of currently-active people (though narrative conventions might also play a part). How and why people move away from pro-environmental practices is an important area for further study, with major policy implications. It is also important to note that, in keeping with the experience-based research approach, people could take part if they *defined themselves* as taking action to address climate change, rather than if they met external criteria.

The first step in selecting the sample was to build a list of contacts, or potential participants who met these three criteria. The main strategy for creating this list involved conducting keyword-based searches using the internet, to find relevant groups and organisations. These could include hobby and interest groups, local community groups, campaign groups and voluntary groups. Groups and individuals were also sought by other means, such as through discussion forums and social networking sites, and stalls at local fetes and events, as well as through pre-existing contacts. It was important that offline routes were used to ensure that the sample was not limited to internet users. An initial call for participants was sent to all contacts via email, or phone calls followed by letters for offline contacts. This message briefly explained the research, and invited people to reply if they met the sampling criteria and wished to take part.

Because of the iterative process, sampling took place in several phases, interspersed with phases of data-collection and analysis. For the first phase of sampling, a brief online survey (Appendix Two) was used to gather some basic information on participants’ characteristics and practices, and aid the selection of a diverse sample. Selected people were invited to give an interview (Appendix Three). The selection process involved first checking that the

people met the three criteria above, and then choosing a relatively diverse set of people, based on age, gender and level of action. Three men and three women, in various age-groups and taking various forms of action, were selected in this phase. These were then asked to suggest other contacts, in a snowball sampling strategy (O'Leary, 2005).

The snowball strategy was adopted (alongside the strategy of directly contacting people) for several reasons, especially the need to use diverse sampling strategies to reach a wide range of people. Using a snowball approach alongside online and offline routes meant there were three different ways to reach people, and so reduced potential problems of bias associated with any one strategy. Specifically, snowball sampling might help access those who do not take prominent public roles (such as a group contact role), but are involved in less formal ways, and might be missed by other methods. Snowball sampling also meant that preliminary information about a potential contact could be gathered from an existing interviewee, and could help feed into participant selection. Convenience was a final reason for including this method. Because participants could provide basic information about the contacts they provided, a survey was not necessary in this part of the process. Some new contacts were also found through online and offline methods at this stage.

It was particularly easy to find participants using online methods (such as Facebook groups and forums). However, offline methods were also used, in order to ensure the sample did not only include young people and those with access to the internet. While several people were recruited through offline modes, most of these also had internet access. In the final sample, one person was included who did not use the internet. This may, to an extent, reflect the nature of the environmental movement in the UK, which in general has adopted online tools (Pickerill, 2003). Throughout the sampling process it was relatively simple to find people that met the three criteria; this meant that as sampling progressed, particular participants could be deliberately selected from the list of contacts in order to produce the diverse sample that was desired. Again, age, gender and level of action were the key variables considered in this selection process. For example, when the sample included more women than men, male participants could be selected from the list for future interviews.

The snowball sampling method proved to be an effective way to reach people who met the criteria, generating many potential contacts. However, it may have had ramifications for

the sample produced, giving access only to those who had connections with other active people. In addition, this method means that the more links a person has within the community, the more likely they are to be suggested as an interviewee (Heckathorn, 1997). Because of this, the snowball sampling method may have inevitably highlighted the role of social networks and interaction by accessing those campaigners most embedded in such networks. While social processes are clearly important to the people studied, further research, using more independent sampling processes, would be needed to confirm the generalisability of this finding. To try to reduce this effect, the strategy used a mixture of snowball sampling and other methods (such as online contacts and street/fair stalls). Three participants seemed to have no contacts with any of the other participants (though for reasons of anonymity this could not be confirmed through interviews), and two of these were not engaged in any local groups relating to climate change. Among the other participants there was a mixture of people who were very highly connected and people who had just a few links with other active people. This suggests that the sample contained a reasonable mix of people with different degrees of connectedness.

An advantage of the snowball method was that if several people suggested the same person, this served to indicate that this person might represent a very high level of action, and a node in the network. This kind of information is useful in the selection of diverse participants. These highly-networked people might fall into Gladwell's (2000) classes of "connectors" and "mavens" and Wenger's (1998) class of "brokers". Such people form an important part of the sample, and make a valuable contribution to the results. Another benefit of the snowball method is that the person providing names can provide some background information about the suggested contact, removing the need for an initial survey to find out age, gender and approximate level of action. Similarly, it can contribute in a small way to safety, as the first person acts almost as a "reference" for the acquaintance they suggest (though this is no substitute for rigorous safety procedures). An alternative approach to sampling would have been to interview several members of each household. This would have provided more detailed information on daily routines, and especially on the intersection of different people's life-paths. However, it would inevitably have entailed considering only a very limited number of households, due to time constraints. Since household routines and the entanglement of different people's lives were just two of many dimensions of the research topic, this approach was not considered to be the most appropriate. Another alternative would have been to define the sample

more narrowly; for example, including only the members of a specific community group, only people taking a specific form of action, or only people in a particular age group. However, this would have reduced the diversity of people included, as well as the forms of practice, and the experiences and processes of change that could be explored. After consideration, it was determined that such *a priori* exclusions would unduly limit the scope and utility of the findings.

Table Three shows the ages and genders of all sixteen participants. The names given here are the pseudonyms used throughout this study.

Table Three: Ages and genders of participants

Age:	**21-30**	**31-40**	**41-50**	**51-60**	**61-70**	**71-80**
Male	Josh Ryan	James Gary	Ray Giles	Jeremy	Paul	
Female	Josie Gillian	Kristina Carrie	Alison Kitty		Patricia	Maggie

This shows that that the sample contains more people under fifty than over, which could be due to the sampling strategy. The internet was used as part of the recruitment method, and there are age differences in use of this technology. Also, snowball sampling can lead to an imbalance in age groups; if participants suggested their acquaintances as interviewees, these are likely to include predominantly people of a similar age. However, it is important to note that the strategy was not intended to produce a representative sample of any population, but rather to achieve a relatively broad spread of participants. Also, the imbalance may be partly due to the characteristics of the environmental movement in the study area.

Turning to ethnic background, all participants were white. Again, a small snowball sample may limit the diversity of participants. However, it is possible that this is not a bias in the

sampling strategy; the sample site is not a very diverse city (City Council[4], 2001), and the mainstream UK environmental movement still involves relatively few people from ethnic minorities (Agyeman, 2001; Ray *et al*, 2003). This reflects ideas raised in Chapter Three concerning socio-demographic differences in environmental behaviour. However, it should be noted that results may be limited in their applicability for this reason. One participant was from Ireland and another from a different European country; the rest were British.

Several participants described their upbringings as working class or financially unstable; however at the time of data collection, relatively few participants seemed to fall into the lower socio-economic groups. Again, this is potentially linked to the characteristics of the UK environmental movement (Ray *et al*, 2003). Two were retired, two were full time carers for their respective children, and one was a student. Seven had children, of which four had young children living at home and one was expecting a baby. Participants held a wide range of religious beliefs, including Christianity, atheism and paganism, and political affiliations including Socialism, Conservatism and support for the Green Party.

Chapter Six established that this study aims to include a diverse sample not only in terms of the people included, but also in terms of the types of action they take. This is necessary in order to maximise theoretical generalisability and fully answer the Research Questions. Therefore, the forms and levels of action taken by participants were considered throughout the sampling process, and efforts were made to select participants who were engaged in a range of different ways. As noted in Chapter Three, it is sometimes helpful to divide practices into the categories of political and practical action, and this distinction was useful in considering which potential participants to select. To maximise diversity, sampling aimed to include people taking political action and people taking practical action. It also aimed to include people taking low levels of action and people taking high levels of action. The research was relatively successful in these aims, as is shown by the visual representation in Figure Five. This figure separates political action and practical action, and shows each participant's approximate current level of action in each field, based on the data gathered. The categories shown here are not intended as rigid or discrete, but as indications of levels of action relative to other participants, which may be helpful in considering the findings of this study.

[4]The city in this reference is not named to preserve participant anonymity

Figure Five: Participants' current levels of political and practical action

		Practical action		
		Low	Medium	High
Political action	High	**Josh** **Josie** **Ryan**	**Kristina** **Carrie**	**Alison** **Giles** **Kitty** **Gary**
	Medium	**Paul**	**Patricia**	**Ray**
	Low	**James** **Maggie**	**Jeremy**	**Gillian**

Here, a low level of political action means that a person may be a financial supporter of a campaign group, or send occasional emails, or be involved in community groups that relate only very indirectly to their action on climate change. A medium level of political action means that a person may be involved in some campaigning or community engagement groups or activities, but generally not as a key organiser or highly-committed participant. A high level of political action means that campaigning is a very significant part of the person's life, and they are probably involved in several different organisations or campaigns, taking on the role of an organiser or regular and committed participant.

Turning to practical action, a low level means that, while they are engaged in some practical lifestyle change activities, these are not of extremely high importance in their life, and do not demand high levels of time and effort. For example, they may take some fairly simple actions such as recycling, saving energy or reducing car and use and flying. A medium level of practical action means a person spends more time and energy on these practices, or takes a greater variety of actions, perhaps including some more difficult actions such as home renovations. Alternatively, they may have a job relating to

sustainability, which is also included here as a form of practical action. Those with a high level of practical action see it as a very important aspect of their life and take a wide range of actions, devoting much time and energy to these. They may take high-commitment actions such as installing home renewable energy, keeping chickens, using compost toilets and considering the environment in major life decisions such as where to live. The figure shows that there was a high diversity of levels and forms of action taken, and that the sample included both people who are only marginally involved in action on climate change, and people who are deeply committed to it. This figure also provides useful context for the following chapters, where individual cases will be drawn upon to illustrate the findings.

Despite some limitations, the experience of implementing the sampling strategy suggests that it was appropriate for the research questions and approach adopted, and that it produced a relatively diverse sample of people who were able to provide rich and plentiful data. An improvement would have been a more systematic mapping of participants' connections to each other, so that network effects could be more thoroughly evaluated and explored. However, this would have raised challenges to participant anonymity. A further improvement would have been a slightly greater number of people aged over fifty; especially as these people are more able to provide a "long view" of their action over time.

3. Data Collection

3.1 Pilot studies

As discussed in Chapter Six, there is a great diversity of narrative techniques. To determine which techniques were appropriate to answer the research questions, pilot studies were essential. Initial pilot studies involved testing interview questions and life graphs and grids on acquaintances, as well as writing my own biographical account of changes in action over time, in order to gain a basic understanding of the process. This idea builds on the principle from survey and interview design, that when designing a question, the researcher should examine it from the point of view of a potential respondent (Hague, undated). This had several benefits; not only did it serve as a sample text for experimenting with analytical techniques, but it also provided insights into the experience of being a participant, and suggested lessons for the development of the methodology.

One lesson of this initial pilot study was that telling a life-story of this kind is a surprisingly difficult task. There is a great deal of information to recall and assemble in a logical and coherent account. Various techniques were identified to address this issue. First, it was clear that the participant should know about the interview topic in advance so they could think about the subject. (For these research questions, spontaneity of the narrative was not a key priority; a clear and comprehensive account was more important). It was also clear that towards the end of the interview the participant would need an opportunity to think about what they had said, so they could clarify and fill in any gaps. As discussed in Chapter Six, another effective way of helping people organise their thoughts and clearly communicate the sequence of events is to use a life grid or life graph. The whole interview process, including a life grid and life graph method, was tested in a full-length pilot interview with an existing contact. This helped to refine the questions and suggested that the visual tools would be a useful addition to the method. It was also a useful opportunity to practise and refine interview techniques.

3.2 Interview set-up

In each phase of data collection, people selected as participants were contacted, given further information about the study and asked to give an interview. If they agreed, they were asked to sign two copies of a consent form and keep one of them. The information sheet and consent forms are included as Appendix Four. Participants expressed no concerns about signing the consent form, and seemed to find the information sheet helpful. An interview was arranged at a time and place convenient to them, and all interviews were face-to-face and one-to-one. The aim was that people should feel comfortable and unconstrained in what they said. Most interviews were in participants' homes, which seemed to be a useful aspect of the methodology. It allowed participants to look around for inspiration when talking about their daily lives; for example, Kitty looked around her kitchen when thinking about what to describe next. Some even showed me around their homes or gardens; for example, Giles gave a tour of his compost facilities and productive garden.

Some interviews were in cafes, and this sometimes meant that it was hard to transcribe the recording, due to background noise. Using a public space also created a less private feeling, though homes were not always private, as in the case of Maggie, who had a visitor

during the interview. Gillian's interview was in her workplace; an interview in her home might have led to greater emphasis on her domestic, rather than professional practices. A lesson from this is that interviews might benefit from being in the surroundings where the relevant practices are performed (so interviews at home might be especially useful if domestic practices are the focus), but that in general, interviews at home seem to help participants relax and feel secure. A potential improvement, were this study to be repeated, would be an increased use of home and garden tours, which would particularly have provided more data concerning the role of material objects in participants' practices; this was an area relatively rarely mentioned in interviews.

Interviews lasted between one and three hours. Timing was a slight problem for two interviewees, Ray and Maggie, who had other commitments, and so had to end their interviews earlier than they otherwise would have. Timekeeping during interviews was relatively challenging, as I did not wish to hurry or limit narratives, but was not always certain about whether participants would have to end their interview at a certain time. A lesson drawn from this is that it is essential to establish at the start of the interview how long the participant is available for, and also to explain to them the different tasks to be accomplished in the time. In the interests of interviewer safety, another person was informed of where each interview was happening and at what time it was likely to end.

An important decision was that each participant would only be interviewed once. It was recognised that repeat interviews can be useful in narrative studies, as they can focus on different topic areas, help build rapport, and allow participants to reflect on their accounts and add further details. Furthermore, interviews spaced over a longer time period can track changes in practice in "real time" (as opposed to through retrospection). These approaches were considered and rejected because they would have demanded a corresponding decrease in the number of participants interviewed. On balance, it was decided that a sample of fewer than sixteen people would not have been able to encompass the diversity of forms of action and of ages and genders that was needed for the purposive sampling strategy. Furthermore, as this study was limited to three years, repeat interviewing would have been limited in extent and could not have encompassed an entire life-course. However, the iterative process meant that initial analysis of one case suggested themes to explore with the next participant.

3.3 Narrative interviewing

A narrative-based approach can use many different forms of data, including field notes, journal records, interview transcripts, observations, letters, autobiographies and many other forms of writing and images (Connelly and Clandinin, 1990:5). In this study, in-depth face-to-face interviews formed the main data source because these are generally considered to be a very effective way of accessing individual experience, and give most opportunities for interaction with participants, and exploration of particular topics; interviewing is central to much narrative-based research (Fraser, 2004). Each interview was recorded; this is very important to narrative-based interviews because the exact words that participants choose are a subject of analysis, and tone of voice can also be useful in interpreting the data (Elliott, 2005).

The structure of the interviews is summarised in Appendix Five, and the process is described in more detail here. Each interview began with an introduction that included a brief overview of the research, a statement about confidentiality and how the data would be used, and an opportunity for questions. It was stressed that in this interview there would be no right or wrong answers, and that their responses could be as long as they liked. The introductory talk was followed by some questions about the participant's current level and type of action. This served as a warm-up exercise, helping both parties get used to the interview situation. It was also important in guiding the rest of the interview, as people can understand "action to tackle climate change" in very different ways. This part of the interview illuminated the way the participant understood this action, and gave an idea of the topics the interview should cover.

The next phase was the main narrative section of the interview. This involved asking the participant to give an account of their past involvement in action on climate change. The aim of this section was to give the participant the freedom to present their account as they wished, allowing as much time as they needed, with the interviewer speaking as little as possible, and never interrupting. Wengraf (2001) argues the researcher should never interrupt a story as it damages the flow of a narrative. This narrative section started with an open question on how the participant first became involved with action on climate change. Further questions were then asked as needed, to generate an account that covered the time period from this first engagement to the present. Open generative

questions such as “then what happened?” were used as invitations to continue the narrative (Flick, 1998).

Narrative researchers often use an informal, conversational style of interviewing (Mills, 2001):

> “*Engaging participants in relatively informal and friendly ways, we sometimes process stories with participants along the way, and allow for stories or comments that do not appear to be immediately relevant”* (Fraser, 2004:185).

Furthermore, it is considered important not to rush speakers or pass judgement on what they say (Flick, 1998); these guidelines were followed in this research. A very loose interview plan was used in early interviews, but was not treated as binding; “*In the narrative approach, the agenda is open to development and change, depending on the narrator's experiences*” (Hollway and Jefferson, 2000:31). Interviews were relatively unstructured, with respondents controlling the flow of topics, as suggested by Mishler (1990). The open-endedness and flexible structure of narrative interviewing means that participants are not pushed towards any particular answers, and so strengthens the quality of findings (Hollway and Jefferson, 2000). For example, in this study, participants were never asked to describe particular pre-determined events or changes in their lives (though they might be probed if they raised specific events themselves).

Allowing participants to practise “unconstrained recall”, recounting events they select as important, at their own pace, has been found to promote accuracy (Chawla, 1998). However, it should be noted that participants' memories are not perfect, and stories are not neutral presentations of the past, but creative reconstructions, evolving with every retelling. For this reason, throughout the interviews, I paid attention to verbal/non-verbal cues or inconsistencies that might suggest distortion or lack of openness, and if appropriate, prompted clarification. These strategies were all directed towards the generation of high-quality conclusions, as required by the evaluative criteria set out in Chapter Six.

3.4 Rapport

Rapport was generally good, and participants seemed to feel comfortable with the situation and able to give full answers; a situation conducive to rich and accurate data (Chawla, 2006). Rapport seemed to be helped by the considerable common ground provided by my own participation in action on climate change, and often by shared social networks. However, as noted in Chapter Six, my positionality as an environmentalist also presented challenges to the interview process. Reflecting on potential effects, I was aware that there was a risk that participants might feel they were being judged, or that they had to justify or exaggerate their actions, in a way they may not have done with an interviewer who had no personal engagement with the issue. An example of a participant who seemed keen to justify his behaviour is provided by this exchange with Gary:

> *G: There's elements of my green lifestyle which are perhaps not as...green as what some people would think.*
>
> I: It sounds pretty green.
>
> *G: Well, we have family in the United States, so we do, well, we're not doing a lot of flying, so it's once every year, once every couple of years we take a flight over there, and that tears me up sometimes.*
>
> I: Really?
>
> *G: Yeah, I try to be green generally. So that's a bit of a problem for me. We offset that.... Which, offsetting is not the answer, I know that, but it makes my guilt feel a little bit better. So, we'll get that bit out of the way first (laughs).*

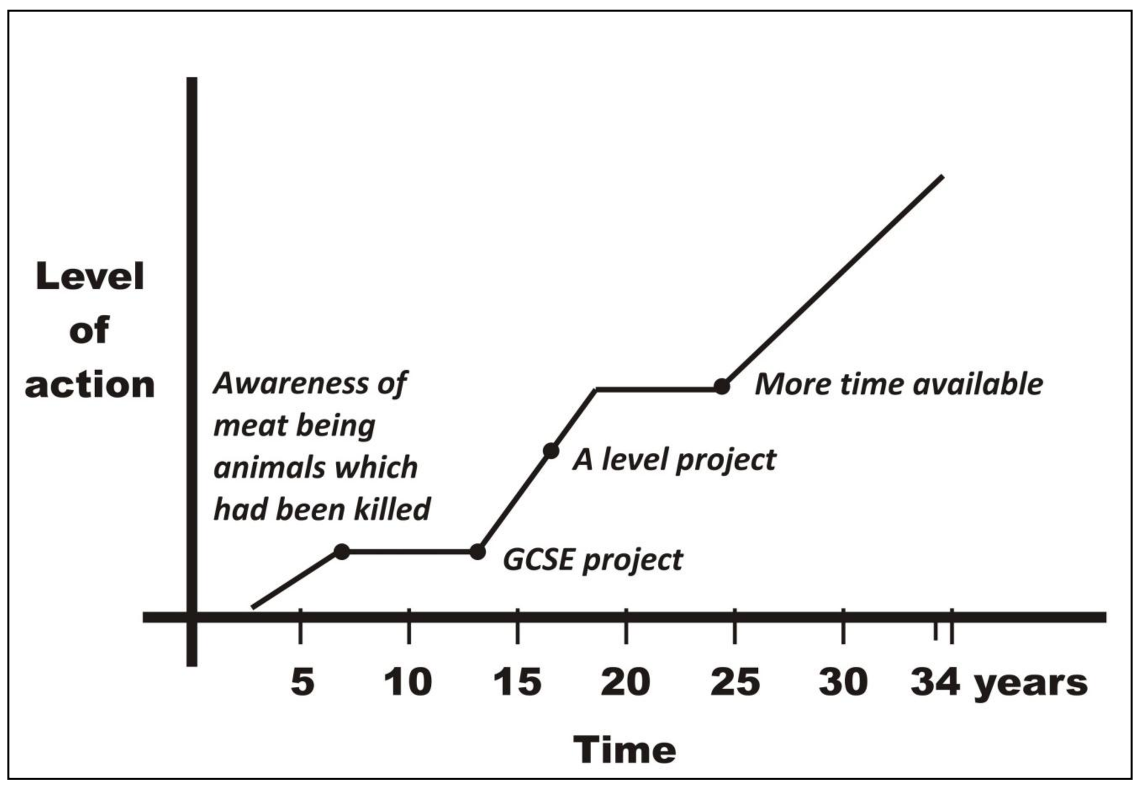
My aim as an interviewer was that participants should understand that I held similar values and could relate to their experiences. Some participants were curious about my level of action, and I openly discussed this with them. An interesting reversal of roles came when Alison asked for an example of a life graph, and I sketched my own. She then pointed to a recent downward trend and asked, *"What's this*?" in a tone of disappointment and surprise, making me justify my own actions. In general, the common ground was useful in

establishing trust and facilitating a relaxed conversation. However, not all the interviews seemed perfectly enjoyable for participants. Carrie's manner of speaking, with short, guarded answers, suggested that she was not entirely comfortable with the situation, and as noted below, some participants did not enjoy drawing graphs. In such situations, the interviewer can try to put the person at ease, and not dwell on problematic areas or tasks. My skill as an interviewer developed throughout the fieldwork, so building rapport and making the interview enjoyable became easier over time. Good rapport and trust have been found to improve data quality (Hollway and Jefferson, 2000).

3.5 Life grids and graphs

The next section of the interview drew on life-course methods, as described in Chapter Six. The participant was asked to fill in a life-grid representing their life-course for the period over which they had been active on climate change. They were provided with a pre-prepared blank grid on a large sheet of paper. They were asked to show all the events and episodes mentioned during the interview, plus any more that they remembered at this stage. These elements were discussed as the grid was created. Two example life grids are shown in Appendix Six and Appendix Seven. The process was then repeated, but instead of a grid, the participants were asked to draw a graph representing their action over time. They were given a sheet of paper with two axes drawn on it, but these were unlabelled and had no other markings (so the axes were not divided into units). However, participants were asked to use the x-axis to represent time, and the y-axis to represent their level of action. During this phase, questions were asked to fill in any gaps, and to draw out causation and key factors. However, in this section longer narratives were not discouraged. Figure Six gives an illustration of a life graph.

Figure Six: Life graph drawn by Carrie (31)



Carrie chose to represent time using her age rather than years (1980, 1990 and so on); this was common. She also began by dividing the time axis into units, as many participants did. The graph shows a trajectory, which indicates the rate and duration of periods of change, and the timing of specific points of change in gradient. Carrie also, without prompting, annotated her graph with notes on key moments, attitudes and conditions. Some life graphs were simpler, with no annotations, but others were very complex, with many notes on thoughts, feelings, external conditions and events. The grids and graphs were invaluable as a source of factual information, especially on dates, sequences and timings of events. This is the kind of information that is hard to elicit during storytelling, as it would require frequent interruptions and backtracking to establish facts of relatively little significance to the narrative flow. This is summed up by a post-interview research journal entry on the 1st March 2010:

> *"Again, I was grateful for the graphs/grids – they act like a whole series of questions that I don't actually have to ask! And save me from asking endlessly "when?" and "how long for?" and "was that before or after...?""*

It is also difficult for an interviewer to keep track of this kind of information without extensive note-taking; I did not take notes during interviews, as this would have had a negative effect on the desired informal and conversational tone. These tools also provided additional data, especially on rates of change, which would have been much harder to elicit through non-visual means. The graphs encouraged people to reflect carefully on the details of changes, which may have contributed to the accuracy of the data. They could also be asked to explain any changes they drew, but had not previously explained. Life-grid techniques can also promote recall (Parry *et al*, 1999); in this study participants often remembered new details while completing grids/graphs. For example, Jeremy said "*Different things come out, plotting a graph, don't they?"* because noting the buying of a house led him to think about a green renovation project he was doing. Recording during the completion of these tasks was very useful, as people continued to develop stories, explain events, and even give completely new and detailed accounts of experiences not previously mentioned.

Some participants seemed to particularly enjoy drawing the graph, finding it an interesting activity, and taking great care in labelling the axes and plotting each point. However, Patricia seemed almost distressed when I asked her to complete a life-graph; as shown by the following extract, which begins after I have explained the life-graph exercise.

> I: Could you draw the line for me?
> *{I offer the pen and paper}*
>
> *P: It would just ascend.*
>
> I: Yeah? Perhaps you can show me. Some people draw a curve, some have steps...
>
> *P: I'm sure there were loads of steps, but I can't, it would take me half a lifetime to think what they were...{inaudible}.*
> *{She quickly draws a sloping line, in a single stroke}*
>
> I: And what sort of age is that?
> *{I indicate the start of the line}*

P: That is probably ......let's see {long pause}, 1950 to 1970 we'll say.

I: So what sort of time is there, is that the 1950s?
{I point directly to the very start of the line}

P: I'm sorry, I'm finding this far too difficult-

I: I'm sorry-

P: I can't compute.

I: No, that's fine. I don't think there was anything else, is there anything you'd like to add?

She only drew very briefly, simply drawing one sloping line. I tried to respond sensitively, and did not press her to develop the graph. Maggie also seemed to struggle with the idea of a graph, and seemed unsure about what she was representing; she preferred to draw points rather than a line, and I accepted this and moved on with the interview. It is perhaps notable that these participants were both women over sixty; it is possible that graph methods may appear especially intimidating to some people in this group, if they are unfamiliar with drawing or using graphs in general. However, the sample is too small to draw conclusions on issues of this kind. Based on this work, I would recommend the use of visual biographical tools to complement interviews, especially when story-telling is closely integrated with these tools. However, they should be used with care, and an awareness that some people find them more accessible than others. A particular advantage of research that applies mixed methods within each interview is that people are normally able to express themselves through at least one medium, even if they struggle with another; both Maggie and Patricia provided long and detailed narratives.

3.6 Exemplars

The research design did not initially involve the use of exemplars, and in the first six interviews, participants were asked to use the life grids and life graphs to represent their overall action on climate change; in other words, a combined variable made up of all the

practical and political practices they had performed. However, some participants struggled with the task, finding the question too vague. At around the same time, during initial analysis of this data, it also became clear that the research questions could be answered in more detail if one or more specific areas of practice were used. The volume and diversity of the data regarding every practice that participants associated with addressing climate change was too great for a comprehensive and detailed analysis.

For these reasons, it was decided that two exemplar areas of practice should be selected. The selection of these two areas was informed by the first phase of data collection. The first six interview transcripts were examined, and the different forms of action mentioned in each were noted. Car use (or alternatives to it) was mentioned to some extent in all six of these the interviews. While some other areas, such as waste minimisation, were also frequently mentioned, car use was selected because it is a particularly important and problematic source of UK greenhouse gas emissions, as noted in Chapter Five. Since this study aims to address a wide range of practices around climate change, it seemed important to include a set of political or public practices, as well as practical, lifestyle-based practices; for this reason, as well as the fact that five out of six participants mentioned it, campaigning was selected as the second case-study.

These are still relatively broad domains, to reflect the fact that participants perform practices in very diverse ways. Using such broad categories meant it was possible to include data from almost all the participants, and reflected the inductive, holistic approach of this study. Therefore, in the final ten interviews, participants were asked to draw a grid and graph that related to campaigning and a grid and graph that related to car use. In the car use tasks, participants were also asked to draw lines, and include information, representing their use of other transport modes. This is because use of cars is often intertwined with use of other modes, as the review in Chapter Five showed. In these interviews participants were not asked to represent their overall level of action. The selection of exemplars proved to be very useful in focussing the research and making the data-collection procedure more manageable. In retrospect, it might have been useful to have focussed on exemplar areas from the start. However, this would have detracted from the holistic overview of practices which was gained. It would also have meant that it was not possible to choose exemplars based on participants' accounts; assumptions would have

had to be made based on pre-existing literature, or on an additional and time-consuming initial phase of data-collection.

3.7 Post-interview feedback and reflection

Finally in all interviews participants were invited to add any further comments or details and to provide feedback on the interview. This was done so that interview technique could be improved, questions refined, and any sources of confusion addressed. Normally, this occurred after the recording device was switched off, but notes were kept in the research journal. Most participants did not provide specific feedback, but three did make comments that helped to refine future interviews. These are extracts from entries made immediately after the respective interviews:

> On James: *"He said more specific questions would have got more information from him"*
>
> On Patricia: "*She said she enjoyed the interview and felt it had brought things together for her..... She said my not talking too much was the sign of a good interviewer*".
>
> On Jeremy "...*he very quickly got into telling me his life story, with lots of detail, so after an hour we'd only got to 1979! I was a bit concerned about taking up his time, but he didn't seem to mind. He told me he really enjoyed the process*".

Based on this feedback, I used more specific questions in the life-grid and life-graph stage of the interview, and ensured that I did not interrupt other life stories. I also paid greater attention to the timing of interviews, and ensured that I had no other commitments, and so could extend the interview if the participant wished to.

Other participants provided more general positive feedback, suggesting that the interview style was an appropriate one. Many participants enjoyed the process; for example, Ryan said at the end of the interview, "*It's helped my ego enormously to have someone this interested".* Ray laughed and joked throughout his interview, and Giles seemed very relaxed and happy to tell long and detailed stories. Several were surprised (positively) by

how much they had found to talk about. For example, when I thanked her, Patricia said "*You're very welcome. I'm surprised that so much came out!"*. Kitty talked enthusiastically for three hours, with very little interviewer input. Patricia seemed keen for me to stay; for example, after the interview had finished and the recorder was turned off she kept recalling new details and anecdotes, and even began new conversations as I was leaving.

Several expressed the hope that this research might eventually lead to positive outcomes, and Alison only agreed to take part once she had been convinced that the study could contribute to policy/practice in sustainability. Giles expressed this idea particularly clearly, when explaining the recent phase of his life, where he has tried to help others:

> *"I'm helping others go greener because I've already done this amount of self development and maybe this PhD that you're doing, I don't know what you'll do with that, but it is possible that you'll become a lecturer or a teacher or maybe a researcher who can help progress things, and this interview will be a small part of more action...I'm now an hour late for my lunch....my lunchtime pales into insignificance over you, because you're really important and whatever you do with this there's a possibility that you'll get more people understanding green issues, and what they can do, what kind of actions. And that's incredibly important. So I don't mind altering my life to fit in."*

At the end of the interview, participants were also asked whether they were happy for the results to be sent to them, so they could give feedback. Memos were written immediately after each interview to record observations, including any relevant information concerning atmosphere and setting, and other details which could not be captured by the audio recording, such as body language, tones of voice and style of story-telling. These were treated as supplementary data in the analysis stage. Throughout the data collection process a research journal was kept, to record decisions made as the methodology evolved, alongside emerging concepts and hypotheses (as suggested by Watt, 2007).

In conclusion, reflection on the fieldwork suggests that this approach based on narrative interviews and visual biographical tools served as a successful data-collection method. As discussed in Chapter Six, narrative methods face challenges around accuracy and

verifiability; stories are necessarily a subjective and selective way to represent the past, and may be subject to conscious or unconscious distortion by narrators, especially when recalling events long past. However, narrative inquiry offers various strategies that were employed during this fieldwork to ensure data was as accurate as possible. Specifically, attention was paid to the setting of interviews and the use of flexible structuring and open questions to promote unconstrained recall. Emphasis was also placed on building rapport, and the use of mixed methods to elicit different but complementary forms of data. However, the interviews and life grids/graphs provided more data on the life-path scale than on the daily-path scale; to provide richer data on everyday routines, a diary method might have been appropriate. In a large-scale study, diaries could be used alongside biographical interviews to provide temporal data on both scales. However, this study already used several methodological tools, and therefore did not have scope to add additional techniques.

4. Analysis

The analysis of the data included several overlapping phases, very loosely based on those suggested by Fraser (2004).

4.1 Initial reflection and transcribing

Many researchers suggest that the first part of analysis occurs during the interview – listening to the account, and afterwards, reflecting on the experience (Elliott, 2005). Familiarisation with the data, by listening to recordings, was important in this study. Brief sketches of each participant were made, including basic information and key themes and quotations from their interview, and kept in a file, as suggested by Hollway and Jefferson (2000). Transcribing is very important to narrative-based analysis, as this methodological approach emphasises the participant's own words. Transcription is generally seen as part of the analysis (Elliott, 2005). However, it can be done in different ways depending on the analysis to be conducted, and the research questions.

> "*Whole tapes can be transcribed; field notes can be made as one listens and relistens to the tape recordings; or partial transcriptions can be made for segments*

of the taped interview, depending on the researcher's interests" (Clandinin and Connelly, 1990:110).

For this research, a high level of detail was not generally required, as the main research focus was on content. Initial transcription included only a rough indication of the length of pauses, and not every hesitant sound was transcribed. However, recordings were retained so that data could be re-examined, and re-transcribed if the evolving analysis suggested this would be useful. I performed the transcription myself; this brought many benefits, especially in allowing greater familiarity with the data (Fraser, 2004). After transcription, text was re-presented with one clause per line, for ease of analysis. Fraser (2004) states that it is important to number lines, and to name/number stories, for reference in analysis, and these guidelines were followed.

4.2 Interpreting individual transcripts and comparing cases

This phase involved a number of different approaches, used in an evolving analytical process, with different methods brought in as each research question was considered, and as emerging concepts suggested new directions. The first step involved gaining an understanding of what action on climate change meant to each individual, to address Research Question One. This was done by listing each person's current actions, and using inductive coding to highlight key motivations and ideas around their practices. Analysis also considered the "elements" of practices as discussed in Chapter Four, and coded the images, skills and materials associated with the participants' action on climate change. This analysis particularly focussed on the two exemplar areas of practice. The results of these analyses are discussed in Chapter Eight.

Analysis then turned to Research Question Two; description of the processes of change in each biography, drawing on both the interview texts and the visual representations. This included the identification of phases in the life-course. The grids and graphs were taken as the starting point for identification of these phases, with narratives then used to clarify their boundaries and add detail regarding the conditions and practices of each phase. The result of this analysis was the production of a relatively detailed table showing the phases in the life of each participant, and the practices they performed in each phase. This analytical tool is drawn upon in Section Four of Chapter Nine when discussion turns to the

forms of action taken and how they change over time. Next, the graphs were used to identify the different trajectories (positive, negative and stable) in each life-course and interview texts were used to explore the nature of these transitions. This included considering their antecedents and consequences, and the meanings they had for the individual concerned and writing notes on each case. Cases were then compared and emergent themes identified. This analysis is also drawn upon in Chapter Nine, when six typical forms of trajectory are discussed.

Analysis then turned to Research Question Three, and considered explanations of these changes. This involved identifying the key themes, concepts and metaphors in each narrative in order to gain a deeper understanding of each case, with a particular focus on processes underlying change; for example, social interaction or work responsibilities. Particular attention was paid to narrative segments that described and explained periods of change in practices. This included examination of the non-narrative, or evaluative clauses related to a particular experience within the story. This technique can give insights into meaning of that experience for the participant (Riessman, 2008), and is especially valuable in exploring a person's development; for example, the development of pro-environmental attitudes as a result of specific experiences. These analyses of individual cases were synthesised to reveal which themes spanned many cases. These comparisons were used as the basis for the identification of processes on a range of levels that appear to shape individual practices around climate change. The comparison method helped build theoretical generalisability, by exploring all the variation within each concept or category. Comparing cases was also vital in answering the final research question, which concerns lessons that can be learned. This involved reflecting on the key findings in the light of the current policy context (as set out in Chapter Two) and the theoretical context (as set out in Chapters Three and Four). Results of this process are presented in Chapter Thirteen.

Throughout the analysis, cases were also considered with regard to issues of co-construction, performance and motives, for clues about data-accuracy and interpretation. This was based on the recordings, transcripts and research journal. Attention was paid to participants' use of language, which suggested when effects such as exaggeration, nostalgia or self-censorship might be colouring the account, and what the underlying motives were. It was especially important to consider whether the narrative appeared rehearsed or not (Fraser, 2004). For example, throughout Giles' narrative the language was richly

descriptive, and he spoke with little hesitation and virtually no verbal input from me. He mentioned that he often gives interviews or writes about his life; together with his confident performance, this suggests he may have told this story before. Rehearsed stories can be seen as problematic, as they are polished with every retelling and can become stylised (Cook and Nunkoosing, 2008). However, retelling can clarify an event's meaning for the narrator (McAdams, 2008) and such narratives can convey particularly clear messages, albeit ones crafted for a purpose. In Giles' case, several richly descriptive narratives were woven together to convey his identity as an explorer and eccentric; the interview was analysed with this in mind. All narratives are told for a purpose; this does not negate the value of the information they provide, but needs to be considered in the analysis.

Attention was also paid to the way in which my characteristics as an interviewer might have shaped the narrator's account. An example of this is Ray's frequent use of humour, even when talking about apparently distressing or serious experiences. One interpretation might be that he did not in fact find these experiences distressing or serious. However, paying attention to co-construction suggests an alternative explanation; as a man talking to a younger woman he had never met before, he might have felt slightly embarrassed talking about his emotional vulnerability, and humour might have helped defuse this awkwardness. Accordingly, Ray used comical images and mocked himself, when describing his child's illness and concluded with a wry comment "s*he wasn't even that ill... just had the, ahem, bleeps!".* Similar ideas have been explored in previous work; for example, Ervin-Tripp and Lampert (1992) discuss men's use of humour as a defence and coping mechanism in conversations. Throughout analysis, attention was paid to potential effects of interviewer positionality and co-construction. As noted above, the fact that the interviewer was an environmentalist may have influenced participants' accounts. However, the desire to justify or excuse certain behaviours seemed to apply mainly to current, not past practices; this means that it is less problematic for the study's key findings on careers of practice.

In conclusion, an advantage of the mixed method data-collection was the rich and multidimensional data for analysis, and opportunities for triangulation; for example, when a grid, graph and story all presented different "angles" on a single experience. If an event

was mentioned in a person's interview, grid and graph, it was probably of high significance to them. However there were also challenges associated with combining the analysis of very different forms of data, especially visual and textual forms. One challenge was that within each case, the sources did not always have perfect consistency; for example, an event might be represented as occurring at slightly different times in the interview and life grid. However, this did not pose serious problems for analysis, as details such as exact dates were not the focus of the study. The fact that most analysis was performed in an interpretive way by a researcher, rather than involving statistics, models or computer-based processes, meant that such inconsistencies could be handled in a pragmatic fashion, with judgement used to assess what the facts might be, and the significance of the problem. More generally, ways of combining the data sources had to be developed on an on-going basis throughout the analysis process. The strategy adopted was to take a particular research question, or aspect of one, and ask: what can each source of data contribute to answering this question? The different ideas that emerged from the sources were then synthesised.

The analytical approach adopted was inductive and exploratory; this brought both advantages and disadvantages. A key challenge was the sheer number of different themes and concepts that emerged from the data, and which suggested multiple possible routes for further analysis. Some of these areas which could not be explored here include the body and senses, design and technology, power relations and class, external sources of information (such as the media and education) and practices in the workplace. However, a key advantage of these analytical methods is their emphasis on temporality and the integrity of each case. This analysis used themes (such as family responsibilities, experiences of groups and issue-specific concerns) but unlike in some other qualitative approaches, concepts were considered as part of the specific narrative they emerged from, so events could be analysed in the context of each life-course. Other methods involving text-coding generally do not focus on the link between each data-item and its original narrator and location. This integral analysis of each biography allows illumination of the temporal dimension of change; its rate and durability can be explored in both the short and long-term (albeit cautiously, with consideration of issues of accuracy).

5. Evaluation

Evaluation is an important part of any research (Kumar, 2005), helping readers to assess the quality of the findings, as well as allowing the researcher to reflect on the strengths and weaknesses of the study, and draw out lessons which may be valuable to others. The evaluative criteria for this research have been set out in Chapter Six, and one of these involves participant evaluation. Narrative-based methods recognise that research findings are a co-construction, and the participants will have ideas about the findings which could be very valuable, and it is common in narrative-based inquiry to take results back to participants for feedback at least once during the research (Connelly and Clandinin, 1990). As noted in Section Three, in this research, this was done during fieldwork by asking for feedback after each interview. Also, after analysis had been completed, each participant was sent a three-page summary of the study and its findings, and invited to provide feedback. This document is included as Appendix Six. Eight participants responded, and all gave their consent for their comments to be reproduced here; this feedback is reproduced in full in Appendix Seven. These comments suggest that participants broadly supported the findings, and found them reflective of their experience. Their thoughts also raise some additional issues; this additional set of perspectives provides a useful complement to the discussion of findings in Part Three.

In addition, evaluation involved reflecting on the process, aided by field notes and research diaries, and assessing whether the research met the criteria laid out in Chapter Six. These are reproduced in Table Four below, and each is followed by a brief summary of how it has been met.

Table Four: Ethical and evaluative criteria, revisited

Criterion	Description	Implementation
Respect for participants	*Be open about the research, and their role. Ensure confidentiality is maintained, and that participants freely consent to each stage. Invite feedback throughout the process, explaining how it will be used. Be sensitive to potential impacts on participants, especially at the end of the process. Treat them as active collaborators in the research process.*	Informed consent and confidentiality were maintained to the highest degree possible, and feedback was sought and used to improve the process. Impacts on participants were considered to be minimal, as long as sensitive and identifiable information was not published.
Critical subjectivity	*Be transparent about researcher positionality and discuss how this may affect the research*.	This kind of reflection is an important part of this chapter. The most important aspect of positionality was my identity as an environmentalist, which had positive and negative effects.
Transparency of data	*Retain tapes and transcripts. Explain transcription choices. Carefully number lines, sections and transcripts. Present sections of verbatim text in the results, explaining the context.*	These points have all been followed, with verbatim text presented as much as possible, given the constraints of thesis length.
Transparency of method and sampling	*Record methodological decisions and discuss them. In particular, discuss limitations, sources of bias and other possible alternatives. Make it explicit that sampling is purposive, not representative. Explain how sampling is theoretically justified, and discuss the implications of the sampling method for the results.*	Chapter Six and this chapter discuss methodological considerations in detail, and reflect on their implications, including the consequences of the small-scale and snowball-type sampling strategy.

Transparency of conclusions	*Explain how each conclusion is grounded in the data, using examples. Discuss alternative interpretations.*	Chapters Eight to Twelve are closely grounded in the data and use examples, considering a range of explanations for the patterns observed.
Quality of conclusions	*Conclusions should include meaningful overarching themes, but remain grounded in context.*	The analysis has aimed to draw out themes, and these are discussed in Part Three, and are considered as part of participants' daily lives, often using participants' own words.
Participant evaluation	*Use participant feedback to evaluate the quality of results. Results should resonate with participants' own experiences and ideas. Any divergence between the researcher's and participants' interpretations should be discussed. Present the results of this evaluation in the final report.*	Participant feedback was gained, and is presented in the thesis. Feedback was generally positive, and participants felt findings reflected their accounts, while also suggesting their own further thoughts.
Triangulation with literature	*Compare results to existing literature, and discuss any divergence*	Key convergences and divergences are highlighted throughout Part Three. Connections are found between these results and diverse concepts and fields; the main divergence is from individualistic social-psychological approaches.
Implications and relevance	*Discuss whether findings challenge any existing theories. Explain any policy implications.*	This is a key aim of Chapter Thirteen, which discusses the various implications of this work for policy, theory and methodological debates.

This process of reflecting on each criterion suggests that (while alternative standards could be used) based on this set of criteria, the study has been relatively successful in meeting its standards of ethics and quality.

However, confidentiality was more problematic than anticipated, simply because of the close-knit nature of the community under investigation. People often asked whether certain other people had been interviewed; either out of curiosity or because they wished to suggest them as potential interviewees. While I explained why I could not answer these questions, this slightly reduced the feel of openness and informality in the interview. Another issue was that the snowball sampling meant that certain people might have an idea about which other people were involved; for example, if they suggested a friend as a potential interviewee. As well as not revealing any identities during fieldwork, these concerns meant that I took extra care to conceal identities in written reports. For example, I did not use any names (or pseudonyms) when presenting a whole life grid, because of the quantity of information these provide. Some minor details of cases were also changed to reduce identifiability, and I took care not to reveal any sensitive information in any research outputs. However, a lesson from this is that snowball sampling within a close-knit community may not be appropriate for work where data is more highly sensitive or personal.

Finally, as noted in Table Four (p180), part of the evaluation involved examining the findings to discover how they related to the literature, including where they supported existing theories and where they challenged them. This is a form of evaluation that does not simply involve checking that all the findings confirm previous work; it involves active engagement with the theoretical context, to explore where this work diverges from existing knowledge, and to explain why it does so. Divergence may suggest weaknesses in this research, but there may also be other explanations, such as variation between contexts, changes over time or insights provided by a new approach; that may offer a useful contribution to knowledge.

6. Writing and Dissemination

In narrative-based approaches, writing is considered to be part of the research process, and involves the researcher making decisions about how to represent the data. Connelly and Clandinin (1990) point out that narrative inquiry is driven by a sense of the whole, and this should guide the writing process. Good writing of narrative-based research should enable the reader to understand the experiences in question, using rich descriptions of "*the complexity of personality, context and time"* (Hart, 2002:157). Bochner (2000) states that it should include abundant concrete detail and acknowledgement of limitations, and the writing stage of this research aimed to achieve this. Quotations are used throughout this thesis, with pseudonyms given to attribute each one. Where participants strongly emphasised a word, this is shown in bold type. Notations concerning non-verbal interaction are included where relevant. Finally, throughout the research process, opportunities were sought to discuss the methods and results with other researchers, and to disseminate the findings to any interested parties.

7. Chapter Summary

This chapter has described how narrative life-course methods were applied to answer the Research Questions of this study, and justified the decisions made at each stage. Potential participants were identified using various online and offline points of contact and a snowball method. Each of the sixteen people selected participated in an in-depth interview, with both narrative and life-course components. A range of analytical tools, drawn from narrative inquiry and life-course studies, were employed to analyse individual transcripts and to compare cases. The process of evaluating and writing the research has also been outlined. The next chapters represent a new section of the thesis; the presentation of results.

Part Three

Results and Discussion

This is the final part of the thesis, and serves to present its findings and discuss their implications for research and policy. First, Chapter Eight addresses Research Question One, concerning the ways in which individuals understand action on climate change, and Chapter Nine addresses Research Question Two, regarding the ways in which that action changes over time. The answers to Research Question Three; the most complex question, and also arguably the most critical to theory and policy, are divided into three chapters, representing different levels or lenses of understanding. These three themes, which can be labelled Performance; Co-ordination and Sharing; and Context, emerged from the data during the inductive analysis. Finally, Research Question Four, concerning policy implications, is addressed in Chapter Thirteen. This chapter also highlights key findings of the research and its theoretical contribution, and evaluates the entire study.

Chapter Eight

Understanding Action on Climate Change

"It becomes more important to ask what types of practices are prevalent, and what range of the available practices do different individuals engage in.... the question "what level of commitment is displayed to different practices?" becomes focal, and ...how people come to an understanding of what is required by the practice and their role within it"
(Warde, 2005:149).

1. Introduction

This chapter serves to introduce a new part of this thesis: the presentation of results. The chapters in this part are organised to reflect the research questions of this study. This chapter addresses Research Question One:

1. How is "action on climate change" understood by the people performing it?

This chapter examines the nature of action on climate change, and how it fits into the lives of its practitioners. To do so, it draws together findings from the two exemplars as well as findings on action on climate change more generally. It highlights the finding that "action on climate change" is not a simple category, but one that contains many different practices, in combinations that vary between participants. Section Two provides an overview of the practices mentioned by participants as part of their action on climate change, which can be seen as "baskets"; including the role of practices of "not doing" in these baskets. Section Three focuses in more detail on the elements of these practices, and Section Four examines how practices may be organised within projects. Section Five explores the three forms of habitus that emerged from the data, and which appear to structure much action on climate change.

2. What Practices make up “Action on Climate Change”?

2.1 Main types of practice mentioned

Taking action on climate change was understood by participants to cover a wide range of practices. As noted in Chapter Three, practical action can be categorised using Defra’s headline behaviour goals (Defra, 2008a). These fall into five categories: energy, transport, waste, water and eco-products. In Defra’s categorisation, food practices are included under the heading of eco-products, but here, participants discussed many food practices not related to buying, so food was treated as a separate category. Furthermore, participants often discussed practices that were related to consumerism, but did not fall into a narrow definition of eco-products, for example, buying from local shops, avoiding supermarkets, buying second-hand or simply avoiding buying things whenever possible. Therefore, the category of eco-products was renamed “consumerism”. Finally, an additional category was added to represent “campaigning”. This resulted in a set of seven categories that together describe most of the practices mentioned by participants. These categories, and the main forms of practice within them, are listed in Table Five.

Table Five: Main practices mentioned by participants as part of action on climate change

Area of practice	**Examples**
Waste	Recycling, composting, having a wormery, using compost toilets, using leftovers, re-using items, avoiding excess packaging, avoiding junk mail.
Consumerism	Buying organic, locally produced or second hand products, using local shops and Freecycle, reducing buying, using homemade alternatives, buying eco-gadgets and sustainable products, avoiding chemicals.
Food	Buying locally produced/sold food, eating organic, vegetarian or vegan food or adopting a reduced meat diet, growing produce (including organic growing), keeping hens.
Water	Reducing toilet flushing, showering rather than bathing, using a water butt.
Energy	Getting a new boiler or insulation, turning lights off, having solar panels (water-heating or photovoltaic), having a wood burning stove, having some cold rooms, using a smart meter, using energy-saving appliances, buying renewable electricity.
Transport	Walking, cycling, using buses, taxis or trains, reducing car use, reducing plane use, living near amenities/work, living on good public transport links, using “sustainable” fuels, buying smaller, greener cars, keeping cars longer.
Campaigning	Lobbying decision-makers, organising/attending events and demonstrations, signing petitions, sending emails, fundraising, donating, raising awareness and publicising, recruiting others, doing media work, running stalls, taking direct action.

Most practices mentioned could be described as falling into one of these categories. However, there were also some areas of practice mentioned by only a few participants, which do not fall into these categories. One was nature conservation practices, including practices around gardening (such as organic growing). Another was action taken in a professional capacity, by people who saw their work as addressing climate change. (This would not generally apply to the broader population). Another was major life choices such

as where to live or how many children to have. The fact that these were not considered by Defra suggests that the types of practices engaged in by these participants may be slightly different to those of the general population, with participants performing additional forms of practice.

Considering the whole life-course of all participants, the most common area of action was waste minimisation (including recycling and composting), which was mentioned by all sixteen participants, followed by actions around transport (fourteen people), campaigning (fourteen people), food (fourteen people) and energy (twelve). Six mentioned eco-products and six mentioned saving water. This serves to indicate the complexity of the category called "action on climate change". However, no single participant performed all of these practices; the actual practices of any individual will be a subset of the practices listed above.

2.2 Individual baskets of practices

This section explores the practices of individuals, using the concept of a "basket" of practices. As introduced in Chapter Four, this is a set of practices that are labelled by a person or institution as belonging to a category, though they may be diverse in the activities, images, skills, materials or time and space involved. This thesis, by working with the concept of "action on climate change" is inevitably concerned with a basket of practices, because action on climate change is not a single practice, but many. However, because it has adopted a holistic and inductive approach, it has not sought to define which practices are or should be included in this basket, but has explored the practices that different participants see as within the basket.

It was clear from the data that all participants were engaging in some practices which they understood as action on climate change; indeed, this was a criterion for inclusion in the sample. However, based on participants' accounts there was no clearly-bounded set of practices that consistently made up the category "action on climate change". Diverse practices were mentioned as relating to action on climate change; in fact, for different people, it could include opposing practices. For example, Kitty wore only natural fibres (because they can be composted) while Alison opted for manmade ones (because they

have lower carbon footprints). Figure Seven shows example "baskets" for two participants, based on current actions.

Figure Seven: Baskets of practices for two participants

Job in sustainability
Live in energy efficient house
Energy efficient bulbs
Smart meter
Recycle
Compost
Harvest rainwater
Avoid car, use alternatives
Avoid flying
Live in place with bus links

Gillian's basket of practices

Campaign on environment and development
Donate to environmental charities
Solar panels
Wood stove
Recycle
Avoid meat
Grow vegetables
Keep chickens
Get "veg box" delivered
Avoid car, use alternatives
Avoid flying
Offset flights with tree planting
Buy ecoproducts

Gary's basket of practices

It can be seen that while some practices are common to both (in green), many are not. Participants had diverse baskets of practices linked with their personal priorities, capacities and routines.

However, there were some core groups of practices that were very common across participants' baskets, in particular; campaigning, using sustainable transport (including reducing car use), saving energy and reducing waste. An interesting issue is which practices fall outside each person's basket, and why. While this was not a key question in this study, some participants did discuss practices that they saw as positive in addressing climate change, but which they did not personally perform. In these cases, they generally presented a reason for this, such as a lack of time, money or space, or a need to compromise with others. While there is not scope to examine these practices of narrative justification here, some examples of these cases are discussed throughout the following chapters.

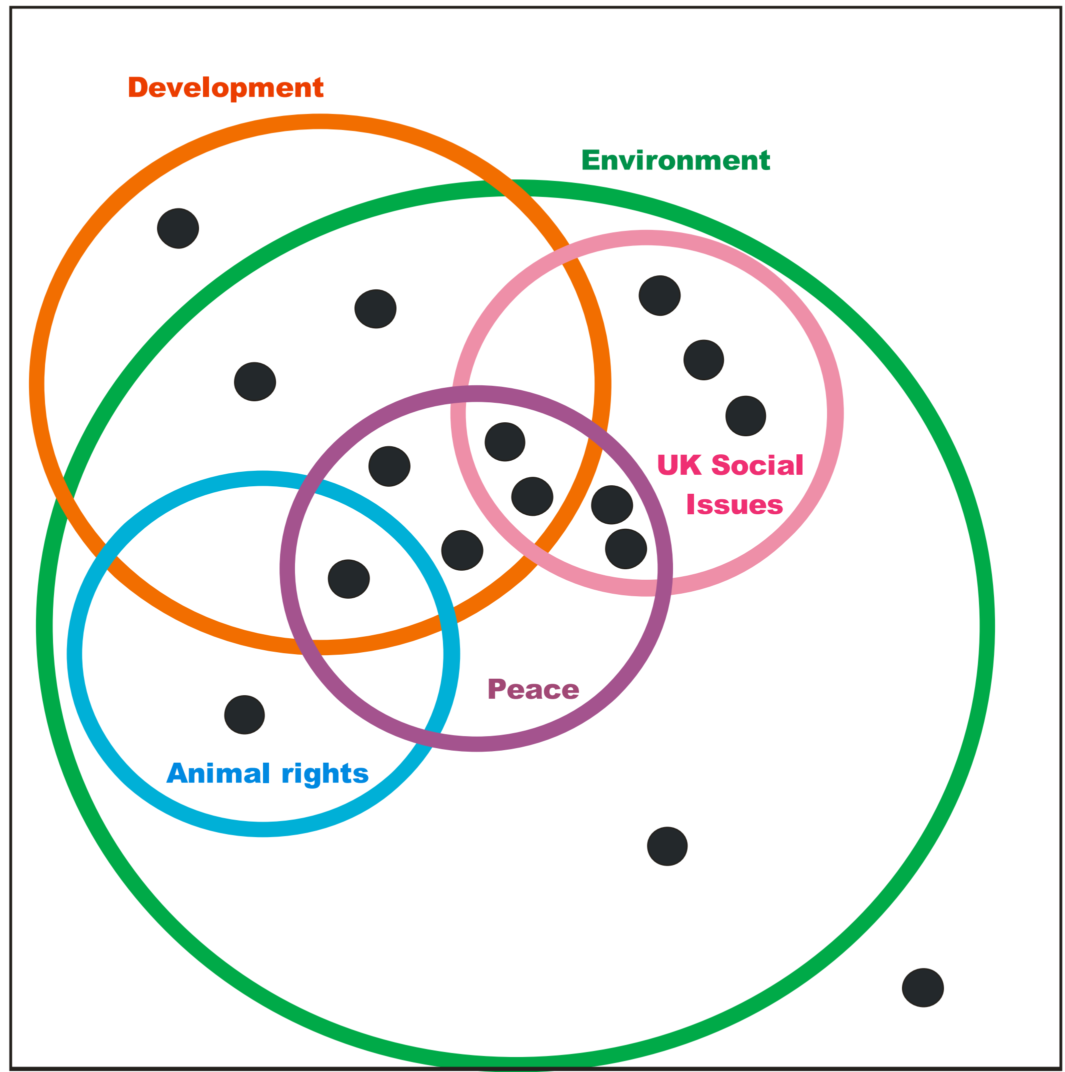
As explained in Chapter Four, a basket of practices such as "action on climate change" may be a category that does not have a strong salience within a person's life. In other words, it may be defined by an external actor, such as a Government department or researcher, and will not necessarily reflect the way the person themselves thinks about these practices. Nevertheless, they may be able to identify practices that fall into such categories, if asked to do so. Section Four of this chapter considers the extent to which "action on climate change" does form a meaningful category in participants' lives. However, first it is useful to consider in more detail some of the forms of practices that participants mentioned when asked about action on climate change. Based on the case-study part of the fieldwork, it is possible to focus on two areas of practice: campaigning and car use.

2.3 Campaigning practices

The subject of how campaigning practices are performed has been extensively covered by the literature on social movements, as mentioned in Chapter Seven. Authors such as Pickerill (2003), and Carmin and Blaser (2002) have described repertoires of action in the environmental movement, and many others have done the same for related social movements. The practices adopted by participants in this study followed similar patterns to those previously identified. For this reason, it is only necessary briefly to summarise the ways in which campaigning practices were performed. Only one participant was involved in no campaign activities, so was not included in this analysis, with a further participant only very marginally involved. It was common for participants to be involved in more than one campaign organisation (such as lobby groups, community awareness-raising groups and the Green Party). These were generally not focussed solely on climate change, but covered a wide range of broader issues. Figure Eight shows the

broad categories of groups, based on their main campaign issues, which participants had been involved in. Each black dot represents a participant.

Figure Eight: Issue-groups participants had participated in (over their whole lives)



It can be seen that most participants were active in a range of different campaign groups. Some implications of this fact are discussed in Chapter Ten, when communities of practice are considered.

For several participants, campaigning formed most of their action on climate change, and for some it formed a very important part of their life. Josh summed up this activist identity, saying, *"I tend to be the*

one who's dancing around with a megaphone and a placard". Campaigning involved activities such as political lobbying (from emails and petitions to visits to MPs), awareness-raising (including work involving schools, community centres, the media and the workplace) and group-related activities (such as fundraising, recruitment, administration and social activities). All these activities often involved organising or attending events such as demonstrations, meetings and public stalls.

Gary provided an insight into the life of a committed campaigner when describing his activities with one environmental group:

> *"I probably do a good three or four hours a month on the website, probably longer, six or seven hours on average. And then you do an afternoon on a stall or a day on a stall. And then writing letters. Just the meetings themselves is an evening a month, and actually there's two meetings a month generally. I've been doing this leaflet, designing it, which is another afternoon. Gonna be doing the [fundraising event], I put [that] together at work, took about half a day."*

Others were more peripherally involved, spending less time on campaigning, but participated in similar activities. Several had previously been involved in direct action protests (such as sit-ins at threatened sites) but only one, Josh, was currently involved in such practices.

2.4 Practices of car use

Car use practices differ from campaign practices in two important ways. First, car use practices are widespread in the general population. Therefore, it is important to know whether and how participants see their practices as diverging from the mainstream. This will reveal how car use practices are reconciled with, and incorporated into, action on climate change. Second, the car use practices of environmentally-aware people are under-researched and little understood. The key question here, therefore, is not just how participants use cars, but how they use them as part of their action on climate change. This section addresses the question: What specific features of car use practice are associated with action on climate change? Following the suggestion of De Certeau (1984), it considers how conventional practices are adapted and re-interpreted by these people, as well as the practices they reject and the new practices they adopt.

Some participants had levels of car use that would not be unusual in the general population. For example, James had a two-car household; Ray had a car and his wife also used a large company car. However, none showed very high levels of car use and while most were able to drive, more than half did not currently own a car. This latter group either had low car use (involving hired, borrowed or shared cars) or none at all. Across the sample, efforts to reduce car use were very commonly mentioned as one of the actions taken to address climate change.

A key dimension of car use practices that people mentioned was the purpose for which the car was used. Participants tried to limit the number of places they drove to, using alternatives for short journeys. Many participants used a car to commute to work, and some used it as part of their job. However, some had deliberately chosen to live and work in places that meant they could minimise car use. Some mentioned holidays that involved using cars, which prompted mixed views in relation to the climate-friendly lifestyle project; some chose driving because it was greener than flying, but some saw it as negative because it was worse than other modes such as cycling. Car use, like other practices was understood within a spectrum of possible practice. Where it was deemed to fall on this spectrum varied depending on the type of car use concerned; so driving to work was seen as bad, because the alternatives were understood as public transport, cycling and so on; whereas the alternative to a driving holiday was flying, which was "worse". This fundamentally concerns social norms; what it means to commute or to go on holiday, it also concerns divergence from norms; how far people feel willing, able and responsible to go.

The car was used by several participants to support other "green" lifestyle practices; for example, collecting unwanted wood for fuel. It was also used by some to support practical volunteering projects such as conservation work, and by others for campaign activism (for example, travelling to a demonstration). In this way cars become materials supporting the participant's pro-environmental practices. Again, cars have a variable ethical standing; both condemned and valued, sometimes by the same people. Cars could also be used as objects for "make do and mend" practices; some male participants aimed to keep their cars as long as possible by maintaining them technically. Another recurring idea concerned being an unwilling passenger. This occurred mainly in childhood, but some, for example Kristina, had experienced it as an adult because of family demands. This raises issues of agency and its links to social context and biographical time, suggesting that people's ability to shape their own practices varies over time and space. However, it also raises questions about the rationalisations that are necessary when taking action on climate change, to create a sense of consistency. People may need to

create a narrative, for themselves and for others, that justifies their actions. For example, presenting oneself as an unwilling passenger, rather than a willing one, might be a way to legitimise an action that seems inconsistent with personal beliefs and goals.

Another dimension of practice is the amount of driving that is done, and all participants who had cars were trying to limit this. Others tried to use their car in more sustainable ways, such as sharing lifts, ensuring the car is full, and keeping a car as long as possible rather than buying a new one. Those that did not own a car used alternatives such as hiring cars, sharing lifts or hitchhiking, in order to manage without their own car. Use of alternative modes is a very important aspect of car use practices as part of action on climate change. These include walking, cycling, coach hire, public transport and taxis, as well as mixed-mode travel. Perhaps the most commonly mentioned alternative was cycling, probably because the study site is a city with relatively high levels of cycling. Participants were divided on whether using taxis is a valid part of a sustainable lifestyle or not, with some seeing them as equivalent to a private car (though perhaps even more costly) and others seeing them as a legitimate way to access the benefits of car use when necessary while avoiding owning a car. Some of those that thought they were not acceptable had "simplicity" or "frugality" values that deemed taxis unacceptable, others simply had a view of all cars as negative. Jeremy described cars (albeit ironically) as "*the objects of the Devil*".

When participants discussed their own car use in relation to their action on climate change, their discourses became complex. Some weighed up the significance of the car in their green lifestyle, and its contribution to their carbon footprint, accepting that it was a very important element. Some noted a potential hypocrisy in their car ownership, and many offered justifications for their car ownership or driving. In one notable case, Ray excluded his wife's commute from his "green lifestyle", when he gave their carbon footprint without its contribution, but at the same time he recognised that this commute was necessary to their lifestyle.

So participants made a wide range of modifications to the conventional set of car use practices. This relates to De Certeau's (1984) concept, described in Chapter Four, of the subversive possibilities of everyday practices. Here, people are performing a practice that is part of a particularly deeply-embedded complex and wide-ranging social system, including a set of rules and expectations. However, they are able to perform their practice in ways that, to a greater or lesser extent, subvert this system. For example, by sharing or hiring cars they challenge the idea of mobility as private and the social expectation

of individual ownership. By using a car as an object for "make do and mend" they challenge the trend towards high-tech cars that are replaced every few years. This highlights a difference between the exemplars; campaigning itself is a radical set of practices, rather than a subversion of a mainstream set of practices. However, campaigning seems to be the exception here; most of the practices mentioned by participants involve modification of conventional practices. For example, boycotting products, buying ethical products, buying second hand goods, reusing items and growing one's own produce can all be seen as ways of subverting conventional consumption systems.

2.5 Ways of thinking and talking

Practices of action on climate change involve ways of thinking and talking, as well as ways of doing. Participants used certain forms of language that seemed to be associated with their practices; for example, "peak oil" "transition culture", "humanure" "eco-chic" and "nukes". Giles said of vegetable peel and leftovers: "*this material is not waste. Never use the "w" word."* Another illustration of ways of thinking and talking about action on climate change was provided by Patricia, in this exchange:

> I: Does it all {your action on climate change} fit into a set of moral and ethical beliefs about how we should all live?
>
> *P: Well you used the word "should" there. We **might** live our lives. I don't do "should-ing".*
>
> I: Not even when you're thinking about it?
>
> *P: Hopefully not. I constructed a mental dustbin some years ago and any sentence with "should" or "ought" in it goes in it. ......I think they're the most off-putting words in the English language. So I try not to do them to myself.*

However, ways of thinking and talking are involved in more complex ways. If a person cannot or will not make a change in a particular area, but wishes to appear consistent to themselves or others, they must find some way to reconcile conflicting desires and needs. This means that sometimes, certain ways of thinking and talking are used as substitutes for action, or are necessitated by a lack of action. For example, Ray justified his wife's commute in a large company car by describing it as necessary for her job,

which financially supports their sustainable lifestyle at home. Paul also seemed to separate his work as a driver from his efforts in sustainable living; the final section of his car use graph shows his car use as a solid line at zero, but a separate, dotted line represents his use of a van, which is moderately high. He labelled this line "*access to work van*" and said "*I do use this van to carry things, like the wood outside that's nicked off skips. I have access to work's van*". So although he does drive frequently, for work and when using the van for other purposes, the ways he presents his verbal and visual accounts emphasise that this is not his personal vehicle, and suggest that he sees his use of the van as less important than the fact he has given up driving a car.

Practices of action on climate change involve ways of thinking and talking about personal identity. For some participants, their participation in these practices seemed to be the most important aspect of their identity. For others it was a more problematic element, perhaps hard to reconcile with other aspects of their identity, or not fully compatible with their social environment (for example, if they have no friends with an interest in the issues). Several were not entirely comfortable with the labels associated with their practices; for example, though Gary was deeply involved in a campaign group, he did not call himself a campaigner:

> I: Do you think of yourself as an activist, or a campaigner?
>
> *G: "Um, I don't know if I do actually, I see myself as a ....just concerned, just wanna do my bit, I feel as if, I see other people who are a bit more active and I just think, I don't know if I could do that. I want to do stuff, and I care about stuff....I wouldn't say I'm an activist or a campaigner, as such, I'm more of just a sort of person who gives a shit, wanna help out".*

Patricia seemed to hold quite a narrow definition of "environmental campaigner" that excluded most of her activities. She described a particular campaign, to protect a specific site:

> *"I wasn't an on-site campaigner, I was a supporter, further back. There was a whole circle of supporters giving books and taking things out to the site. ....I think it was the time I was nearest to being an environmental campaigner. On a single issue."*

Such discourses may be partly linked with a sense that certain terms represent a "deviant identity", and that they do not wish to be labelled in this way (Becker, 1963). In contrast, Josie was happy with an activist identity; for example: "*I realised that my time was better spent in the UK, being an advert, being a political activist in the UK*". Similarly, Josh used the term "activist" fifteen times, speaking about himself as a representative of that category, for example, saying "*it's a fairly serious business, being an activist*" and describing feelings that are experienced "*when you're an activist."* This seems to represent an enthusiastic commitment to this subcultural identity.

"Environmentalist" seems to have similar connotations, but with perhaps less emphasis on political, visible, challenging actions. In one notable case, Gillian used the term to refer to an identity that had no relation to campaigning, but was a professional certification: *"I've got to do seven years and then I do my, become a Chartered Environmentalist. A kind of professional goal*". So participants varied greatly in the ways they labelled themselves as practitioners of action on climate change, and (in this small sample) there was not a clear connection between people's practices and their identification with these labels.

2.6 Practices of not-doing

An interesting feature of these findings is the importance of practices around avoidance, reduction, substitution and generally "not doing". This is notable because the practice literature has generally focused on the "doing" of things, but not doing things is a very important part of people's daily lives. This is a huge category of practice, and there is an important distinction to be made between what the philosopher Myles Brand calls "refraining" and simply not-doing. People are not-doing an infinite number of activities all the time, without even being aware of them, but refraining involves some form of active behaviour or intention that results in not doing something (Brand, 1971).

What Brand calls refraining is here labelled with the more neutral, and less restrictive term "practices of not-doing". Within the social practice literature it is relatively unusual to emphasise the distinction between deliberate and non-deliberate actions (hence the fact that all kinds of doing are labelled as practice). However, there is a very real and significant difference between not doing something that has never crossed one's mind (for example, walking to Timbuktu) and not doing something that one has considered but decided against (for example, driving to work). For this reason, it is helpful to distinguish an absence of a practice from a practice of not-doing.

As Brand notes, a practice of this kind is difficult to define. It involves an active engagement with the possibility of doing something, which could take the form of a conscious deliberation, for example, a weighing of costs and benefits. However, this process does not have to be rational or deliberative, and could even happen on a subconscious level, for example, refraining from approaching a spider due to fear, or refraining from speaking to a stranger due to subconscious prejudices. For some behaviours, such as taboos, people may refrain due to deeply ingrained social norms. Nonetheless, they are in some sense engaging with the possibility of doing something, and then not doing it. Sociologists and anthropologists have noted the importance of deliberate or active not-doing within social and cultural systems; for example, obeying taboos, abstaining from certain behaviours for religious reasons or not breaking the law. These practices can also be important in constructing identities, for example, being an ex-smoker, recovering alcoholic or unmarried for religious reasons (Mullaney, 2001).

Here, practices of not-doing formed an important part of many participants' action on climate change. These included, for example, not driving, not flying, not eating meat, not wasting energy and not buying from supermarkets. For Ryan, such practices were an important component of a list that he used to introduce himself*, "I don't have a car, I don't fly, I cycle everywhere, I compost, I've done all the things I can do easily, I don't buy new clothes".* In some cases these practices were strongly linked to identity, for example, Carrie was a passionate vegan and said "*I couldn't not be a vegan".* Alison was a committed anti-car campaigner and took pride in not owning a car.

Practices of not-doing are more common in the domain of practical action than of political action. With the exception of boycotts, almost all political actions were about doing rather than not doing. This may be inherent in the nature of the political sphere; to make any kind of political statement it is generally necessary to do something that is visible to others. In contrast, the goal of living a low-carbon or low-impact life is, to an extent, inherently about reductions; whether it is cuts in consumption, waste or pollution and emissions. It involves a rejection of certain social norms and ways of living that the person sees as unsustainable, unethical or undesirable.

Sometimes, practices of not-doing involve completely giving up or refraining from something, for example being vegetarian or vegan, boycotting a product or not learning to drive. It is more often the case that people reduce or limit certain practices; for example, drive less, or use less energy. These are

modifications of practice, but are still forms of not-doing. Most practices of not-doing also involve the replacement of one form of practice with another, but in some cases this replacement is much less direct and obvious. Examples of replacements are buying organic, not conventional products; travelling by bus, not car; and buying renewable electricity, not fossil fuel electricity. Examples of less direct replacements would be buying fewer products; travelling less; and not heating certain rooms. It is important to note that the distinction is not a clear one; many practices of not-doing may involve replacement in indirect ways. For example, travelling less may in fact involve practices around local leisure activities, or doing things at home. The difference is a spectrum rather than a polarisation.

In terms of real lives, the complete avoidance of a practice, without any replacement, seems to be less common, and to require more commitment or sacrifice than some form of moderation. The former involves a change in outcomes, which may entail some inconvenience, or reconfiguring of personal goals. In particular, it may involve a rejection of certain social norms, because socially expected outcomes are not met. For example, buying renewable energy can enable a household to function exactly like a household with non-renewable energy. In contrast, choosing not to heat certain rooms may appear strange to others. Such practices of not-doing may generate stigma or opposition. However, the change in outcomes is not always seen as negative by the person involved; for some participants, certain practices of not-doing were associated with positive outcomes, such as a sense of having a simpler and more natural way of life and avoiding negative aspects of conventional lifestyles such as stress and over-spending.

Practices of not-doing which involve little or no direct replacement are a relevant issue for research and policy because they may be some of the most effective ways of cutting emissions (as many replacement practices will have some environmental impact themselves), and also because they suggest ideas about alternative visions of society. If current norms, standards and expected outcomes are leading to unsustainable systems, and there are limits to the impact of efficiency and technical solutions, it is worthwhile investigating the anti-practices that offer more radically different ways of living. More generally, practices of not-doing are a neglected area in the literature on environmental behaviour, and the practice literature. Further research could be valuable in ascertaining the ways in which they differ from other practices, especially whether they are they harder or easier to adopt and perform, with greater or lesser barriers offered by social norms.

Another interesting question concerns the other areas of social life in which practices of not-doing are common, such as religions, institutions with rules, and health/diet regimes. It could be useful to discover whether these practices are associated with sacrifice, control and the pursuit of long-term, sometimes intangible benefits. If this is the case, this could have implications for the promotion of sustainable lifestyles. In terms of communication, asking people to do less of things they currently do may inevitably be seen as a criticism of them, with a focus on what is to be lost, not what is to be gained. As noted in Chapter Two, policy-makers may be wary of telling people to "stop doing things". Therefore, if practices of not-doing are to be promoted, then those that involve replacement, or that involve reduction rather than outright rejection may have more success.

These findings suggest that the basket of practices that makes up "action on climate change" contains very diverse physical and mental activities, and even non-activities. These can potentially take place within every domain of life. However, to understand more fully what action on climate change means to participants, it is helpful to examine in more detail the components that make up the various practices in the basket; what Shove and Pantzar (2005) call the "elements" of practices.

3. The Elements of Practices

As noted in Chapter Four, Shove and Pantzar (2005) see a practice as a particular configuration of three types of elements: images (ideas, values and beliefs), skills (knowledge of how to do things, and abilities) and materials (elements of the physical world, including the body). These elements make up every practice, and facilitate, constrain and define every action. This framework is a useful way of breaking down a practice and understanding its component parts, and this section highlights the key elements associated with the practices that fall into the basket of "action on climate change". Again, it draws on the two exemplar areas to provide concrete detail; full details of campaigning and car use elements are listed in Appendix Ten, with key findings highlighted here.

3.1 Images

Analysis of the exemplars, and the data as a whole, shows that the images involved in practices of action on climate change vary greatly between people, and can also be very diverse for just one individual.

Images were on a range of scales, from fundamental worldviews (including spiritual and political ideologies) through to the specific thoughts and feelings linked with daily tasks, such as enjoyment of cycling, and other priorities such as financial concerns or convenience. The most common images, unsurprisingly, involved the belief that anthropogenic climate change is occurring, the belief that individual action is worthwhile, and the desire to take action personally. However, the ways in which the issue of climate change was understood varied greatly, with different participants linking it to images around justice, development, animal rights, war, politics and religion, as well as to other environmental issues.

For campaigning, issue-concern is a key image linked with action; a lack of it was mentioned as a limiting factor, both on past and present practices. This is normally explained by participants as resulting from the prioritisation of other issues. In particular, animals, people and the planet are weighed against each other in this way, with various different judgements made by different people. Of course, more self-interested values (such as money and health) also played a part in promoting or limiting action. So images associated with campaign practices may fall into any of Schultz's (2001) categories of altruistic, biospheric and egoistic concern, outlined in Chapter Three. Negative perceptions of other activists or their activities can also limit action.

Regarding car use, participants hold a range of negative images around the car. Many of these may be shared by the general population, but several participants linked their opposition to cars to the beliefs about climate change. To an extent, other people were used to create spectra on which participants positioned themselves and their car use (as with other aspects of identity). Many images around others' car use were used as good and bad examples in participants' justifications of their own behaviour. Often motives were mixed, and affected practice in diverse ways; sometimes involving very specific changes, for example a change in fuel, and sometimes involving more general changes, for example avoiding the car.

An especially important area of images, which applied across all areas of practice, is norms. Participants expressed a range of values around normality; at one end of the spectrum were several who were angry about current norms and aimed to challenge them through activism and example-setting. At the opposite end was Gillian, who referred to herself as "*strait-laced*" and "*professional*" in her action on climate change, and preferred to work within existing systems than change them. While most participants fell between these poles, there was a common tendency to equate normality with unsustainability; eight

participants expressed a direct opposition between "normal" and environmentally-friendly values, practices or people. These participants presented unsustainability as a dominant, invisible category from which environmentally-friendly things (whether light-bulbs, actions or ideas) had to be specifically distinguished. Participants often expressed negative connotations with normality, highlighting conflicts between "normal" practices and practices associated with action on climate change.

Norms are a key dimension of any practice, but are especially prominent here as action on climate change inevitably involves many practices which are not currently mainstream. This means that these practices involve particularly intense consideration of, and conflict or compromise with social norms. This is expressed clearly by Ray's reflections on normality:

> *" I'm not one of the dippy hippie crowd, the sort of lentil munching, vegan diet, you know. I try to live as close to a "normal", and I'm sort of giving that inverted commas, sort of thing, lifestyle as anybody else. I mean, our house is a little bit shabby admittedly, but then if you've got kids my age, who hasn't....We live differently but within the same sort of rules to a certain extent*."

This account suggests a compromise with normality, negotiated through subtle nuances of normal/abnormal and sustainable/unsustainable practice. This complexity may be linked with the different worlds Ray occupied; his wife did not share his views, and he had a "*constant struggle getting her to come round to my way of thinking*". He also had to contend with the middle-class materialism he encountered in his social life. This social context could be one reason why he rejected an abnormal identity: "*We're not tree-huggers*".

James did not have environmentally-aware acquaintances; his friends laughed when he collected wood to burn, and his wife was not interested. So adopting pro-environmental practices in his context meant radically departing from normality. Perhaps for this reason, his commitment was limited, and focussed on practices generally seen as normal, such as recycling. Without conducive social networks it may be hard to reject dominant norms, or envision alternative forms of normality.

3.2 Materials

The material elements involved in practices of action on climate change can include virtually every material object used by participants in their daily lives; for example, household appliances and furniture, items purchased, vehicles and food. Often, action on climate change means performing a practice with some modification of the materials used.

This is done in three main ways:

1) Using less of certain materials; for example, cars, meat, high-energy-consuming gadgets
2) Using more of certain materials; for example, bikes, vegetarian food, eco-gadgets. (Often these two forms are related, with greener alternatives replacing the usual materials)
3) Using the usual materials in a different way; for example, keeping a car for a long time, reusing things.

The use of one material element, the car, was a key way of modifying dominant practices of car use; for example never owning a private car, giving it up, or getting one only late in life. In the latter case, biographical time is being actively involved in the performance of practice (and certainly used in the creation of the narrative of the project). However, agency is not complete here; several mentioned the idea that buying a car raises car use, and lack of a car can trigger a transition to alternative modes. This links to path dependency and the risk of becoming trapped by un-desired habits; Ryan summed this up, saying "*The main thing is not to have a car so it doesn't become normal life".*

The campaign exemplar also revealed some notable aspects of the role of materials. As well as a direct, practical involvement as tools, materials can be implicated on a deeper level in campaign practices. Fundamentally, any ideas about pollution, natural resources and natural sites (key campaign concerns) are ideas about materials. Pollution has been defined as "matter out of place" (Douglas, 1966), and we could even see resource extraction/depletion in the same way; though here, it is matter that is absent from, rather than present in a certain place that is the issue. These fundamental beliefs about materials may also underlie many other practices around climate change, as well as just campaigning practices.

3.3. Skills

The skills mentioned by participants are also diverse, ranging from technical know-how about engines, generators and plumbing to expertise on climate science or transport systems. Lifestyle change activities seemed to involve a range of practical skills for the house and garden, including cooking, composting, growing produce and keeping animals, mending items such as clothes and do-it-yourself (DIY) skills. These skills have links with the ideas of self-sufficiency, voluntary simplicity and "make do and mend". They may also be associated with ideas about the past, and ways of life that have been lost in a high-consumption, disposable modern society. For example, Kitty described a party organised by an environmental organisation as an example of a simpler way of life:

> "*Literally homemade entertainment...It didn't need expensive, fancy things. We had a ceilidh band, acoustic...It was a light to show you can have so much fun in an evening without expensive stuff*."

Kitty's account suggests that certain skills underlie her practices; such as finding inexpensive entertainment, connecting with others, and finding and using items that are second-hand but good quality. For example, she said, *"You buy all these different chairs, have them re-upholstered and it looks really nice".* Another skill involves rejecting the "rat-race" and consumerism for a slower and better way of life, which demands will-power:

> *"There's a vote with your feet thing. If none of the shops have what you want you should have the strength to come home empty-handed. If none of the jobs have got what you want..."*

Regarding campaigning, some advanced skills are gained through experience. An example is the skill of non-patronising persuasion, which Kristina and Patricia both say they gradually developed over several years. Skills are often a limiting factor in campaign practices. This can be linked to life stage; being young often means having an incomplete knowledge of issues and possible actions or just lacking a background understanding of how the world works, where to get information from and so on. For example, when Jeremy was young, his shyness and inexperience meant that it was hard for him to find information. For car use practices, the key skill was the ability to drive; however, participants also mentioned skills in

maintaining cars, and in using and maintaining other forms of transport. For some, expertise on transport issues helped guide their practices; for example, their choice of travel mode or fuel.

3.4 The relationships of elements

This discussion has highlighted the fact that the elements of practice are not distinct, but inter-related. For example, materials and images intersect as people hold concerns about pollution, resources and natural sites. There are also many other overlaps and connections between the three kinds of elements. For example, knowledge can be classed in the category of skills, but is also closely linked with images, especially where the line between knowledge and belief is not a clear one. (This is especially true of the issue of climate change, where the status of certain pieces of knowledge is intensely contested by different interests). Skills and images are often linked; for example, being skilled can lead to images of confidence and pleasure in the practice. Equally, images of interest and desire to learn can lead to skills development. Similarly, the boundary between skills and materials is not always clear, with the use of materials often relying on associated skills; for example, any form of campaigning involving computers will involve closely connected hardware and abilities. Use of materials often generates skills, but skill level can also determine what materials are used. So this three-part definition is a useful tool, but should not be seen as a rigid and definitive model.

An important issue for this study concerns the relations between the different practices that a person performs in order to address climate change. Elements can be useful in exploring these relations, as some elements may be shared between different practices in the basket. A few key images are clearly associated with many or all of the practices that make up action on climate change. Most notably, the belief that anthropogenic climate change is occurring, the belief that individual action is worthwhile, and the desire to take action personally could be seen as necessary and defining characteristics of such action, and are all images. However, less specifically, other images may also be associated with many of the climate-related practices a person performs; for example, a sense of ethical duty, a sense of pleasure, or an awareness of divergence from social norms. The dominant images will vary depending on the person; for example, Josh held many strong images around justice that shaped his various practices, while James held images around community and Carrie held images around animal rights.

Materials are shared to a lesser extent, unless materials are considered on a relatively large scale. For example, the planet and natural objects are associated with many practices, as are the home and garden as sites for their performance. The body is also deeply involved in all of these practices; an interesting topic which this thesis does not have scope to address. Some materials span practices in complex and diverse ways. For example, trees can be the subject of campaigning (to protect them, locally or globally), and the site for such protests (including lock-ons and sit-ins), a tool for the practice of growing produce (fruit or mushrooms), a tool for guerilla gardening (a crossover political-practical action), a source of wood for non-fossil fuel heating, a source of leaves for composting, a site for encouraging wildlife, and a tool for carbon offsetting through planting (either locally or globally by donations).

Similarly, cars can have campaigns against them, or for alternatives, and around various issues including speed, congestion, road-building and car-focused developments. They can serve as a symbol of greed, selfishness and unsustainability (especially if they are large and "gas-guzzling"). In contrast, electric cars can be a symbol of positive future options for sustainability. Cars can be avoided as part of a practice of not-driving, and can also be the site and tool of "sustainable" driving practices such as biofuel use or car-sharing. Taxis can be used as a tool to avoid ownership of a private car, and hence increasing reliance on cars. Cars can sometimes be used as "sustainable" alternatives to even worse modes, such as flying. Cars can be used to support campaign activities, by driving activists to their protest sites, and to support practically sustainable activities such as collecting old wood (though some suggest that such uses are unjustified). Most interestingly, a single car (or a single tree) can fulfil many of these roles for one person.

Some skills are also associated with more than one practice. A key area of skills was in social interaction and working with others, including persuasion. This was vital to most political practices, as these very often involve participation in a group, or interaction with the public or decision-makers. However, many practical activities also involved some engagement with others, whether in a community group or simply convincing one's family to accept lifestyle changes. Another very generalised skill involved learning and knowing where to find information and advice; whether on issues and campaigns or on practical solutions. A related skill involves understanding the issues around climate change (for example, the scientific debate, or the political situation), including some fairly technical understanding of carbon footprints and the impacts of different forms of behaviour. Practical or do-it-yourself skills were important in some people's lifestyle practices, and also had some role in campaigning (for example, banner-making); creativity was also mentioned by some as a fairly cross-cutting area of skills. For some people, an ability

to reject or subvert social norms seemed to underlie many of their practices; this is especially true of the most committed people, such as Giles. Interestingly, physical capacities were barely mentioned.

This suggests that there are some elements that are not only linked with one practice, but which unite several practices that are related to climate change. However, it is important to note that the key elements vary greatly between people; an element that links several practices and defines a project for one person may be largely irrelevant to another. For example, concern for animals was fundamental to all Carrie's practices, but barely mentioned by other participants. There are also many elements that are specific to certain practices. For example, insulation is only used to conserve energy, and the skill of installing solar panels is mainly used for that one purpose. So the diverse practices that make up action on climate change are not simply linked by a shared set of elements.

4. Projects

It has been noted that action on climate change can be seen as a basket of practices; a set of activities linked by some defining feature, which may or may not have resonance and significance to the people concerned. An important question for this study is whether action on climate change is in fact a meaningful concept to participants: Do they see themselves as engaged in a coherent and linked set of practices that are addressed at tackling climate change? Here, the concept of a project is useful. As outlined in Chapter Four, a project is a set of practices directed towards a particular goal. Unlike a basket, a project is a set of practices linked by a goal that is important to a person, and is relevant to the ways they plan and understand their activities. For example, while "practices that affect cancer risk" is a basket, an example of a project might be "losing a stone in weight" or "quitting smoking". While the distinction is a subtle one, it is important in understanding how people perceive and organise their practices, especially in fields where there is a gap between public understandings and those of policy-makers and researchers.

Projects can exist on various scales, because goals can exist on a variety of scales. It was suggested in Chapter Four that mid-level projects are those with mid-level goals, while the set of actions aimed at achieving a major life goal could be called a major life project. This is a project that operates on the scale of years, perhaps spanning the whole life-course, or not having a defined endpoint. A question

considered in the analysis of the data was whether action on climate constituted such a major life project in the lives of any participants. As noted in Chapter Two, various policy interventions, such as Act on CO_2, have aimed to promote individual participation in a set of diverse practices, linked by the goal of addressing climate change. Therefore, it might be expected that this would be reflected in the projects adopted by people.

However, it did not appear to be the case that participants had adopted a coherent and definable project of action on climate change. When people were asked about the actions they were taking to address climate change, they mentioned many actions that have little impact on greenhouse gas emissions, such as encouraging wildlife, or campaigning on poverty, but related to other areas of ethical or sustainable behaviour. This suggests that "action on climate change" is not a clear-cut category of practice that has meaning in their daily lives, or a project in its own right. Rather, it is bound up with broader environmental and ethical ideas, practices and projects.

This leads to a further question: What (if any) are the projects of which action on climate change forms a part? Taking an inductive approach to the data, it is possible to identify a range of projects within participants' lives, which they linked with their practices of action on climate change.

Key types of project (which are related and overlapping) include:

- "Living lightly", having a sustainable lifestyle, protecting the environment or being an "environmentalist"
- Conserving resources, being efficient or living a simple life
- Achieving political change, being an "activist" or "campaigner"
- Doing no harm to people, animals or the environment, or being ethical
- Living the "good life" or improving personal quality of life
- Exemplifying a better society or way of life to others

However these are overlapping categories and each participant expressed their own life project in a different way, based on their own priorities. For example, Carrie said she strives to live her life according to the principle of "ahimsa" (doing no harm), and gives herself a regular "ethical makeover" to ensure she

is performing all the practices she should or could be, in order to pursue this. Giles summed up his project as "*my fairly traded, organic, reclaimed life"* and for Kitty her practices were all aimed at "*quality of life*".

No participant was engaged in a project that was solely directed at addressing climate change. However, practices aimed at addressing climate change might be a component of a wider project; for example, a project aimed at reducing one's carbon footprint was often part of a broader "living lightly" project, and campaigning on climate change was often part of a broader "political change" project. For almost all participants who participated in campaign practices, this was part of a broader effort to live an ethical or sustainable life. Several spoke of "walking the talk" and avoiding hypocrisy, suggesting a Gandhian desire to "be the change you want to see in the world". A project may have the potential to encompass every aspect of the individual's life. The extent to which it does this will depend on a range of factors acting to extend or contract the project's influence. These are discussed in Chapters Ten to Twelve.

For some participants, their project was an incredibly important dimension of their lives, and had even influenced decisions about work, family and accommodation. Such projects could be an important aspect of the person's identity, as highlighted by Giles' characterisation of his life (quoted above) as based on ethical and environmental principles and his feeling that it was inevitable that he would *be "some kind of environmentalist".* As noted in Chapter Four, identity can be understood as constituted through practices. Accounts suggest that to some participants, "*you are what you do (eat, buy, drive, plug in, grow, make, watch, read...)"* (Research journal, 30.3.2011). For many, this meant building and maintaining an identity based on a set of ethical, environmental or political practices, integrated into a life project. By performing a particular set of practices, including ways of producing, consuming, using and reusing things, ways of talking and ways of thinking, Giles developed the identity he summed up as *"my fairly traded, organic, reclaimed life",* as noted above. His words are especially revealing as he labels himself using the same terms that are used to label the material objects that are central to his production and consumption practices. However, others were engaged in projects that were more minor concerns, with relatively limited scope within their lives.

Within a major life project, there will also be mid-level projects such as running a campaign or installing insulation. These sub-projects will be based on shorter term and more specific goals. For example, at the very start of his account, when asked, "What are you doing to address climate change?" Ray listed a set of practical projects, past, present and future:

"What we do now, um, let's see. Well we've got a wood fired central heating system...I source old pallets, cut them up and heat the house with them....as well as that we have had some solar hot water heating panels...I've taken them off and I'm putting them on the front and back roofs so it catches the winter sun, one roof in the morning, one in the afternoon. That's just half way through at the moment because the school summer holidays have got in the way of the project a little bit....."

"I'm an active composter, I've got five compost receptacles in the back garden. ....Um, what else, up to a little while ago I was running my car on 100% biodiesel....... We've got on the cards to have a new downstairs loo.....But the stipulation with the wife is that I make it a rainwater harvesting one, which flushes on harvested rainwater from the roofs, and again I've not quite got round to starting that one either."

These sub-projects do not have to be purely practical or domestic; for example, Alison had written a book, Jeremy had completed a relevant Masters degree and Giles had set up a community group. One person may have a wide variety of sub-projects associated with their project; just as they may have a range of goals and practices. However, the cases discussed here clearly show that participants' projects are not always fully planned in advance, that they can stall or regress as well as progress, and that they are messily entwined with other areas of life. Watson and Shove (2008) similarly note that projects are emergent and contingent, evolving as they are carried out.

Within a project, the relations between practices may be extremely complex. Practices are entangled with each other; one may demand another; for example, because people feel a need to "practice what they preach", campaigning activities may also necessitate lifestyle changes. Less frequently, one practice may rule out another; some reject the idea of doing a "green" activity if it also involves doing or supporting a less sustainable one. For example, Josh always had to consider whether a campaign event justified the emissions caused by travelling to it. So the maintenance of a project involves a negotiation and balancing of a range of different practices, which sometimes conflict, and sometimes necessitate each other.

In conclusion, while action on climate change does not form a clearly defined project, it is involved in various major life projects, which may be ethical and/or environmental as well as practical and/or

political. The project approach highlights the relationships between practices and between action on climate change and other domains of daily life. In Chapters Three and Four it was argued that approaches to sustainable practices need to be holistic and contextual, and also dynamic. The project approach particularly addresses the first of these, as it sees action on climate change within a whole assemblage of practices, set within the context of a life.

5. Habitus

A final approach to understanding how participants construct action on climate change is to explore the different forms of habitus associated with these practices. Chapter Four explained the concept of habitus; a set of dispositions, reflexes and forms of behaviour people acquire through acting in society. Based on findings emerging from the data, it appeared that this was a concept that could be usefully applied to action on climate change. Three forms of habitus were identified, and are considered here, alongside the images, skills and materials they involve. Images and skills are what make up the habitus or "disposition", they are what is acquired. The role of materials is less direct; here, what is acquired is likely to be ways of using materials, and ideas about them, rather than the objects themselves. For example, some people were taught how to reuse tins, paper or wool; this way of using objects formed part of their habitus.

Radical habitus is an acquired disposition to challenge the status quo, often through the means of political activity. This study found evidence of a radical habitus in the sample, with eleven people seeming to fit this description. It appeared to be a prerequisite for any significant participation in political or campaigning practices. However, radical habitus does not just facilitate campaigning activity; it may also help people to take radical steps in their own lifestyle. In particular it may enable people to overcome the barrier of stigma and rejection of social norms; if a person has a disposition to challenge norms and even to enjoy being visibly unconventional, then measures such as veganism or compost toilets will be easier to adopt.

Key images associated with this habitus include political ideologies, ways of defining social and environmental problems and solutions, a sense of personal agency and moral responsibility, and also ideas about campaign strategies. Key skills associated with this habitus include the ability to engage with topical issues, to argue and persuade, to work in groups and to reject dominant norms, as well as the skills

associated with campaigning practice (including lobbying, demonstrating, letter-writing and so on). The main materials are those linked with campaigning (stalls, leaflets, banners and the like), but a feature of this habitus is the use of practical or lifestyle actions as exemplars, or aids to awareness raising. For example, Alison invited people to her house to see her solar panels, and Giles used his compost equipment to teach others. Radical habitus can involve challenging the status quo in a variety of ways.

Ecological habitus was also visible in the accounts, with nine participants having a tendency to love and respect nature, and try to protect it. This was often manifested through practical conservation and "green gardening" activities (such as composting), but also through campaigning. Ecological habitus was most clearly involved when campaigning was directed at specific threatened sites, or was on conservation and biodiversity issues. However, for some, campaigning directly on climate change was driven by an ecological habitus. For example, Gary, an active campaigner on climate issues such as UK emissions reduction, spoke of his sense of wonder about the planet:

> I: Have you always liked spending time outdoors?
>
> G: "*Yeah, definitely. ... beautiful, beautiful world, isn't it.... That's one of the reasons we went travelling as well, we wanted to see some of the beautiful places that are in the world.... We saw a lot of wonderful- Yellowstone park, snorkelling in Australia, and Fiji, you just see how fragile it is as well...I try and influence people in my own little way"*

Key images within this include the linking of "naturalness" with goodness; a sense of connection to living things and landscapes; a view of nature as fragile; and a belief that humans should treat it with love, respect and responsibility. Key skills include the ability to enjoy nature, often through outdoor activities, and the associated knowledge and mental and physical capabilities, as well as skills in conservation, nature-friendly gardening and campaigning. This habitus also includes uses of materials, especially natural places and objects, and the equipment needed for conservation and campaigning.

While most participants expressed some degree of ecological habitus, an exception to this was Alison. She linked this to her childhood in a city, with parents who were uninterested in the environment; she had preferred television to outdoor activities. This lack of interest remained throughout her life, and her action centred on well-being in urban environments, rather than nature. Several other participants

described their values around nature as secondary to values around justice or human suffering. So in this specific time and place, an ecological habitus may be a major component of the practice of taking action on climate change, but not an essential one.

In addition to these two previously identified forms of habitus, a third and new form emerged from the data. This can be called a **simplicity habitus**, and defined as a disposition towards simple, frugal or resource-efficient ways of life. This describes twelve of the participants, and was particularly strongly associated with many of the practical or lifestyle practices that participants mentioned. It was not associated with campaigning in the sense of political protest, but many participants who held a simplicity habitus were keen to pass this on to others, through community groups and events. For example, this was a key habitus for people involved in the local Transition movement, who described running public events such as workshops in reusing materials and making homemade crafts.

Images of simplicity, including frugality, thrift, low-consumption and "living lightly", were widely held by participants, while greed, waste and luxury were condemned. These images were also linked with a rejection of globalised consumer capitalism, in favour of community, localisation and diversity, with a do-it-yourself, make-do-and-mend ethos. This habitus was associated with visions of the past (sometimes nostalgic ones) and imagined futures; both utopias based on simple living and dystopias in which self-sufficiency is necessary. Saving resources for environmental reasons and saving money were often linked in people's accounts, rather than presented as separate or alternative motives. This habitus involves skills in "making do and mending", reusing and recycling, creativity and practical DIY skills. The materials can be any of the materials used in daily life, but tend to be reused, recycled, homemade, second-hand, traditional, long-lasting or good value. Occasionally high-tech materials are used in simplicity practices (for example, solar panels), but this is relatively rare. Some people linked their simplicity habitus to being brought up in the north of England, being brought up in a time of austerity or being working class. However, it is not clear whether there are real differences based on these factors, or whether this is in fact a habitus that is quite widespread in the general population.

So action on climate change may involve any combination of these three forms of habitus (and a larger study might also find more). The fact that a simplicity habitus was mentioned by participants of all classes is a potentially important finding, because radical and ecological habitus may be predominantly found in middle class groups. Any set of ideas that could engage a broader population with pro-environmental

practices could have useful policy implications. The concept of a simplicity habitus also has interesting links to other fields, including Defra's segmentation of the UK population, and the literature on the voluntary simplicity movement. While any habitus is a relatively enduring set of dispositions, it is subject to change, as people have new experiences, perform practices and interact with others. This is discussed in the next chapter.

6. Chapter Summary

This chapter has presented findings of this study that help illuminate the nature of action on climate change (Research Question One). It has considered the specific practices that make up "action on climate change", and the way each participant's activities form a "basket" of practices. Within this basket are not only "ways of doing" campaigning, car use and other activities, but also associated ways of thinking and talking. There are also a range of practices of not-doing. By examining more closely the elements associated with campaigning, car use and other forms of action on climate change, it is possible to see that diverse images, skills and materials are involved with these practices, but that there are some key elements, especially images, that serve to link them. Finally, many participants, described their practices as organised into a coherent project; but not one centred on climate change. Rather, these projects involved broader goals around ethical and environmentally-friendly ways of living. The next chapter moves on to discuss how action on climate change develops over time; the subject of Research Question Two.

Chapter Nine

How Action Changes Over Time

“...an individual's existence can be diagrammatically described as a trajectory, a "daily-" or "life-path" of movement-a weaving dance through time-space”

(Pred, 1977:208)

1. Introduction

The previous chapter explored the nature of action on climate change, suggesting that this is a complex and multi-dimensional concept. This chapter builds on this to present the results of data analysis that answer Research Question Two:

2 How does performance of action on climate change develop throughout the individual life-course?

This chapter draws heavily on life grids and graphs as well as interview texts, as these visual methods proved especially effective at showing how, when, at what rates, and in what stages, change occurred. Various techniques have been applied to the data, and are discussed here in turn. Each provides a different view of how change happens, and suggests patterns to be explored in later chapters. Section Two considers the technique of identifying phases in the life-course, and Section Three examines trajectories on life graphs and the experiences of change that these lines represent. Section Four examines how forms of action change over time. In order to ground the discussion in participants’ actual experiences, Section Five uses the two exemplars to describe how change occurred in these practices. Section Six concludes the chapter by applying the concept of a “career of practice” to these processes of change.

2. Identifying phases

Based on the life grids, graphs and interview texts, each life can be divided into a series of phases. These were sometimes easily identifiable within the narratives; for example, people often divided their accounts into chronological sections with fairly clear start and end points. However, life graphs and life grids enabled participants to set the pattern of their lives down on paper and clearly show the timings of any phases they perceived in their biographies. For this reason, as noted in Chapter Seven, the grids and graphs were taken as the starting point for identification of phases, but narratives were then used to clarify their boundaries and add detail concerning the conditions and practices of each phase. This is essentially a process based on judgement, and is not intended as a definitive breakdown of a person's life. To illustrate this tool, Table Six shows the phases that have been identified using this method within the life of one participant, with the direction of the line on their life graph (trajectory) and actions taken.

Table Six: Phases in the life of a participant[5].

Context	**Graph trajectory**	**Practice: Practical**	**Practice: Political**
Childhood- awareness of nature and "make do and mend". Professional job	No action	No action	No action
University and unemployment	Stable, then negative	Vegan, then vegetarian Allotment, permaculture	Anti-war campaign group, gender awareness and anti-violence groups
"*Normal*" lifestyle	Stable	No action	Anti-violence group
Re-engagement with alternative/ environmental ideas	Steep positive	Semi-vegetarian Cycling Wood burner, collecting unwanted wood	Environment/ community groups, pro-cycling campaign action

[5] Names and ages are not supplied with life-grids, because these inevitably contain information that could risk identification.

The smallest number of phases was three, in the lives of both Giles and Maggie. These participants drew relatively smooth life-graphs with few "ups and downs". The greatest number of phases was eleven, in the life of Jeremy. Jeremy's life-path was fragmented, with many false-starts and tangents as he tried to find a career he considered socially-useful. There is no clear link between age and number of phases in the life-course.

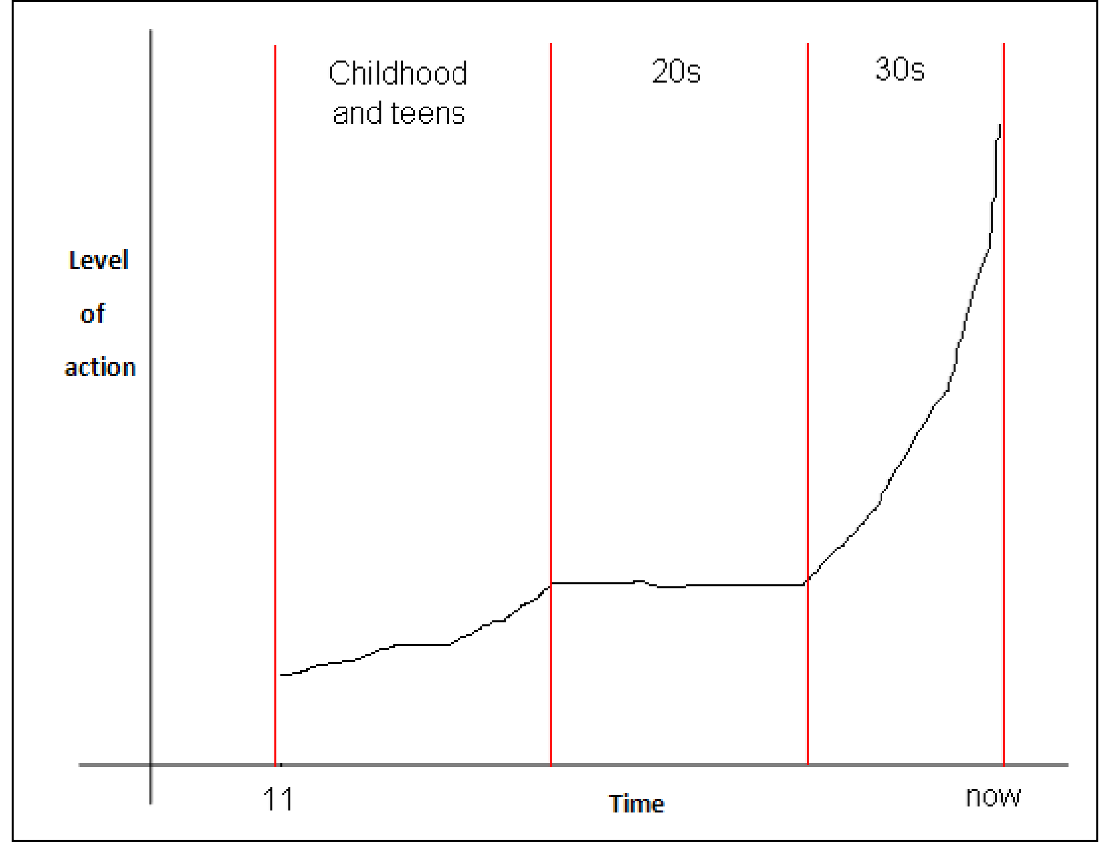
Most participants described an initial phase of little or no action. In most cases this was in childhood. For participants who had been to university, this period often formed a distinct phase. However, beyond this, the nature and timing of phases began to vary greatly between participants. Key factors used to delimit phases include the location the person lived in, their employment situation and their life transitions and relationships with others (including births, marriages and deaths). So phases within participants' pathways of action on climate change are often linked to phases in the biography more broadly. These factors shaped the action taken during each phase in complex ways, and are discussed in the following chapters.

3. Identifying Trajectories

The next step in analysis involved examining trajectories in participants' levels of action. This refers to the gradient or slope of lines on the life graph. A trajectory is defined here as a section of the graph which is either upward-sloping (positive), downward-sloping (negative) or flat (stable)[6]. Figure Nine shows three trajectories: one shallow positive, one stable and one steep positive.

[6] It should be noted that while trajectories and phases often coincide, they do not always have identical start and end times. This is because trajectories are a property of graphs, while phases are defined using a combination of graphs, grids and interviews.

Figure Nine: Life-graph drawn by James (34), divided into trajectories



As noted in Chapter Seven, the first six participants drew graphs showing "action on climate change", while the remaining ten drew a graph for car use and a graph for campaigning, because of the introduction of the exemplar methodology. The analysis of the graphs showed significant differences depending on the variable that was represented. Specifically, car use graphs were very different to the other graphs. For that reason, only graphs of campaigning and all action on climate change are considered in this section; car use graphs are discussed separately in Section Five.

Most of the campaigning and action on climate change graphs were made up mainly of positive trajectories interspersed with stable trajectories. In several cases this produced a "step" pattern of alternating flat and upward trajectories. Positive trajectories were very common in participants' life-courses, and some even described their life-graphs as "*exponential*" or "*a hockey-stick graph*"[7]. A positive

[7] A reference to the famous graph showing global temperature and its sudden rise in the last century

trajectory could involve participating in a greater number of "sustainable" practices, or intensifying participation in one area; for example, devoting more time to it. They were often associated with a sense of new discoveries and opportunities, and feelings of enthusiasm. Negative trajectories were quite rare in the graphs[8]. However, some participants had negative trajectories which resulted in them taking no action at all, either for a short period or break, or for several years, sometimes due to boredom, disillusionment or fatigue.

This finding concerning the predominance of positive trajectories raises interesting methodological questions. Do people active on climate change tend to want to represent their lives as a positive trajectory, ending on a "high"? Does sampling people who are currently active (and relatively easily accessible, and known to other active people) result in a sample of people at their most active? If the graphs are accurate, will these people continue to become ever more active throughout their lives? Further research would be needed to ascertain the answers to these questions; longitudinal research with the same sample would be especially valuable, as would sampling of less active people. When life graphs are combined with grids and interviews, and cases are compared, it is possible to identify specific sets of personal images, circumstances and practices that are associated with certain trajectories. In other words, it is possible to move from a line on a graph to the experience of change in a person's life that the line represents. Six key processes, inductively derived from the data, are outlined below:

Early exposure

Almost every participant described elements of their upbringing that shaped their later action on climate change. Often these were not practices *per se*, but things they learned, or interests they developed from parents/mentors. This generally occurred in childhood and involved trajectories that were stable or gently positive, at a low level. It often lasted up to a decade.

Learning curve

Every participant described at least one phase when their action increased at a moderate rate because they were becomingly increasingly interested in and committed to action on climate change. This "learning" did not just involve information, but the building of contacts, concerns and identity. It could

[8] This is an interesting result, which may be linked to the methodology, but which there is not scope to discuss here

happen at any stage of the life-course, and last many years; for some participants, this was the only kind of trajectory they experienced, and so spanned the entire life-course.

Explosion

Many participants described a time of rapid increase in action, often associated with a high rate of learning about issues, and enthusiasm. Ryan described this by saying "*the issues... explode at that point*", so the term explosion is adopted to describe this process. In eleven cases this occurred in teens or young adulthood. In eight cases it occurred while the person was at university. Carrie experienced two explosions – or an explosion in two phases, just a year or two apart – each triggered by a school project. Two other people experienced a second explosion that came after a period of distraction; a re-engagement with action on climate change. In all other cases there was only one explosion. This generally occurs in teens or young adulthood, but occasionally later. It involves a trajectory that is steeply positive, sometimes vertical or exponential. It can be rapid, or last several years.

Distraction

Six participants described periods of distraction from action on climate change. For two men this occurred in young adulthood and was a time when they were concerned with money, women, jobs, sport and so on. For two women and one man this occurred in mid-life and was associated with family responsibilities. Another man experienced it in early mid-life, linked to the disposable income provided by a professional job. This type of phase generally occurs in early adulthood or mid-life, and involves a trajectory that is stable or negative (following on from a higher level or upward trajectory). It generally lasts no more than a few years.

Plateau

Some participants identified a phase where their action remained constant, which they experienced as a "rut", when they have taken all the opportunities available, and were (consciously or not) waiting for something new. For example, Carrie had two of these periods, each following a phase of explosion. Giles suggested he is at risk of plateauing simply because he cannot reduce his carbon footprint any further, or become more committed to awareness-raising. This stable trajectory could occur at any life-stage and take various durations.

Burnout

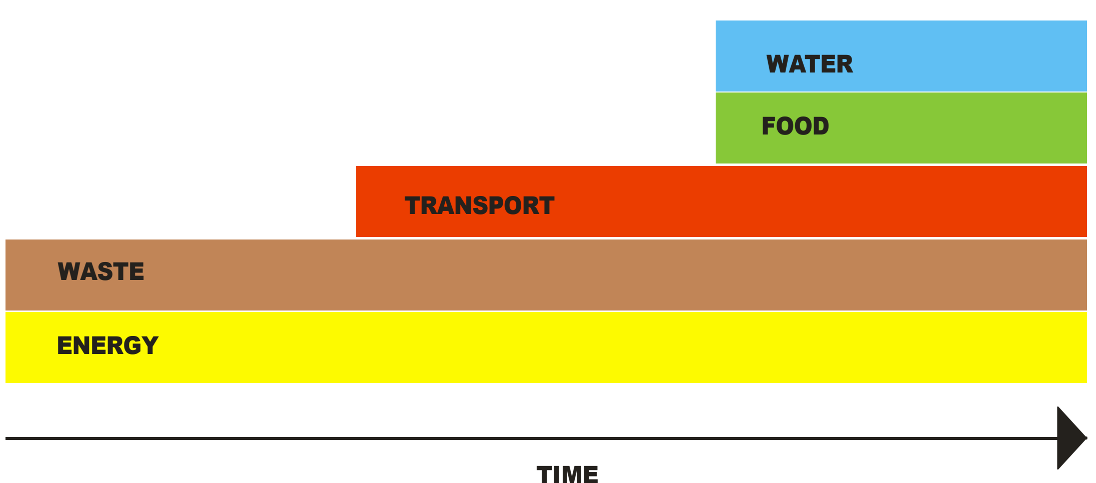
Three participants described times when they lacked energy or enthusiasm for action, having previously expended much effort. In two cases this occurred due to a failure or disappointment. In a third case there were several brief periods which the participant described as “breaks” following intensive and exhausting times of high action. This transition generally occurs from young adulthood onwards and involves a trajectory that is negative or stable and low (following on from a higher or upward trajectory). In the three cases in which this occurred, it was relatively short-lived (albeit ongoing in one case).

These processes appear in people’s life-courses in varying sequences. They do not explain all of every graph, but they do cover most of the trajectories in the data. These trajectories do begin to suggest some underlying processes and factors affecting change, providing insights relevant to Research Question Three on why practices change. For example, several of these involve the role of experience in shaping practice, or the opportunities and constraints created by past actions. However, to understand these fully it is necessary to consider in more detail complex social and contextual factors, which are often not covered by the visual data. These are examined in later chapters.

4. Change in Forms of Action

Another aspect of change involves the types of action that are taken. The first actions that people take when they start to take action on climate change can be called “entry-level” practices. The most common “entry-level” category of practice was waste; eleven participants were active on this in their first two active phases, followed by food and transport. Eco-products and water conservation seemed to be linked with later phases. However, there are too few instances to say this with certainty, and buying practices may also be limited by youth, and so not applicable to some people’s early phases. Historical time may also play a part, for example, eco-products may be a recent innovation; this is explored in later chapters. Figure Ten shows a schematic representation of the areas of pro-environmental practice engaged in by a participant throughout their life, from their earliest active phase to the present. A gradual build-up of areas of action is a very common pattern across the cases.

Figure Ten: Areas of action for a participant over time



Of course, within these broad categories there are diverse practices, demanding diverse levels of commitment. For example, the energy category extends from switching unneeded lights off to installing solar panels, and the waste category extends from recycling to managing many compost heaps and collecting waste from others. There was a tendency for participants to engage in activities that required relatively little time and energy in early phases, and then move on to more demanding activities later on, especially when one area of practice persisted through their life. For example, Figure Ten above shows energy practices persisting, but in fact in this case these developed from basic energy saving around the house to installing a new boiler and loft-insulation. This links to the controversial idea of an “escalator” from small to large actions (WWF, 2008), as discussed in Chapter Two; in many of these cases, an escalator-type pattern did appear; though reasons for this need further exploration.

While political action cannot be so easily broken down into categories, the key types of activities engaged in included political lobbying, awareness-raising and various group activities (including fundraising, recruitment and so on). These tended to be entangled and distributed throughout the phases of participants’ lives. However, some entry-level activities could also be identified here. These included signing petitions, sending campaign emails, financial support or membership of organisations, administrative/support roles in groups, and attendance at events (generally the more mainstream, non-confrontational events). If participants engaged in high-risk or demanding practices, such as illegal demonstrations, these generally came after some initial phases involving easier or less risky practices.

Comparing the life-graphs with tables showing participants' actions, it seems there is a link between high levels of action and forms of action that require high levels of commitment. When people become more active, they do not just add more easy actions, but also take on more difficult actions. So the tendency for participants to show upward trajectories is linked with a tendency to describe increasingly demanding practices. For example, after following a path of increasing action for many years, Giles had eventually given up using central heating, using wood burning stoves instead.

A few participants had followed a whole path completely or almost entirely within one type of action (either practical or political). For example, as the grid below (Table Seven) shows, as part of a positive trajectory of practical action, one participant went from just saving energy and not wasting food to a much broader range of actions, including gathering wood for a fire, composting food waste and getting a new boiler. On the other "track", that of political action, Josh went from helping with petitions to taking leadership roles in many environmental campaigns and events, including large demonstrations and camps (alongside a few practical actions).

Table Seven: phase grid for a participant showing changes in forms of action[9]

Context	**Trajectory**	**Practice: practical**	**Practice: political**
Childhood (single parent, not much money). College.	Positive	Energy saving at home Not wasting food	No action
Young adult – distraction	Stable	As before	No action
Adult	Positive (steep)	Composting at work Cycling House insulation Low energy bulbs Keeping car for 5 years	No action
Adult - new location	Positive (steep)	Cycling House insulation Low energy bulbs Keeping car for 5 years Recycling Composting food (briefly) Seasonal food Conserving water Gathering wood for fire Turning TV off, keeping heating low New boiler	No action

When people did mention both types of action, patterns of action varied depending on their personal biography. For example, Ray and Patricia both developed environmental concern in the middle of the life-course. However, Ray had started with a background in practical action (living a low consumption lifestyle for economic reasons), while Patricia had started with a campaigning background (working on gender, health, peace and homelessness). So when Ray developed an environmental concern, he continued his existing practical actions, but added new campaigning actions (getting involved with community

[9] Not named because of the level of detail provided in the grid

environmental groups and promoting sustainability education). Conversely, when Patricia developed an environmental concern, she continued her campaign actions (adding some new environmental ones) but also branched out into practical actions, such as renovating her house to make it more sustainable. Both ended up with a comparable mixture of practical and political action, but they had reached it by very different routes. The complex influences of background and upbringing are explored in the following chapters.

As noted above, negative trajectories are rare, so it is difficult to examine how forms of action change during these times. (This limitation is discussed in Chapter Thirteen). However, Ray described a recent negative trajectory. During this time, he continued all but one of his former practices. The practice he gave up was one that could be considered high commitment; using biodiesel in his car. This had proved to be a "high cost" action for him, as a technical problem meant it cost him £500. (While continuing his other sustainable practices during the negative trajectory, he expressed a view that he was somehow less committed to them than formerly). So it is possible that during negative trajectories, high-commitment or high-cost actions may be dropped first; further studies would be needed to test this.

These different approaches to describing change have revealed that participants experienced diverse pathways to action on climate change. However, it is possible to identify some common patterns and themes. For example, certain forms of trajectory, such as plateau or explosion, are common to many cases, though the precise transitions and their sequence varies between people. This and other modes of analysis have begun to highlight factors that promote or limit action, including life-stage, family responsibilities, past experiences, location and social and economic context. Unsurprisingly, most people begin with low-commitment actions, and gradually take on higher-commitment actions while following a positive trajectory. Having gained an overview, through these various techniques, of how overall action changed over time, it is useful to consider how practices changed within the exemplar areas. This will provide a more detailed understanding of these processes of change.

5. How Specific Practices Change

5.1 How campaigning practices change

It should be noted that, as shown in Chapter Eight, action on climate change is understood by participants as bound up with other actions that are not directly focussed on climate issues. Their climate campaigning often had roots in other campaign practices; for this reason, and in line with the study's holistic approach, a broad view of these practices is taken here. Most participants described their history of campaigning on climate change as a generally positive trajectory, with their level of action tending to increase over time, and high-commitment actions being associated with high levels of action. However, there was a tendency for people to participate in certain high-commitment, high-risk actions during their teens and twenties (and in one case, as a mature student). For example, Paul was involved in a squatters' movement in his twenties, and Ryan and Kristina were both involved in direct action on various issues as undergraduates. None of these were currently involved in equivalent high-risk actions.

Most participants began with entry-level actions such as signing petitions or donating money. Many then became increasingly involved, often joining local groups, and then eventually becoming a teacher to others, or became "professional", by becoming an expert, working full time or getting paid for work relating to activism. Times of high involvement in campaign practices (i.e. high time commitment and emotional or identity involvement) are associated with many different images, skills and materials being used (as might be expected). In the study, participants normally described their campaigning over time as involving an increasing level of skills, a broadening and intensifying set of images and increasing use of activist tools and other materials.

The nature of change in images was complex. Often it involved the specific issues people were concerned about; for example, a person might be initially concerned about polar bear extinction but later become more concerned about rising global food prices (perhaps due to media coverage or learning from friends). A common process was issue expansion, when there was an increase in the number of issues that concerned a person. For example, Alison went from a narrow concern with road safety to a broader interest in transport-related issues, through her own research and participation in campaign groups. This process included situations where a person shifted from caring about no "issues" in the campaign sense

(perhaps focusing on other life priorities) to caring about a campaign issue. This expansion of images was a common process. Conversely, in issue contraction a person was initially concerned with several issues, and then focused on fewer issues (normally a subset of the original issues). This might represent a decline in action (though these are rare) or could represent an increased concentration on issues seen as especially important.

Changes could also occur in the scale of concern; for example from global to local, and its specificity; for example from the environment to endangered species, as well as in the radical-mainstream spectrum. These occurred in diverse forms, without clear patterns across cases. Intensity of concern could also change; if an image existed in a weak form, it could easily be strengthened without any particular or notable events or transitions. This was fairly common and associated with positive trajectories.

All these processes affected practice to a greater or lesser degree. However, these changes did not occur at random, or solely due to external conditions. It is possible to identify certain underlying patterns which suggest there are more fundamental processes at work. For example, skills tended to increase over time (even if campaigning was at a low level) through various kinds of learning and experience. Also, in the sample, issue expansion was very common and issue contraction very rare. Issue expansion may be driven not only by persuasive messages and interaction, but also by a need to appear consistent to oneself and others, and have a coherent lifestyle. This suggests a need to understand activist biographies as paths containing a degree of continuity and co-evolutionary change, and also involving processes of path dependence and feedback effects.

5.2. How car use practices change

This section provides an overview of how participants' car use practices had changed over their lives. As explained in Chapter Seven, nine participants drew graphs to represent their travel behaviour over time. These did not show the same clear patterns as graphs of all action or graphs of campaigning. Rather, most people's car use involved a mixture of different trajectories, and at first viewing there seemed to be few similarities between the overall shapes of the graphs.

Three participants (Kitty, Alison and Kristina) had had generally consistently low car use throughout their lives, though there were some small changes due to specific circumstances; for example work. Anable's

(2005) segmentation (mentioned in Chapter Three) includes a group called “Carless crusaders”. If we add the dimension of time, these three can be described as “consistent carless crusaders”. Four participants (Josie, Ryan, Josh and Jeremy) showed a clear downward trend in their car use. For the former three, this was due to high use as passengers when they were children, with a conscious and environmentally-motivated decline once they were old enough to make their own choices (around the late teens). Jeremy’s fall in car use was linked to similar motives but came later in his life. No segmentation models have so far modelled this kind of change, but these could be labelled “conscious car quitters”.

For the other participants, changes were more complex and seemed to be dependent on contextual factors. Gillian’s graph shows a recent decline similar to the “conscious car quitters”; however, this follows on from a positive trajectory during her young adulthood (linked to work and location). Her account of how she hates cars makes it clear that she has always been in Anable’s category of “reluctant riders”; the changes are due to her circumstances. Paul similarly had several peaks and troughs linked to factors including work, location and family circumstances. Maggie said that her car use had fluctuated due to factors such as house-moves, childcare responsibilities and growing older, and had recently increased. In contrast, James had recently started driving less and cycling more, due to his house move. To find common themes in this diverse dataset, it was necessary to seek hidden similarities, including in the reasons and contexts associated with change.

Analysis of life grids and graphs showed that phases in car use were often defined by phases in location, family and work life. Car use trajectories were also strongly entwined with trajectories in the use of other transport modes. In some cases, it could clearly be seen that as car use went up/down, another mode followed the opposite trajectory, creating a mirror image of the car use line; for example, Gillian’s transport graphs show this symmetrical pattern. In some other cases, there is not a perfect reflection throughout the life, but other modes replace cars during certain periods, depending on specific contexts. In some cases, different mode trajectories follow a similar path, perhaps being shaped by a common process or factor. In other cases, certain contexts demanded either a high or low level of overall travel, and this was reflected in use of several modes. Compared to campaign graphs, car use graphs tended to involve more sudden changes. Reasons for all these findings are discussed in the following chapters.

Another way to explore change was by examining shifts in the elements of car use practices. Some described how the images they associated with car use had changed over time. Josie and Paul said that

when they first developed an environmental awareness this affected their transport choices; in these cases this had gradual or delayed impacts on their levels of car use. Ray said he had recently become less extreme in his environmental priorities, and "*more pragmatic";* this was part of his reason for giving up biodiesel and returning to conventional fuel. Some described changing views of what is sustainable; such as diesel versus unleaded petrol, or the advantages and disadvantages of biofuels.

The most important skill element is whether a person had learnt to drive. Some deliberately chose not to, for environmental reasons. Ability to drive had a two way relationship with practice; not learning could be a deliberate way of minimising car use. Here, some people are using path dependency as a form of agency, preventing themselves being drawn into a particular path which might involve a loss of control, paradoxically, by giving more choices. In other words, the option of driving may result in a compulsion to drive. Some had not learned to drive for other reasons (for example health, for Kitty), but found this helped then to have a low-carbon lifestyle. Another aspect of skills involved knowledge of issues; for example, Alison learnt about the environmental and social impacts of car transport and this played a part in her decision to minimise her car use.

Material elements changed significantly throughout people's lives. The acquisition and disposal of cars (whether for environmental reasons or other reasons) was a key process in promoting/reducing car use. Some also mentioned changes in the material elements associated with alternatives to the car, such as bikes, panniers and trailers, cycle lanes, buses and taxis. Finally, money can be considered a material element, and is an important factor in practice, varying in availability over time. This description suggests some ideas about why car use practices change, but to fully understand the roots of these changes it is necessary to examine the underlying processes and contexts; this is the task of Chapters Ten to Twelve.

6. Action on Climate Change as a Career

This chapter has considered participants' patterns of action on climate change over time, using analysis based on phases, trajectories, forms of action, and exemplars. These different approaches to describing change have revealed that participants experienced diverse patterns of action on climate change, but there are some common patterns and themes. For example, phases in participants' action are linked with phases in other life domains, such as location and family. Positive trajectories are the most common form

in the graphs, and negative the rarest. Certain forms of transition, such as early exposure or explosion, are common to many cases, though the precise transitions and their sequence varies between people. Most people begin with low-commitment actions, and gradually take on higher-commitment actions while following a positive trajectory. Patterns of campaigning are relatively simple, showing mainly positive trajectories. Car use patterns are more complex, with sudden changes based on context, and interactions between different modes of transport.

As explained in Chapter Four, an individual's changing performance of practices over time can be conceptualised as a career. This approach highlights the ways in which past performance of practices shape future performances, by shaping the individual's capacities, dispositions and other characteristics. An illustration of a career and its impacts on practice is provided by two stories told by Carrie. As a child, she saw smoke rising from cooling towers and developed a concern about pollution's impacts. However, she was "*just a little girl*" and lacked the basic skills and knowledge to interpret this as an environmental problem. The result was that she questioned her mother about pollution's impacts, but then accepted her reassurances. As an adult, a similar problem was presented by a proposed incinerator near her home. However, her capacities and dispositions had developed. Having spent time learning about environmental issues, Carrie retained her original concern, but in a more grounded, integrated and confident form. Furthermore, she had developed skills in research and in understanding environmental issues, as well as practical skills in campaigning, such as working with others (mainly through experience of animal rights campaigning). The new configuration created new opportunities for practice, and the outcome was that she participated in various campaign activities opposing the incinerator, including a stall and demonstration. This change can be seen as a career, because it shows the evolving two-way relationship between Carrie's practices and her personal capacities and dispositions.

The findings presented here suggest that a career does not begin just with the first deliberate action on climate change. Its roots generally extend back into childhood, to early experiences and learning from parents and mentors. This is linked with the development of various forms of habitus (discussed in Chapter Eight). Furthermore, careers may contain disruptions and diversions, as well as progressions. While many participants seem to have had fairly simple, one-directional careers, others are much more messy, with diversions and regressions (similar to the craft-artists' careers described by Mishler, 1999). The most disrupted career is that of Jeremy, who repeatedly found his endeavours ending in failure and disappointment. He says this was often because of a lack of information, partly because of the time

period he was living in. It was also linked to problems in identifying what his own desires and skills were, and then finding a way to fulfil/use them.

Careers are shaped by contexts, including biographical time, historical time and place/space, and the social conditions that these entail. For example, Paul (63) moved in and out of sustainable practices throughout his life. Until the age of 30 he "*lived a perfectly normal life"*, working in IT and conforming to his parents' expectations; he "*made loads of money and had a successful career and met their demands*". He then decided to go to university, was influenced by the radical socio-cultural landscape of the 1970s and "*started developing my own life".* His participation in campaign and community groups led him deep into an alternative culture and he chose to volunteer rather than find paid work. A new phase of low levels of action began when he entered a long-term relationship, got a "*normal job*" and cared for a child, while his alternative practices were "*on the back burner".* This phase had ended, partly due to the breakdown of the relationship, and he had since become involved in an environmental group, saying, "*I'm on another learning curve now".* His case illustrates how changes in social context can shape practices throughout a career.

In Chapters Three and Four it was argued that approaches to sustainable practices need to be holistic and also dynamic. The career approach particularly addresses the latter need, as it examines the ways in which practices evolve over time. However, project and career approaches are fully compatible, and both together are required to provide a complete understanding of action on climate change, and how and why it changes over time. The key task of the next two chapters is to explain changes; both positive and negative, in individual careers.

7. Chapter Summary

The chapter has addressed the question of how action on climate change has changed over time in these participants' lives (Research Question Two). The descriptive analysis used several approaches, including phases, trajectories, forms of action and exemplars on car use and campaign practices. Finally, it has introduced the concept of a career, which can be applied to practices aimed at addressing climate change; this will be explored and applied in the following chapters. The next chapter moves to Research Question Three, and begins to explain the processes that have been identified here.

Chapter Ten

Change through Performance of Practice

"Our deeds still travel with us from afar.

And what we have been makes us what we are"

(Eliot, 1994:578)

1. Introduction

The previous chapter described in detail the ways in which individual action on climate change developed throughout the life-courses of the participants. It found that positive trajectories were the most common form of change in overall levels of action on climate change, and in careers of campaigning. Furthermore, most of the trajectories described by participants could be classed as "early exposure", "learning curve", "explosion" "plateau", "distraction" or "burnout". However, car use careers showed more complex and context dependent patterns. The next step is to consider reasons for all these changes, as expressed in Research Question Three:

What are the key processes that influence this development?

However, analysis of the data showed that the answers to this question were extremely complex, and involved processes or factors that operate on a variety of scales, from individual thoughts through to historic social change. For this reason, the answers to Question Three have been divided into three chapters, based on three broad themes that emerged from the data analysis. This first chapter addresses the ways in which the performance of practice affects a person's career of action on climate change; in other words, how every action that a person takes brings about changes in their dispositions, capacities and so on, which then shape their future practices. Chapters Eleven and Twelve go on to explore how careers are shaped by co-ordination with others, and the broader context in which practice is embedded. This chapter begins by considering participants' accounts of childhood experiences of the practices that are relevant to this study. This includes consideration of how the three forms of habitus identified in Chapter Eight are formed. Then, in Section Three it explores how these dispositions, and other personal

characteristics are modified through the performance of practice throughout the life-course. Section Four discusses the ways in which these processes result in an element of path-dependency within careers of practice, which could explain some of the trajectories identified in the previous chapter. Throughout this chapter, the exemplars on campaigning and car use are used to provide detail on the processes under discussion.

2. Upbringing and the Formation of Habitus

As noted in Chapter Nine, the roots of participants' careers seem to extend into their earliest experiences. This section explores the formation of habitus in upbringing, which was a strong theme in the data on campaign careers. However, the concept of habitus does not seem to apply to car use in the same way. Nonetheless, some childhood experiences did shape car use careers, and are considered here.

2.1 The formation of habitus

Chapter Four introduced the concepts of radical, ecological and simplicity habitus, identified within the data. For each form of habitus, this section considers how that habitus is developed. When data on careers of campaigning were analysed, it was clear that for many participants this was associated with a **radical habitus**. For many, this was developed when they were children. In the sample, very few participants had environmentalist parents but many had parents who were engaged in other ways, whether as activists on other issues, or just being politically-aware, radical or socially-conscious. The data suggest that some participants were brought up with an ethos that they can and should challenge the status quo if they believe it is wrong. Often the images instilled in childhood were quite general principles, worldviews or approaches, not specific beliefs, and these remained powerful throughout life, especially influencing campaigning. Ryan expresses the power of parental images particularly clearly when describing how he was taught to think unquestioningly that Margaret Thatcher was "bad".

Based on the results of the study, it seems that a predisposition to campaign is instilled in children in several ways. Family is a key source, passing on images of knowledge and concern, and activist know-how, and even demonstrating the use of materials such as books and articles. However, non-parental mentors can also fulfil the same roles, and school can play a part. For example, Josie seems to have been

strongly shaped by her radical school, where she learnt an alternative worldview, specific issue knowledge, and how to campaign. Some people were also introduced to the world of campaigning early on in life. For example, Jeremy's father gave him campaign leaflets and information about organisations. Several parents took their children on demonstrations, which involved activist materials such as a giant missile on a trailer (Gary), or introduced them to petitions (Josh). This meant that the images, skills and materials that make up the practice of campaigning were familiar to them from an early age. It may be no coincidence that these participants became activists in their teens and went on to be particularly radical or committed.

In this study, those participants who did not have parents or mentors described as radical, alternative or campaigning tended to be less involved in activism, to have come to it late, or to focus on non-confrontational, peripheral or support roles. An exception is Carrie, who had a working-class upbringing and parents who were not at all sympathetic to her beliefs, but became a committed activist in her teens. She seems to have become an activist through sheer passion and determination, finding her own sources of information, and facing down any opposition. This illustrates the strong, but non-deterministic role of upbringing: a person can become an activist without a conducive upbringing, but it is hard work, and as a result, most activists will come from more conducive backgrounds. This case also raises the issue of class; it has commonly been suggested that the activist tendency is a middle-class phenomenon. However, this dataset is not appropriate to answer such questions of correlation.

Another form of habitus that affected campaigning, and also lifestyle practices, is **ecological habitus**. For ten participants the roots of this can be traced to childhood. Practices involving interaction with natural beings and objects were important, especially if these took place in natural contexts. Through practices such as walking, playing outside, wildlife-watching and conservation volunteering, many learned to enjoy being outdoors, to be curious about and interested in nature, and feel a love and respect for wildlife and specific places. This supports the idea that the performance of practices that involve interaction with other life-forms, especially in outdoor contexts, may facilitate the development of an ecological habitus.

Another important process was teaching by parents/mentors, which could be explicit and deliberate or more passive; for example, through example-setting. Many parents/mentors also encouraged practices that involved direct experience of nature, or combined these with teaching. Patricia describes this kind of experience, saying of her stepfather:

> "*He had a very very healthy respect for the environment, which he passed on to me...it was hands on. Because he took me out from a very early age to see frogspawn and caddis fly larva and things like that, and showed me how it worked.....I suppose I just absorbed it. Which I think inspired me to do a permaculture course a few years ago. A lot of it seemed so natural after that early instruction*."

This account highlights the interconnected nature of experience and social interaction in developing habitus.

Experience of nature, participation in outdoor activities and interaction with others have been noted as influences on environmental attitudes and behaviour by work within environmental education (such as Palmer *et al*, 1999). These findings support this, but also highlight the relationships between those processes; if someone participates in practices that involve contact with nature, while simultaneously interacting with others who hold nature-respecting values, they may be especially likely to develop an ecological habitus themselves. This also links to findings in education more generally that the teaching of ideas is most powerful when accompanied by direct experience and participation (Schank *et al*, 1999).

All twelve participants who held a **simplicity habitus** had had aspects of it instilled in childhood, with waste-prevention being the most universal element, often concerning food, water or energy. Again, interaction, performance and context were important in the formation of this habitus, often in combination. As well as directly teaching simplicity and frugality, many parents encouraged these through practice, making children turn off lights, eat leftovers or re-use materials. Ray described how his father gave him toys that encouraged technical know-how and engaged him in practices of making use of available resources, building a habitus that remained with him for life.

Experience of wider social contexts in which frugality was valued was also important, especially for those brought up during the Second World War and its aftermath. In two cases, it appears that a simplicity habitus was transmitted through generations via place-specific cultural memories. One participant (not named to preserve anonymity) described how her husband's family were from Leningrad (now St Petersburg), and his resulting hatred of waste:

"W*hat is Leningrad famous for? The siege. Where people were starving...the whole city collectively remembers it. And so if you're from Leningrad, you don't waste food."*

Maggie (73) made a similar point about her Irish heritage, linking her values to the potato famine. These accounts reflect the idea that images held by individuals are drawn from images circulating within the environment, and are shaped by social context. However, here the context that shaped them was not limited to the household and the present, but extended back into history and outwards to wider imagined communities.

When a simplicity habitus was acquired in childhood, it was often linked with financial rather than ecological motives; unsurprisingly, given that environmental concerns are relatively recent phenomena. So although participants expressed a simplicity habitus as part of their current practices around climate change, this generally preceded concern for climate change in their lives. Several said that when they first became aware of environmental/climate concerns, these were easily married with their existing disposition towards simplicity and they continued existing practices, or altered them slightly. Some also suggested that pre-existing tendencies towards simplicity had made them open to the development of pro-environmental values, and practices to address climate change. So a simplicity habitus seem to be relatively durable, but can be reformulated as contexts change, and adapted to new practices.

2.2 Upbringing and car use

A notable finding was that the concept of habitus did not seem appropriate when considering the origins of car use practices. While all the above forms of habitus may shape current car use practices, participants provided little evidence of a clear car-related habitus being instilled in childhood. However, experiences and performances of practice in childhood did have impacts on their later careers. For example, Kristina had a bad childhood experience of being a passenger. She said:

"*I think it might be another reason why I hate cars, well part of it, because my granddad was a terrible driver and my mum was always scared with me in the car...it was a bit scary*".

At the time of the interview she had a very negative attitude to cars; she did not drive or own a car, and had worked as an anti-car campaigner. Jeremy also had a bad experience as a child, when a park that he

loved to play in, and had a special connection to, was threatened by a road-building scheme. He described his:

> "*opposition to roads....I felt a sort of real* ***love****, for this piece of land, and I didn't want that to be spoilt*".

This was one of his first experiences of environmental concern. Ryan noted that as a teenager he had seen his friends start to rely on cars and realised it was unnecessary: "*I was watching my friends all becoming car dependent, making these kind of transport choices and it was so obviously absurd*". However, these experiences seem too diverse to classify as an anti-car habitus, and notably, did not involve the instillation or absorption of ideas held by family, friends and mentors.

However, childhood experience of car use did seem to play a part in shaping adult expectations; some cases suggested that those who grew up with little or no experience of cars held different norms to those who grew up using cars often. These results highlight some impacts of the performance of car use practices, especially in childhood, on dispositions and practices. For example, some participants explicitly traced their current disposition to "hate" and avoid cars to their upbringing in an environment with very little car use. Kristina said,

> *"we never travelled much by car, my parents didn't have one. We always went on holidays by train or bus. ...So I never really had much contact with cars."*

She suggested that this might be linked to her consistent dislike of cars (she neither owned one nor could drive); she seemed to have developed an enduring disposition to avoid car use. Paul learnt an enduring love of bikes by riding them as a child, when his family did not own a car.

However, there were equally cases suggesting an opposite process. One of the most anti-car participants (who did not own a car, and had worked for an anti-car campaign group) was Ryan. However, he was exposed to high levels of car use as a child:

> "*We got driven all over Europe by my parents. It really was normal to be driven around... My father is a mechanic, knows everything about cars, had a motorbike and two cars*".

As noted in Chapter Nine, Josie and Josh followed similar trajectories to Ryan, seeming actively to reject their parents' high car use habits rather than absorb or imitate them. In further contrast, Ray and Maggie were both brought up in households with little or no car use but both now own cars and probably[10] have relatively high car use compared to the rest of the sample. These mixed findings mean that car use practices appear quite different to campaign practices, involving less impact of childhood performance of practice and development of habitus.

3. Performance and the Evolution of Habitus

While upbringing appears important, the findings of this study also strongly suggest that practices are shaped by performance of practices throughout the life-course, and that habitus may evolve over time. This section considers how this occurs for campaigning, then explores the impacts of performance of car use practices, and finally examines these processes with regard to overall action on climate change.

3.1 Performance and campaigning

An interesting phenomenon emerging from the study is that of early "proto-campaign practices" which people engage in as children or teenagers, trying out campaign activities. For example, Gary ran a campaign on the ozone hole with his cousin, at the age of eleven, involving designing, producing and distributing leaflets. Josie and a friend sold rhubarb to raise money for WWF, at the age of seven. Many others tried to persuade family and friends to change their behaviour, for example, promoting recycling or energy efficiency at home. Children may pick up ideas about how to be an activist either by watching people they know or indirectly through the media. In other areas of life children learn by imitation of adults, in safe, adapted or playful ways, so activism may be no different. Such tentative experiments in being an activist may act as a first step on a career.

McAdam's description of adult experimentation with activism could equally apply to these childhood proto-practices:

[10] Firm statements of comparison cannot be made based on this dataset.

> "*it is precisely these tentative forays into new roles that pave the way for more thoroughgoing identity changes. Playing at being an "activist" is a prerequisite to becoming one*" (McAdam, 1986:70).

If these lead to feelings of pleasure, or perhaps positive feedback from others, the result may be an enduring image of campaigning as something good to do. Notably, these activities were not organised by a school or directed by any adult. However, some participants also got involved in groups at a young age (for example, Jeremy in a campaign organisation, and Giles in local wildlife groups). These cases are slightly different, as adults were in control and so the young activists were encouraged to conform to structured and pre-existing adult practices such as running stalls. However, they still served as influential learning experiences.

Throughout the life-course, any participation in campaign practices shapes future practice, by creating changes in the configuration of images, skills and materials. The skills element shows particularly clearly how participation in practice leads to changes in the individual mind and body that have lasting impacts on future practice: people acquire them through practice, and being skilled may lead them to continue the practice and deepen their commitment. Data suggest that participation in campaign practices caused specific activist skills and knowledge to develop. Some participants described how feeling good at something is pleasurable, and encourages them to continue doing it; for example, Josh became skilled in "outsider" activism and felt comfortable doing it, as he described:

> *"I've picked up a lot of experience on the outsider track, so I tend to be able to contribute to it. In a way I wish I was better at doing lobbying and stuff. I've improved, having done some media work. But working on the inside, it's something I've had less chance to do... Having quite a big role in activist groups, I've found my feet in them a lot quicker. Yeah. It's not entirely been a deliberate decision to do the outsider stuff."*

Conversely, feeling unskilled can limit the pleasure derived from participation, and thus have a knock-on effect on long term participation; for example Jeremy felt out of his depth in some practices of a campaign group, such as giving talks, and so did not participate fully, and later stopped his participation altogether.

Images are also shaped through participation in diverse ways; for example, performing an activity repeatedly may result in it feeling normal; equally, it may lead to boredom. Images of pleasure, satisfaction and fun around activism are also mentioned by many participants, often explicitly as a motivation for what they do. As noted in Chapter Four, Becker (1963) found that a key step in the career of a marijuana user was learning to enjoy the effects of the drug. It is possible that a similar process also occurs in careers in other, very different practices, such as campaigning. Whatever reasons initially prompt a person to become involved in activism, they may discover a sense of excitement in taking part, as well as enjoying the sense of friendship and solidarity generated. For example, four participants described experiences of becoming involved in activist groups as teenagers, which gave them a thrill; an exciting sense of being radical, being part of a movement, and being different to other people. They all went on to continue their participation, some describing this as a deep personal need. This supports McAdam's (1988) findings about the "high" and collective identity experienced by activists. Many of them tried to rediscover these feelings throughout their lives, which may have contributed to their continuing participation in campaigning.

However, this raises the question of why some people experience this thrill and others do not, despite having similar experiences or opportunities. For example, while Josh's experience of an anti-war demonstration left him inspired, radicalised and eager for more, Paul had a very similar experience in his youth which left him anxious and caused him to avoid demonstrations in future. It seems that the answers lie in individual careers, with life stage, context and past experience playing a key role. It is also notable that the thrill of discovering activism is strongly associated with participation that starts in the teenage years.

3.2 Performance and car use

Although habitus is not relevant here, the impacts of performance of practice on future careers are very strong. For example, Kitty and Maggie both had bad experiences with taxis, which led them to increase their own household car use. Maggie described taking taxis to get to a semi-voluntary job:

> *"I took a taxi, it cost me £11, so £22. And I earned £30! ...I thought blow this, the taxi. And they were late twice, and it was the middle of winter, so I thought, I have to have a car."*

Here, cost and reliability were key issues. Kitty had a similar experience, but time and convenience issues were paramount;

> "*you'd ring up and say, I'm at such and such, can I have a taxi to go to so and so... In [this city], it's oh [bored voice], it'll be at least three quarters of an hour. And it's night time, it's raining and your two kids are screaming and you've got three bags of shopping, and it's not what you want...Taxis were the breaking point. Taxis were what turned us from a non car family into a one car family. Taxis or lack thereof.*"

Carrie had also had bad experiences of public transport and taxis, describing;

> "*struggling to get back home, queuing in taxi ranks....I'm coming home on a night and there's knack all buses from the [city] station to where I live, and not much in the way of taxis, you could be standing around with drunks around*".

The result was that she often felt forced to use her car. As mentioned previously, Ray had a negative experience involving biofuel; a problem with the fuel caused serious damage to his engine, costing £500. This led him to revert to conventional fuel. One participant[11] was hit by a car while cycling, and badly hurt. They said, "*it was the major event in my life*" and "*when I got run over that's the point at which I went, there's too many cars and they're driving too fast.*" This led to major changes in their life, including a deep involvement in campaigning and community groups based on transport issues. Positive experiences or emotions relating to cars were extremely rare in the texts; exceptions were Jeremy's brief mention of enjoying teaching teenagers to drive his van, and Ryan's even briefer mention of using a van to support a campaign action. This does not mean, of course, that participants had never had any positive experiences involving cars. These accounts were framed in the context of sustainability, exploring the narrator's identity as someone acting on climate change, so certain experiences may be seen as unrelated or contradictory, and not mentioned.

[11] Not named to prevent identification

3.3 Discussion of performance and the evolution of habitus

It is a simple fact that by performing an activity people often become more skilled in it. This may be a fundamental feedback process that encourages people to continue a practice once they have begun it, to expand that practice and try related ones, and over time to follow a career of increasing involvement. This could be a key reason for the prevalence of positive trajectories, as described in Chapter Nine. For example, Kitty described the process of learning through cautious participation in "guerilla gardening":

> *"So there's the um, gardening. I've put, only one oak tree and birch tree in places, but you kind of learn how to do it. You learn when it's best to do it and how it's best to do it."*

However, people do not simply develop new skills through practice; performance of practice can also instil new images. James indicated how performance of practice can shape views of normality, saying of recycling:

> *"I possibly resented it a little bit, initially… But once you get into it, it's fine. And I wouldn't want to go back to having just one bin, I'd feel guilty now, if I didn't sort my rubbish…..it's fine, it's good, doing your bit."*

From initially viewing recycling as an inconvenience, he grew to see it as a responsibility and part of daily life; this change seems to have come about through repetition and normalisation of the activity. Ryan made a similar point about campaign practices:

> "*If your experience of supermarkets is getting thrown out of them because you're protesting about GM crops, then going to a supermarket doesn't become such a normal part of life, and I don't go to supermarkets these days."*

These accounts echo the idea within self-perception theory that we might use our behaviour to infer our attitudes (Bem, 1967), and show how the performance of practices may shape the individual person.

So people constantly learn and relearn what is normal, through their performance of practices. For this reason, some people deliberately chose not to own cars, so they can stop themselves learning to see car

use as normal. A related process is that people may also learn and relearn their own identities. For example, what Ryan describes regarding supermarkets may be linked to a sense that it would be inconsistent or hypocritical to shop in supermarkets as well as protesting in them. A period of exciting campaigning can lead to a lasting desire to maintain an activist identity and to continue with these practices (as noted in Chapter Five).

Of course, learning by doing is not the only form of learning mentioned by participants. Learning from others is described in Chapter Eleven. People may also learn simply by accessing new information (as has always been assumed by information deficit communication campaigns, as discussed in Chapter Two). However, these findings suggest that attitudes and beliefs do not simply lead to actions, as much social-psychological literature assumes; individual characteristics both shape and are shaped by performance throughout the career.

All these processes of learning and personal change can involve the evolution of habitus. For radical habitus, the performance of campaigning was key, and common processes involved the reinforcement of radical dispositions and identities, and the expansion of the radical issues and practices that were seen as important. For ecological habitus, changes were sometimes more far-reaching. Several participants developed a love of nature in childhood but found this transmuted to concern in later life; going from taking nature for granted to wishing to protect it. This happened in various ways; for Jeremy, it was when a beloved local place came under threat of development. For others it was a gradual process of absorbing messages from the media and social networks that suggested nature was more fragile or threatened than they had realised. For one, less typical, participant a transformation occurred when he took hallucinogenic mushrooms. In all these cases, performance alone did not bring about the change; other factors were involved, such as interaction with others, and context. These are considered in the following chapters.

The simplicity habitus also evolves over the life-course. Ray experienced a lapse in this habitus when he got a professional job, bought a house and was drawn into middle-class materialism, until work-related stress caused him to return to a simpler lifestyle. Here, the performance of certain practices within certain contexts, and their impact on the individual, contributed to the evolution of the habitus. All these findings reinforce the idea that practices are shaped by past performance of practice.

4. Path Dependency

Running through all these is a further theme: path dependency. This cannot be separated from these processes, but arises from them. On the simplest level, it involves positive and negative feedback effects, and the impacts of past actions; evidence suggests that particular events in the career can have major feedback effects. In general, if a person performs a practice and perceives this as a positive experience, they are likely to perform it again, and if it is negative, they will not. However, beyond this simple statement, feedback effects are not easy to compare or generalise, because they relate to individuals' specific paths. To illustrate this, it is helpful to return to an example mentioned in the previous section; Ray's account of leaving work to live a simpler life. The changes he described seem to be largely driven by feedback effects. First, he had a stressful job and family responsibilities, leaving him no time for the sustainable practices he wished to pursue. As a result of this situation, he had a stress-related epiphany, deciding, "*I don't want to live like everybody else, I'm gonna live the way I want to, a little bit simpler*". This is a form of feedback effect. He then left work to care for his children, volunteer for an environmental group and make his home more sustainable. He embarked on a "*bandwagon*" and was carried away by enthusiasm for sustainable practices. However, this eventually proved to be an unsustainable peak in his practical action; in fact, that excessive enthusiasm may have been a factor in his subsequent decline in action. So here a feedback effect may have operated to reduce his level of action. Further study and larger samples would be required to develop a theory of feedback effects.

Another element of path-dependency lies in the forms of action people take. As described above, Josh initially embarked on a path of "outsider" activism, from the age of 18, and became skilled in it. This led him to pursue this path, rather than an "insider" path. While he does not suggest it would be impossible for him to change track, he seems to feel that a barrier exists; or at least that he would be giving up useful advantages were he to switch. In contrast, Gillian embarked on an insider path, from her early twenties. She chose to address environmental issues through her professional career, which then made outsider activist techniques seem inappropriate, or even ruled out by conflicts of interest. This reflects Becker's (1963) idea, discussed in Chapter Four, that a path may rule out others, if a person becomes invested in or committed to it and it is incompatible with certain other paths.

This chapter has discussed various forms of learning; these often entail a degree of path dependency, because they involve past experiences shaping future practices. However, learning is almost paradoxical

in that it is a form of path dependency that generally creates new opportunities for practice, rather than constraining choices. It should be noted that it can sometimes do both, for example, learning to drive may actually make it harder to choose alternatives to the car, simply by creating this new possibility. It may be the case that becoming skilled in a practice has inevitable knock-on effects on practices that are seen as alternatives to it, as in Josh's case, mentioned above.

Another, more subtle form of path-dependency may involve personal, emotional needs. Jeremy suggested that as a child he had a strong desire to be socially-useful, and was inspired by campaign materials given to him by his father; these left him with a desire to be involved in activism. He then discovered that he could gain a deep sense of satisfaction and excitement by participating in activism, and for many years to come he felt a need to be involved in campaign activities. Josie described a similar feeling, saying "*I feel quite bereft now, if I'm not involved in activism*". This echoes McAdam's (1986, 1988) findings about civil rights activists, suggesting that activism may satisfy needs the person already feels, but may also generate a need for continuing involvement. This may be especially true if the person's identity becomes linked to their activist practices; this seems to have happened to Giles, who experienced a "*hippie makeover*" as a young adult, which encompassed his work, political views, leisure practices, relationships and campaign activities. In these circumstances, it may be very difficult to extricate oneself from activist practices; to do so would have serious psychological consequences.

Path-dependency can also be identified specifically in the field of car use. As noted previously, a key point is when people learn to drive; this can obviously trigger a sudden increase in car use, as shown by the life-graphs. Buying a car can be equally important, and often linked with a long-term rise in car use. Alison, Ryan and Maggie all spoke of the dangers of car-dependence, and the irrational, psychological reliance on cars that is prevalent in modern society. As noted above, childhood experience plays a part in shaping adult expectations and some people developed an enduring disposition to avoid car use which has roots in early experiences. However, some now try to resist the development of a car use habit, for example by not owning a car or not learning to drive. So here, people are recognising the risk of entering a path-dependent trajectory that conflicts with the goals of their project. They are then deliberately choosing to avoid that path. This highlights the interplay between path-dependence and choice; trajectories of car use practice are neither fully-determined or totally freely chosen. There may be key moments in the life-stage when these choices arise; for example, when a person is in their late-teens and many of their friends are learning to drive.

Another source of path-dependency is habit and the way that practices become normalised through experience or repetition, as described above. Past choices can influence future practices in more complex and subtle ways. For example, Gillian had taken a long-distance flight for a holiday two years previously, and felt guilty about this, so decided that the following year she would have no holiday travel, to compensate. The year after that she decided to compromise, and travel to Europe by car. So emotions, morality and memory can allow the past to shape the future.

Despite all these processes of path dependency, this study provides plenty of evidence of people taking an active role in creating their own careers. This can include very deliberate efforts to subvert or avoid path dependent outcomes that they do not desire, by identifying the key moments of choice in their lives, and ensuring they do not fall into unsustainable behaviour patterns. This can include tactics in the domain of performance such as not building up bad habits. Careers involve a balance between choice and constraint, for example, Josh had had two minor disruptions, when he took breaks from campaigning. However, Josh seems to have made a deliberate choice to have these breaks, in order to resume activism again afterwards, and to be more effective. To extend the career metaphor, these are more like brief sabbaticals than setbacks. They are an example of the role of individual choice in shaping careers; though of course, that choice is made within the constraints of a particular context and past. In Josh's case, the context of a period of intense activism provided important constraints: he felt exhausted. However, Josh decided which activities he would continue and which he would give up, when, and for how long, so he exercised a degree of choice.

5. Chapter Summary

In summary, the performance of past practices shapes future practices around climate change. This can occur through the formation and evolution of habitus, but also through more varied and subtle forms of learning, identity change, normalisation and other processes. These processes link past actions with future ones, and link the development of the person to the practices they perform. This involves a degree of path dependency, whereby feedback effects mean that past actions shape future ones. However, individual careers are not fully determined by past performance, but created by a complex interplay between dependence and choice. This serves to partially answer Research Question Three. However, as has been indicated here, there are other processes that must be considered in an explanation of why

practices change. Chapter Eleven turns to one of these; the co-ordination of multiple practices within an individual's daily life, and the ways these are shared and negotiated with others.

Chapter Eleven

Co-ordinating and Sharing Practices

“*While unwinding her path in the course of sleeping, contemplating, and participating in everyday practices, the individual is constantly in physical touch with, (or close proximity to), other individuals… each of which also traces out an uninterrupted path in time-space…. In the repeated process of uncoupling and coupling her path with other paths…there are always certain physical, or time-geographic, realities circumscribing the individual's choice of alternatives*”

(Pred, 1981:9)

1. Introduction

The previous chapter began to answer Research Question Three by considering how the performance of practice itself shapes future practices. This chapter also considers the issue of why climate-related practices change throughout the individual life-course. However, it focuses on a second theme which emerged from the data; the ways practices around climate change are co-ordinated and shared. This means considering not just what activities an individual performs, but the way these are organised within their daily life, and how they are entangled with the other practices they perform (such as work and family-related activities); this is the subject of Section Two. It also means examining the way an individual’s practices are co-ordinated with other people, and the ways that the needs and priorities of others shape a person’s career; this is the task of Section Three. Finally, the chapter considers a specific site in which practices are shared and negotiated; communities of practice.

2. Path Entanglement in Daily Life

Path entanglement refers to the interdependencies between paths within the different domains of an individual’s life, such as work, family and leisure. In particular, family and work responsibilities are key factors shaping people’s trajectories of action on climate change. This is true both of campaigning, car use and of other practices.

2.1 Entanglement and campaigning

An important life domain affecting campaigning was that of the family. Having children limited time available for campaign practices, for example, for both Alison and Kitty. As Ryan noted, some people give up campaigning altogether when they have children, and Paul put his environmental career "*on the back burner*" when he settled down with a partner and child for around twelve years. Having a family also had more pervasive effects such as making people feel a need to be responsible and limiting their flexibility to take risks. For example, Paul said:

> *"I had relationships before, but there were no children so it didn't matter if you got stranded in the middle of nowhere, in the middle of the night, but when you've got a kid that needs feeding, childcare. Babysitters to get back to, it makes a big difference....it does have a fairly big impact."*

Alison's trajectory of campaigning was closely linked to her relationships; she said that her first husband divorced her because she was so deeply involved in campaigning. She then had a period of very low participation in campaigning, followed by a positive trajectory with her remarriage:

> *"And here I got divorced and that meant it went right down as I was fighting the whole legal stuff....And it goes up cause I've remarried somebody who's.... when I go out and speak at a meeting, he can look after the kids. It's easier. Although he's not particularly interested in [environmental group] stuff himself he knows it's important to me."*

The domain of work was also bound up with campaign trajectories in complex ways. First and most simply, it had impacts through time availability; for example, Carrie became much more involved in campaigning when she had greater flexibility in her work patterns. A more subtle process was that experienced by Gary; his campaign practices were limited by his desire to work as teacher in the future, which meant he did not participate in illegal actions for fear of a criminal record. In some cases, the professional career and the campaigning career became deeply entangled or even united, through a process of professionalisation. This describes the process by which people become expert, work full time or get paid for work relating to campaigning. This can only occur if key skills are developed, and if the move is made, these skills will then be further developed. The person's basic motivations may remain the same, but practices may change; for example, a shift in focus from outsider lobbying to insider pressure.

For Kristina, becoming a professional in public engagement on environmental issues actually resulted in her having less time for and interest in campaigning. For Gillian, campaigning ended almost as soon as it started because she chose to address environmental issues through her professional career, which then made activist practices seem inappropriate, or even ruled out by conflicts of interest. So professionalisation can be an end, or an alternative to a campaign career, as well as a climax.

2.2 Entanglement and car use

The data supported the idea (mentioned in Chapter Five), that car use practices are inherently bound up with a multitude of other practices, because car use is rarely performed for its own sake, but rather to facilitate other goals and activities. Several participants discussed the impact of family responsibilities on their car use, suggesting that caring for children increased their car use or reduced their capacity to use alternative modes. This was particularly clear for Maggie, who said she rarely used a car, except when caring for her grandchildren each week, and taking them to their various activities. Paul also noted that complex family arrangements can lead to high car use; at one stage he regularly had to drive his step-child to see her father. He noted that as the child grew older and was able to get around independently, his car use decreased significantly, and he eventually gave up his car. Some noted that having a child made it more difficult to travel by bicycle, for example, due to safety concerns. Kitty described problems with taking children when using unreliable taxis. Several mentioned conflicts and compromises with family members over car use; however, people varied in the extent to which they accepted family demands, or attempted to manage and change them.

Another key life-domain was employment. Sometimes this imposed direct requirements for car use; Paul and Jeremy had both worked as drivers; in contrast, Ryan had worked as a cycle courier. Gillian, while not a professional driver, found it necessary to drive when working in certain jobs, where she had to visit people spread across a large rural area. Interestingly, she had already learned to drive in anticipation of having a job of this kind, so predictions of future entanglements are important as well as actual entanglements. Alison had to drive as part of her employment at one stage, but managed to hire cars rather than own one, perhaps an achievement driven by her strong feelings about the negative impacts of cars. Kitty had left one job, after becoming frustrated with the firm for several reasons, of which one was the inaccessibility of the office via public transport. Comparing cases suggests that the impact of employment is not fixed, but is partly determined by its location relative to the person's home and their

personal capacity to use alternatives. Also, Alison and Kitty show how path-entanglement does not mean that people are tightly bound by demands imposed by other life-domains; they were active in making choices about their car use, within certain limits.

Leisure practices were bound up with car use for several participants. James felt he needed to drive, not cycle, on some occasions when he went shopping, because of the need to carry items home. Alison sometimes drove her children to activities such as bowling (though she negotiated with them about their activities, to minimise car use). Kitty similarly tried to minimise her children's car use for leisure, by encouraging them to take part in local activities for example playing football with friends nearby. Maggie drove to the gym, and weighed up the environmental costs of doing so with the benefits she gained from going to the gym. So for Maggie, another domain linked with car use was health; she also felt the need to drive sometimes because she could become over-tired by walking. In contrast, Kitty was unable to drive for health reasons.

A final dimension of entanglement in the area of car use practices, which has no clear counterpart in the campaign domain, is the entanglement of trajectories for different transport modes. For some such as Gillian, two modes could act as alternatives throughout the life-course, with one replacing the other for a period, and then the roles reversing. Jeremy's graph also shows this very clearly, with a line representing bicycle use that is consistently high except for a brief dip which he marked with the word "van"; because for this period he owned and used a van. For such replacements to occur, the modes need to serve an equivalent purpose, so for example, bikes can replace cars if travel is mainly urban, but not if much long-distance travel is involved.

As noted above, taxis and cars were strongly entangled for some participants, because adequate taxi services negated the need to drive a private car. Public transport was often mentioned in the same way; for example, Carrie said:

> "*if I know I'm gonna be coming back from somewhere during the day and there's reasonable public transport then I will opt for that option instead of using the car. Just that unfortunately it doesn't always happen that way".*

For short distances, many used walking as an alternative to the car. In all these cases, the balance between the different modes was affected by the various factors already discussed, including performance, path-dependency and the effects of other life-domains. Perhaps the most crucial factor, and one which underlies and is entwined with all the others is context. Practices of using different modes were often strongly constrained by factors around location, environment and infrastructure, as well as by social and economic conditions. These are discussed in Chapter Twelve.

First, however, it should also be noted that mode trajectories are not entwined only as alternatives; they can also be linked because they are complementary or essential to each other. For example, in her current situation, Gillian used a combination of buses and walking to commute each day, and within her life-course these mode-trajectories tended to rise and fall together. Alternatively, several trajectories may follow the same pattern because underlying contextual factors are shaping all of them; for example, if family or work circumstances result in increased travel to both near and distant locations. On a more abstract level, modes may be linked by the images associated with them. For Josie, car use and flying both declined when she developed an environmental concern, because she saw them as damaging practices. As a result, she replaced them with trains and bicycles as much as possible, causing these two "sustainable" trajectories to rise as the former two "unsustainable" trajectories fell.

2.3 Entanglement in all practices of action on climate change

Considering action on climate change as a whole, findings echo those of the exemplars. In Chapter Nine, an analysis based on identifying phases in each life was outlined. Extending this, it was found that phases of high action within each life were often associated with family and work situations that allowed relatively high amounts of free time, or flexibility in time use. Examples include being unemployed, having a manager prepared to offer flexibility, having no children, or having a partner or family member able to help with childcare. Conversely, phases of low action were associated with periods of time constraint. Positive trajectories were often associated with children growing more independent, or employment shifts including retirement, unemployment or increasing work-flexibility. Unsurprisingly, negative trajectories were associated with increasing work and family demands, especially having children, for participants of both genders. A negative trajectory in one area of practice could be related to a positive trajectory in another; as noted above, Kristina spent less time on campaigning when she got a job using educational measures to the same end.

People may employ strategies to manage their competing time demands, and to create time for the practices aimed at addressing climate change; this can apply to the employment domain as well as family life. Some had given up work partly in order to create time for sustainable practices, for example, Ray did so partly in order to make efficiency improvements to his house. Ryan worked part-time in one job in order to also work for an environmental organisation. Gillian, Jeremy and Kristina all had employment that they saw as part of their action on climate change, and Josie felt the same about her research. These people were able to resolve the problem of competing time demands by making their work an integral part of their action to address climate change. This process can be seen as occurring on two levels: first, a person may actually change their occupation in order to make it contribute to their project; Jeremy for example had moved into a climate-related field for this reason. They can also change the way they understand their work in order to make it compatible with the project. One participant[12] gave a revealing insight into how understandings of work can be flexible when he described his wife's job.

> *"...she is a senior manager within a company which leases, hires out and maintains refrigeration cabinets for supermarkets and the hot cabinets for the chickens and all that as well. So if you think about the high carbon emitting part of supermarkets, it's* ***that****. But in a way actually she is helping them to reduce carbon footprints by helping them install energy saving measures like putting doors on freezers or fronts on freezers or fridges or stuff like that, so um, she does have, in a way, a kind of a green job. Making sure that these machines are running efficiently, and um, they're not losing energy here there and everywhere."*

This echoes the point made in Chapter Eight, concerning how practices of action on climate change do not just involve ways of acting, but also of thinking and speaking.

Those participants that were able to maintain a moderate or high level of action while having children living at home had to employ certain strategies and respond to various challenges. For example, Alison relied on email rather than face-to-face contact and meetings to support her campaigning practices, because she had childcare responsibilities in the evenings. Several parents mentioned their attempts to involve their children in sustainable practices and the ways in which they sometimes met with opposition

[12] Anonymous because of details provided in the quotation

from their families and had to make compromises. Gary, whose wife was expecting their first baby, intended to incorporate childcare into his environmentally-friendly lifestyle project, especially by using sustainable products. However, he anticipated that he might have less time for campaigning after the birth.

Entanglement can also occur between careers of climate-related practice and educational careers. Many participants had taken qualifications in subjects directly or indirectly relevant to their action on climate change. Often this was because they were already interested and active and wanted to increase their knowledge and skills, often with the goal of becoming a professional. Sometimes courses taken as a young adult served as a way of experimenting and looking for the right direction – sometimes successfully, sometimes not (for example, Jeremy took three formal qualifications and several other informal ones before he found his niche). Sometimes people learned things that were not what they expected to learn; for example, Giles wrote a dissertation on an aspect of sustainable practice as part of a degree. Afterwards he did not pursue his degree subject, but the practice became a major part of his life, and the basis for much awareness-raising. Others also found that research and writing during formal education was important as a learning process. As well as developing skills, it helps people form new images or develop old ones; for example, Kristina developed her views on nuclear power through writing an essay.

It is clear that paths of practice around climate change are closely entwined with other paths, largely through the mechanism of time-management, and the competing time demands of different paths. This echoes Southerton's (2003) concept of "hot spots" – periods of high time pressure and multiple demands, and their opposite, "cold spots" of relative freedom from time pressures. Reflecting the work of Southerton, these findings also stress the inherently subjective and relative experience of time pressure. Southerton (and others; see the edited volume by Shove *et al*, 2009) have shown that the ways people allocate their time and experience "hurriedness" and "harriedness" are bound up with the practices they engage in, their relationships to others, their use of technology and the broader social and economic contexts they live in. This data supports this view, with different people responding to similar situations in different ways. Despite this complexity, there are some recurring patterns, as noted above, such as the effect of having children. Of course, the type of path-entanglement that occurs is very closely linked to biographical time; the demands of other paths vary throughout the life-course.

However, entanglement can occur in other ways; for example, practices may also compete for resources of money and mental and physical energy. More subtly, a career in one domain will bring about changes in the individual, such as shifts in priorities, skills, ideas and opportunities. These may have knock-on effects for future practices of action on climate change. To take an example, becoming a parent may lead to a shift in priorities that affects pro-environmental behaviour; perhaps bringing about new practices such as buying organic food or chemical-free paint. In a contrasting example, pursuing a successful professional career might mean associating with people who prioritise status and wealth; these values may be absorbed and lead to a decline in action. Because so many aspects of daily life have environmental implications, action on climate change is a set of practices with a very high degree of entanglement across life domains.

3. Co-ordination and Negotiation with Others

Careers are also entangled with the careers of others. As Time Geography suggests, the need to co-ordinate activities with others can have a major impact on action; in Gary's case this was true even when his wife was involved in the same group as him:

> *"It was funny 'cause we were both interested in two different campaigns, the [environmental campaign] and the [climate campaign]....And then, at some point we thought, we can't do separate campaigns, cause that's separate meetings as well as the general meeting, it's separate days we'll be doing stuff. And I just thought, we can't do that, cause we'll never see each other! You know, it would be silly, going out separate nights, so I said we'd both do the [climate] campaign*."

This supports Pred's (1977) idea, discussed in Chapter Four, that co-ordination with others is an important determinant of people's time allocation.

Others' priorities and needs can also have more complex effects. Several had experienced opposition, or lack of support, from significant people in their lives. For example, Ray's wife "*rolled her eyes*" at his ideas, while Alison's children got bored of "green" practices like not taking plastic bags from shops. Both these people found they had to persuade and negotiate in order to get at least partial support for their

practices. An interesting case is Carrie, who had experienced on-going opposition from her parents when her environmental interests first developed during her childhood and teens. However, in the interview she seemed to relish describing how she had overcome opposition from her parents, and also from her work colleagues. She described these colleagues as "*idiots*" and seemed happy to define herself in opposition to them; this seemed an important part of her identity. So this opposition may have acted to promote, rather than to obstruct, her career.

In contrast, despite issues of time-co-ordination, Gary found that his wife had a strongly positive influence on his career, because she had similar interests and took part in these practices with him. Friends and wider social networks, if sympathetic, can be extremely conducive to the development of a career; for example, Gillian did not wish to be seen as extreme or abnormal in her practices. She described with pleasure how several of her friends had become more "green" due to her influence; such support may have been one factor promoting her career. Gary noted a potential feedback effect involving social support, when asked if his friends in childhood and young adulthood had similar interests:

> *"The friends I used to hang around with, not at all.....No, probably not interested that much. If anything I probably tried to persuade them and influence them. Although when I've got older I've probably searched out friends who probably have more of an interest in what I'm interested in, and that's obviously the environment stuff".*

So feedback effects may appear within the co-ordination and sharing of practices. Others' careers in non-environmental domains were also important, for example, partners' work careers, or children's increasing independence.

Social interaction appeared less significant in the domain of car use than in the domain of campaigning. However, family and friends did influence cycling behaviour, for example, Josh said: "*I got involved with Critical Mass and that kept me cycling quite a lot and introduced to people who were more cyclists than activists*". Kristina said, "*my cycle use went dramatically up....at uni, 'cause my partner was a keen cyclist so we started cycling*." Kitty's partner had a similar effect on her. However, James had the opposite phenomenon; he tried to encourage his wife to cycle, but she sometimes did not want to because it would affect what she could wear. The result was that they sometimes drove short distances into town. Several described conflicts and compromises with family members over car use. Alison refused to drive her

children to a far-off attraction, but compromised on a nearer destination. Kristina had compromised with family members over a trip abroad; her partner's parents wished to fly, and she and her partner wished to travel by coach,

> "*So the compromise was to go by car. But it made sense because the car was full. So I thought it's probably pretty similar to the coach*."

This also highlights the phenomenon that car use can be a relatively "green option" in some circumstances, and that negotiation with others can play a part in the construction of a practice as "sustainable" or "unsustainable".

4. Communities of Practice

As noted in Chapter Four, Wenger (2006:1) defines communities of practice as "*groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly*". This study suggests that communities of practice are a very important factor shaping individual's careers of practice around climate change. A range of communities of practice were mentioned by participants; mainly formal or semi-formal campaign groups and community groups. Many participants were involved in one or more of them, and described major impacts on their careers; normally positive ones. Communities were often formed around campaign practice, and so had clear impacts on participants' campaign careers. However, some communities also explicitly concerned lifestyle practices such as composting and cycling. Furthermore, communities often affected practices that were not their main or explicit concern; for example, campaign communities often involved discussion of lifestyle practices. So many practices could be affected by a community; not always in ways that were transparent and expected.

A common factor preventing people engaging with communities of practice was negative perceptions of more-involved campaigners or more radical, committed campaign practices. Interestingly, this was mentioned by participants at almost all levels of campaigning, from the most mainstream to the very radical. Several described negative perceptions of campaigners as weird, scary or extreme, which prevented them joining those communities, for example, Kitty had negative images of campaign groups at

university, so didn't join. Others (such as Ryan) were able to overcome these perceptions and join the group, or to work co-operatively with community-members without joining; for example, Gillian said she respected and co-operated with NGO campaigners but preferred "insider" tactics herself.

In contrast, some participants had joined a community of practice specifically because they held images about its social benefits. This may be linked to background, and the ideas around experience and habitus discussed in Chapter Ten; if a person's past experiences have led them to feel comfortable with certain worldviews and practices they are likely to seek out likeminded people and groups. Values played a key part in determining whether a person would join a community of practice; those of the individual had to align sufficiently with those of the group. If values and beliefs were not entirely compatible then participation could be limited; for example, Kitty was a member of the Green Party but would not stand as a national candidate because she differed from the party on their policy regarding Israel. Similarly, Paul was once involved in a group where he supported their goals but not their sabotage tactics, so remained a peripheral participant.

A very common route into a community of practice was through existing social networks. This supports the findings of others, such as Snow *et al* (1980), who found that typically people would be asked to join in campaigning activities by a friend, without being asked to believe in the cause, but they would then gradually become involved. Ryan describes a similar process when he joined an activist group for the first time:

> *"I came to university and met some people who were very inspiring and um that's when it all, a whole new world, an alternative worldview, really"*
>
> *"I ended up getting involved in all kinds of things, animal rights, hunt sabbing..... there was an awful lot of animal rights stuff to be honest. It was something that I didn't have any particularly strong feeling for before I came........it wasn't a subject that really motivated me, but I ended up doing a lot of that stuff. But the thrill was just doing something to make a difference with people who cared and wanted to make a difference, and being part of that collective action, that was the thing that kept me coming back"*
>
> *"the issues {that I was concerned with} explode at that point."*

As a result of this experience he moved from campaigning only on transport issues to being engaged with a much broader radical agenda. Conversely, Kristina said she could not act when she had newly moved to the city and was not connected to local networks.

To understand how communities of practice work, and how they shape practice, it is productive to draw on theories of learning within communities of practice, as outlined in Chapter Four, in particular the ideas of a generational cycle and "legitimate peripheral participation". In the study, some participants had engaged in legitimate peripheral participation as children. For example, Ryan wished to be involved in an anti-roads campaign as a child, but had neither the freedom nor the money to contribute in the normal adult ways. However, he was able to receive the newsletter and learn about the campaign. It could also be suggested that some parents involved their children in legitimate peripheral participation. As noted in Chapter Ten, some participants were taken on demonstrations by their parents when they were children; this early immersion in a campaigning community will have involved the performance of a political practice, interaction with campaigners and experience of an alternative set of values. As such it may have been a key mechanism in the development of their political action on climate change.

Some, such as Gillian and Jeremy participated in communities of practice around conservation when they were young, and so were inducted into practical practices of environmental protection, gaining expertise and practical know-how, as well as a love of nature, that remained with them for life. Giles participated in several groups based around ecology and biodiversity, which fuelled his curiosity about nature. Learning in all these communities of practice occurred not only through explicit teaching, but through interaction and experience, with newcomers observing more experienced members (Becker, 1963) and learning the community's ways of thinking, talking and acting. Through shared practice and the development of a shared identity, people became gradually more involved in the community and its activities. Several described how they eventually took on a teaching or mentoring role themselves, whether teaching composting skills or supporting other campaigners.

Of course, not all communities of practice are successful sites of learning. If legitimate peripheral participation is not available (which may be a deliberate or non-deliberate feature of the group), it may be difficult for newcomers to enter the community. For example, Jeremy joined a campaign group as a young teenager and took on the tasks of a full community member, such as giving talks to other groups.

However, being inexperienced and receiving little support from others, he felt he failed in one such task, and decided to limit his involvement in future.

If a person does become involved in a community of practice, data suggested that this could be an important site for the dissemination of ideas about how to live a good or ethical life. Sometimes this involves a sense of conflict or competition; for example, some of the campaigners compared their carbon footprints to others'. However, more often there seemed to be a process of osmosis, whereby members adopted ideas from each other. Ryan summed this up:

> "...A*s time goes on, you fit existing issues together and see how other things, people go, ah but have you thought about this, and you, it widens and it slowly takes over your whole life, and it continues to do that.... like... paint for example. At some point here someone said "paint contains lead" or something, so I went, "oh right", and next time I buy paint... you know, it adds on. And so the number of things you're thinking about... like incineration, I never really thought about it, until someone said there's a problem, and you take it on board. And composting.... and green technologies."*

An interesting point about Ryan's quotation is that he mentions the new campaign issues he learns about (such as incineration) **and** the new lifestyle practices he picks up (such as avoiding lead-based paint) as connected rather than separate processes. He sees this community as encompassing all aspects of his ethical/environmental action, and acting to expand it in many directions.

Many participants learned to be concerned about new issues through interaction with others. This may happen particularly when there is overlap between different communities of practice; such as an environmental group and a development-focussed group. If some people are members of both, ideas can be passed easily between them. Lave and Wenger (1991) refer to such people as brokers. In the study, there was considerable overlap between groups working on environmental, development, human rights, peace, animal rights and UK social issues, as shown in Figure Eight in Chapter Eight (p191). As the diagram shows, three people had campaigned on four of these issues, making them well positioned to act as potential brokers. Interview data also suggested that there may be certain well-connected and influential individuals; for example, Giles was mentioned by several other participants as a key figure in the local campaign scene.

Interaction with like-minded others may also serve to entrench and reinforce ideas over time. This may be a circular process, as Gary described (above). Interaction with like-minded others may also reinforce shared values; however, ideas about how to live an ethical life and address climate change were also negotiated in these communities. Communities of practice offered opportunities to evaluate one's relative position; for example, comparing carbon footprints. Negotiations also concerned appropriate methods, whether for political or practical actions; for example, Jeremy had been reprimanded by other group members when they believed he had acted aggressively towards police at a demonstration. Gary described his struggle to convince other members of his campaign group to modernise their approach and focus on fundraising and recruiting new members. Participation in a community can also facilitate the development of an identity as a campaigner and as part of a particular group. All these processes link to the concept of habitus discussed in the previous chapter; communities of practices may be sites in which a person's habitus may evolve, as new dispositions are acquired.

It is significant that no formal communities of practice around personal car use were mentioned, though Alison mentioned communities focussed on transport campaigning, which involved communication with others about car use practices. Some of the other communities of practice mentioned by participants also had indirect links with car use practices (for example, an anti-road-building group or a carbon footprint-reduction group), but participants did not directly link these to their practices. However, this suggests a notable difference between the two case-studies, since communities were a central part of campaign practices. It seems to relate to the nature of the two practices; campaigning is to a large extent a collective activity, involving shared participation in a social movement. Car use meanwhile seems to be a much more private practice. Some alternatives to car use, such as walking and using public transport, might seem to be more public, and involve a greater number of images about others, skills in dealing with others and shared materials. However, they still concern personal mobility, and the mobility of people directly connected to the individual (such as family members).

This raises interesting questions about the nature of mobility practices in the UK. Studies of other sites/samples would of course find some communities of practice around car use, such as hobby and leisure groups (including owners' clubs and motorsport organisations), as well as car clubs and lift-share schemes. However, these latter communities of practice, which have the potential to help people reduce car use, do not currently have high levels of participation in the UK (as noted in Chapter Five). It is

possible that a less individualistic approach to mobility, and the development of such communities, might contribute to the emergence of more sustainable transport systems.

In conclusion, communities of practice are sites for the dissemination and negotiation of repertoires of campaign practice and can act as important sites for the development of practices around climate change. However, the nature of the community is important in determining its effect; not all have equal impact. Communities that easily engage newcomers, for example, by offering opportunities for legitimate peripheral participation, and draw them into a centripetal trajectory of commitment and identity-formation are more likely to be associated with changes in practices than ones that do not. Within this study, several communities of practice were able to shape individual practice by facilitating social interaction with others engaged in similar practices; by promoting the performance of collective practices such as campaigning; and by providing a context in which people could observe and absorb new ways of thinking and acting. The concept of communities of practice highlights how roles and relationships change as an individual participates in a network over time, with the attendant consequences for practice. As such, it forms an important dimension of an understanding of how and why individual practices of campaigning, and other climate-related practices, change over time.

5. Path Dependency

It was noted in the previous chapter that path dependency was an emergent theme in the findings on performance of practice. This is also true of the findings on the co-ordination and sharing of practice. The above discussion suggests that an important source of path-dependency is social interaction. As noted above, people often seek out friends with similar interests. Because friends and family are a key source of ideas, norms and peer-pressure, this could result in a path-dependent cycle of increasing action. Path dependent trajectories can also occur within communities of practice; as Lave and Wenger (1991) predicted, participation in a community can involve a centripetal trajectory, with participation fostering a growing identification with the group and its practices. As Ryan noted, this can lead to an ever-expanding set of practices that "*takes over your life*".

Path dependency and path entanglement are also closely related; path dependence can be seen as the entanglement of a life-path with its own past. Path entanglement is equally the dependence of one path

(action on climate change) on other paths (such as work and family). The two processes also work in combination, for example, there will be some path dependency in the family or work domains (such as the constraints of a developing professional career, or a growing family). This may then have knock-on effects for practices around climate change, through processes of entanglement. However, as in Chapter Ten, despite these processes of path dependency, the data provides plenty of evidence of people taking an active role in creating their own careers. This can include tactics in the domain of interaction, such as choosing to communicate with certain people, and entanglement, such as giving up a problematic job. As well as actively seeking to balance the competing demands of their personal priorities, people also employ complex strategies of negotiation and compromise with significant other people in their lives, in order to reduce problematic entanglements and to ensure that practices of action on climate change can be accommodated within their daily routines.

6. Chapter Summary

This chapter has continued to address the question of why practices change over time, by exploring the ways they are co-ordinated within daily life; both with the person's other practices, and with the practices of other people. Findings show practices around action on climate change are entangled with other practices in a person's life, competing with them for various resources, such as time and energy. Findings also show that social relationships and issues of co-ordination with others are critical in shaping action. As well as placing practical demands, especially time demands, on participants, it appeared that family members, friends and those who participate in shared practices around climate change can promote or limit action in many ways; for example, by teaching and encouraging certain practices, or by stigmatising and criticising them. Communities of practice seem to be very important for campaign practices, and also have some impacts on lifestyle change practices (though relatively little role in car use practices). Where they occur, they are sites in which practices are disseminated, and people learn new images, skills and uses of materials, and may even develop a new identity and experience an evolution in habitus. They are also sites where practices are compared and negotiated, and perhaps even enter into conflict with each other practices, or ways of performing them. As such, they form an important contribution to understanding why climate-related practices change. The next chapter turns to the third and final dimension of this question; the role of context.

Chapter Twelve

Context and Change in Practice

"*Those stories .... shake my automatic belief in the stability and normality of current practices. You don't have to travel far in time and space to find a completely different landscape*"

(Research journal, February 17th, 2010)

1. Introduction

The previous two chapters have explained how and why practices change through the careers of people active on climate change, focussing on processes operating within the individual's daily life and their immediate social networks. While these approaches have provided many insights into why practices change, they still do not present a complete picture. This chapter takes a different approach, but one which is central to any practice-theory-based study: addressing the contexts in which practices are performed. Context was an important theme emerging from the data in this study. Findings suggest that to understand how and why action on climate change develops over time, we need to understand the "landscape" in which that action is embedded. This means considering the economic, social, political and technological contexts in which daily lives are played out. At the most fundamental level, it means exploring the role of time and space in creating the conditions for careers of practice. As suggested by Pred (1977) time and space form the structure within which all action is embedded, and provide the constraints and opportunities for all practices. They determine the physical and social contexts within which practices are performed and co-ordinated, and the images, skills and materials that are available.

To explore these different dimensions of the landscape, Section Two of this chapter considers the role of biographical time, and Section Three explores historical time. Section Four then turns to the dimensions of space and place. These three themes are based on inductive analysis of the data. In all three sections, the exemplar areas of practice are drawn on when they can be useful in illuminating processes of change. It should be noted that this section intends to offer tentative reflections on social and historical processes, since the study is based on sixteen people's views, and does not incorporate data on the population scale, or on timescales longer than fifty years.

2. Biographical Time

The data suggest that biographical time plays an important role in creating the context for a career of action on climate change. The analysis of phases and trajectories (as outlined in Chapter Nine) found that life-course transitions were often associated with shifts between phases, and that life-stage often played a part in shaping a person's action on climate change. For example, some of the trajectory types identified, such as early exposure and distraction, have links to specific life-stages. In general, childhood was linked with various constraints on practice, including lack of money, information and independence. For example, several participants noted high car use when they were children, and driven around by their parents. For Josie, Ryan and Kristina, gaining independence from their parents meant using cars less; as teenagers, these three had already decided to minimise their car use for environmental reasons. Gaining independence allowed them to make their own choices and develop their mobility practices according to their priorities.

In contrast, the analysis of trajectories showed that two men presented a period of "distraction" in early adulthood. If this is examined more closely, it can be seen that both describe this as closely linked to their age. For example, Gary said;

> "*I was quite into sports, I was quite busy with sports...It's that age group where you're a bit self-centred. You know what I mean. You focus on girls....I think you're a bit more selfish at that age, and you're invincible at that age*".

At the same time, there is also a tendency for participants to be involved in the most high-risk or direct-action forms of campaigning when in their teens or early twenties. This may be related to youthful idealism (as suggested by Ryan); a lack of work and family responsibilities; or social norms and peer influences. (As noted in Chapter Five, other work on biographical availability similarly suggests young people have fewer barriers to protest activity). However, while they had become less involved in risky and direct actions, these participants did not necessarily feel they had become less active. Kristina (31) compared her current actions to the more radical activism she engaged in when living in a capital city in her teens and early twenties:

"...my initial thought was, I think I did more when I was living in [a capital city] in a way because I went on lots of things. But actually some things I'm doing now, getting people to come to events where they can find out more, and just learn a little bit, which means that people will come along and find this place and it might get them thinking about what to do with their life. And actually is that more important?"

Paul had a similar experience when he went to university as a mature student (aged about 30), suggesting that age alone is not the key factor, but rather the social context and networks a person is embedded in. Paul explained how his political and social views were challenged by being surrounded by younger people with new ideas and he was drawn into their campaign groups. However, for most people, social context and networks are shaped by life-stage.

"Plateaux" in action (as identified in Chapter Nine) may be linked with a sense of becoming less radical in one's values and actions with age. Ryan explained his declining radicalism as "*you become less idealistic as you grow older".* This negative correlation of radicalism and age is noted by participants of all ages. For some, increasing income had lead to increasing consumption as they grew older. When Ray first got a job and became a householder he was drawn into a middle-class culture that involved "*keeping up with the Joneses",* with rivalries over cars, houses and holidays. However, James felt he had become more able to perform non-normal practices as he grew older and developed the maturity to be open to different ways of life. His worldview also changed:

"*moving away from an individualistic outlook to being more community- orientated, thinking about people you live around….It's a state of mind, a way of living*".

So for James, growing older was associated with a "learning curve" type of trajectory. Age also affects physical capacities; for example, Maggie (73) found that age had reduced her ability to cycle and walk and increased her car use.

This shows that biographical time has diverse impacts on the images and skills associated with participants' practices. However, another important aspect of biographical time concerns its impact on everyday time-allocation. Time availability on the daily and weekly scale is connected with time on the lifetime scale; people go through stages in their biography during which they experience greater and

lesser time pressure. For example, as noted in the previous chapter, having children may radically reduce time availability; this tends to occur in mid-life. It is also notable that because the study sampled those currently active, people who had significantly reduced their action due to changes in their time allocation could not be included. There could be many people who were previously active and then stopped, for example, due to having children. Ryan suggests that this is the case, based on his experience, saying:

> *"...people your age, who you know are really committed campaigners, really incredibly energetic, practical sort of people, they love working, and then they have kids, and they're suddenly (whoosh sound), they've gone, they're over the horizon and in their little universe over there. And you can see them occasionally at the border lines, but they've gone from the world that you inhabit."*

While Southerton (2003) identifies hot spots and cold spots within the daily and weekly paths of individuals, here it appears that they can be identified on longer time scales (months and years); within the life-path. This relates to the concept of "biographical availability" discussed in Chapter Five. This is normally measured using simple variables such as number of children, however, these findings suggest that the factors shaping "availability" may be more complex. For example, if two people have children but one has access to cheap, quality childcare, they may experience very different levels of "availability".

This means that despite the existence of some broad patterns in time allocation across the life-course, it is not possible to accurately predict when times of low time-availability will occur in an individual's life; each person's path is different. Furthermore, as noted in the previous chapter, people are able to employ various strategies and negotiate compromises in order to create time for particular practices. The result is a series of phases and trajectories that are shaped by temporal factors on various scales, and that vary between individuals in their order, timing and impacts on practice, but nonetheless share some common patterns and relationships to biographical time. The biographical domain can also contain strong aspects of path dependency. Often in a life-course there are certain key moments where choices can be made; for example choosing a career, choosing to have children, or buying a car. These then have long-term ramifications, shaping future practices throughout the career. Discussion now turns to a different aspect of the temporal dimension: historical time.

3. Historical Time

3.1 Social understandings of action on climate change

It is essential to recognise that climate change is a relatively recent phenomenon in public discourse, as noted in Chapter Two. However, before its emergence, many of the practices now seen as involving climate change may have been understood in different ways; for example, as associated with frugality. Patricia (62) described her upbringing in a thrifty household:

> *"That was my early life, that was just a given. ...So later on... it changed its name to taking action on climate change, but....my actions haven't changed that much. My understanding of why it's a good idea to continue with them and learn new ones has, but not the fact that I did it in the first place."*

Several other participants also linked their current practices to their own, or their parents' experiences of rationing and its aftermath.

Even when practices had originated as part of an effort to protect the environment, concerns about the climate were often a relatively late addition to these concerns (except for those participants who were in the younger age-groups, and became environmentally-aware after the scientific and political discovery of climate change). Therefore, many participants had adopted certain practices initially linked with beliefs about resource use, deforestation, pollution and so on, which later became linked with climate change. Their current practices may have roots in earlier practices such as rationing, efficient use of resources, conservation and protection of biodiversity. For some, such as Patricia, the result of these changes may have been a shift in the framing of their personal practices; in the way they were described and understood, without any significant change in the actual activities involved. For others, some practices were altered or added as climate change became a salient issue.

Many participants had been aware of changing social views of climate change and related issues over several decades; for example, "*climate change wasn't an issue in the 1980s*" (Paul). Patricia remembered being terrified about an impending ice age in the 1970s. Maggie first became aware of the environment in the 1980s, when someone told her to reduce her contribution to chlorofluorocarbon emissions, and

had been becoming "greener" as she had absorbed new messages ever since. These perceptions are reflected by national-scale data; Defra's annual surveys show that increasing numbers of people believe it is normal to try to have a sustainable lifestyle (Defra, 2009a). Since 2008 there also appears to have been increased interest in resource-efficient living, due to the recession (for example, with press articles on saving money through green living, such as Money Magpie, 2011).

As well as affecting lifestyle practices, changes in dominant social concerns affect the issues people campaign on. For example, several (male and female) were involved in gender politics when this was high on the agenda in the 1970s and 80s. Some were involved in the peace movement during the Vietnam war and the later heyday of the Campaign for Nuclear Disarmament, while some younger participants remember their parents being involved in these issues. Ryan (30) said of his parents that the environment "*wasn't the issue of their generation... they were very much nuclear weapons, nuclear power, geopolitics*...".

Several described climate change as the major issue for present generations, and said this was a factor in their decision to take action on it. However, campaigning on climate change clearly has strong historic and current links to other campaign practices, both environmental and non-environmental. Some participants suggested that climate change was the latest flagship or umbrella issue for the environmental movement; implying that campaigning on climate change is a temporary incarnation of environmental campaigning more generally. However, it is important to note that many participants did not see climate change predominantly as an environmental issue, but as related to a wide range of non-environmental concerns. Campaigning on climate change seems to have evolved from a broad field of other campaign practices, including those around development, peace and animal rights, as well as earlier environmental issues. So issue-attention cycles and dominant social concerns seem to shape the careers of both practical and political practices.

Shifts in how normal certain "sustainable" activities are perceived to be affect practices; for many people, it is easier to perform a practice if it is seen as normal. For example, recycling seems to have become easier as it has become a more mainstream activity; not just because of the facilities, but also because of the lack of stigma (or perhaps even a sense of stigma associated with not recycling). Conversely, as flying became more common over the last decade (linked with the increasing availability of cheap flights), some participants were unable to resist taking flights, though they had previously avoided doing so because

they believed them to be unsustainable. Some mentioned friends getting married abroad, and a sense of obligation to attend; this would not necessarily have been the case in past decades.   A similar trend may be particularly powerful for communication technologies; Alison said:

> "*I have a mobile phone - one could argue that's not very green. But I have one because that's normal these days*."

While Giles did not have central heating, and used a compost toilet, he did use a laptop computer; he recognised that this was not entirely consistent with a low-energy lifestyle. Despite their high levels of commitment, these participants found there were some technological practices that were simply too normalised and embedded in their current routines to be avoided.

At the same time, some practices previously considered "sustainable" and "climate-friendly" are no longer included in those categories; for example, in the early 21st Century the use of biofuels was generally seen as a sustainable alternative to fossil fuels, but in recent years there has been growing concern about their impact on forests and livelihoods in developing countries; Maggie noted that views of biofuels had changed, from the positive perceptions of the past to an awareness of their social and environmental disadvantages. Some participants were now engaged in campaigning against, rather than for, biofuel use, and Ray mentioned changing ideas about biofuel when explaining why he had decided not to continue using it in his car:

> *"Can everybody run on biodiesel? No!.....Some is grown on land that could be used for food. So I was thinking, well hang on, use of biodiesel isn't as sustainable as I thought it was."*

These shifts in social understandings of sustainability affect people's prioritisation of certain practices over others; for example, Alison decided to wear synthetic rather than natural fabrics because they have a lower carbon footprint, and Paul was aware of *"a whole new set of rules coming in"* about whether to eat local food or sustainably-produced food from elsewhere.

3.2 Innovation and infrastructural change

Participants were aware that they could now use vehicle biofuel technology, electric cars, solar panels, wind turbines (now available at some DIY stores), heat pumps, smart meters, eco-kettles and numerous solar powered gadgets. Some mentioned Freecycle, which has applied internet technology to the age-old practice of swapping unwanted items. It appears that technological change in some respects has increased the potential for performance of sustainable practices.

As well as technological changes, this decade has seen other innovations in the practices that make up action on climate change. These include the invention of carbon offsetting, used by some participants. In some places, local exchange trading schemes and timebanks are in operation as alternatives to the use of conventional currency; these were mentioned by Giles as part of his efforts to live a localised, sustainable life. Recent years have also seen a resurgence of food production in gardens and allotments, which has been linked to social concerns around food, farming, health and the environment; for example, by Garnett (1999). For similar reasons, consumption of organic food has increased, and local "veg box" schemes and markets have grown in popularity, alongside the increased salience of the relatively new concept of "food miles" (Seyfang, 2007). More broadly, infrastructure change also shapes transitions in individual lives; for example, the introduction of cheap flights was mentioned by several participants as an incentive to fly, and provision of good waste facilities and services helped participants recycle.

3.3 Wider economic, political and social changes

Moving to the broader context, data suggested that economic development shapes lifestyle expectations and practices. For example, Maggie (73) said that at certain times her mother and grandmother had a bath in front of the fire, and only a gas ring to heat water; she contrasted this with the lifestyle of her young grandchildren, who are even members of a gym. Maggie linked this to socio-economic change, saying of her upbringing in Ireland;

> *"I suppose I was totally green. Then. Because everybody was green.... people were poor. They recycled their Christmas paper".*

On a similar theme, it is revealing to note the differences between older and younger participants' descriptions of their childhood car use. Older participants were less likely than younger ones to have been frequently driven around as children, probably due to changing levels of car use and ownership across society in recent decades. Maggie gave a vivid description of changing social and economic norms*:*

> *"I was born in the middle of Dublin, we used to run around the streets, there were no cars...And nobody I knew had a car during the war. My dad got a car later, because he had a business that needed a car, so we had a car, and we were considered posh at school, 'cause we had a car. But we never went to school by car. Everybody walked to school. When I see these mothers with their four-by-fours, outside the primary school....they just, people just drive everywhere now don't they?....Car is king*."

Paul had a similar experience in England:

> "*I don't think my dad had a car that often. So I couldn't, it wasn't a middle class lifestyle, it was a working class lifestyle....Mechanical transport was not all that common back in those days. Bicycles were quite well-used and I got an attachment to them."*

As Paul notes, this early context led to a lasting preference for bicycle use. Maggie also noted that gender norms had changed, saying of her young adulthood, "*I didn't have a car. Didn't have a driving licence... None of us used to drive. I think women didn't have their own cars in those days*".

Another economic change mentioned by several participants was the advent of jobs in sustainability; as Jeremy noted, these were very rare in the 1960s and 1970s. Despite his degree in Ecology, Jeremy could not find work in the relatively new field of environmental impact assessment. A strong contrast is Gillian's case; she began her career at the start of the 21st Century, and went straight from an environmental degree into a series of jobs in sustainability management. Jeremy said he now works in climate-related technology; a field that has only recently come into existence.

Changing political contexts also play a part; part of the reason Jeremy could not find work in environmental impact assessment was that,

> “*just about that time we got Thatcher ...environmental regulation collapsed really, there was no interest in that....so there weren’t really jobs in environmental impact statements*”.

For Kitty, the Thatcherite context encouraged her to campaign on student poverty and embark on an activist path. Josh said the Iraq war, declared in 2003, radicalised him and started him on a path of outsider activism. However, in all these cases, it was not just historical time but also biographical time that was implicated in the change; these intersections are discussed in the conclusion to this chapter. Discussion now turns to the role of space and place in creating the landscape within which careers are pursued.

4. Space/Place

Space and place constitute an important emergent theme within the data, and shape careers in a variety of ways, which are grouped here into seven dimensions; these emerged from the inductive data analysis process. The first dimension concerns **distance;** the relative locations of home and work were crucial to travel behaviour, as were the relative locations of schools, shops and other amenities, in many cases. Unsurprisingly, this was critical to mobility practices; however some participants mentioned that periods in which they had to travel long distances were periods when they had little time available for practices to address climate change more generally. This hints at the entanglement of time and space, which come together to create the context for action. Some practices were also aided by proximity to specific locations; for example using local shops rather than supermarkets. Carrie lived some distance away from the urban centre that was the focus of her pro-environmental activities; this placed limits on her, for example, it was difficult for her to attend evening meetings. On a micro-scale, the spatial characteristics of the person’s home and garden affected practices; for example, whether there was space for separate waste bins, a vegetable plot, compost heaps or chickens.

The second dimension is **natural**; some used the countryside as a source of wood for fuel, or as a site for low-carbon pastimes such as walking, so were affected by the nature of the landscape. The local topography even affected some; James, Josh and Kitty were put off cycling by hilly locations. The micro-climate of specific areas was also mentioned as a consideration in decisions about micro-generation of renewable energy. The third dimension of space and place is **infrastructural**; this was especially

important as regards travel behaviour. Availability, quality, convenience, cost and reliability of public transport affected travel choices, as did considerations around cycling, such as the provision of safe routes. For example, both Kitty and Maggie mentioned poor taxi services in their current location as a reason for private car use. Recycling facilities and services were also mentioned by several participants; Carrie noted that these vary greatly between local authorities. Moving to the micro-scale, the physical characteristics of people's homes had impacts on their practices, for example, they offered greater or lesser potential for energy-saving measures.

The fourth dimension is **social**; various aspects of the social environment of specific places were mentioned. One involved norms, including norms regarding the use of cars and bikes and recycling. Maggie mentioned that attitudes to food and other issues vary between the UK and Ireland, and another participant highlighted differences in attitudes to food waste between Leningrad and the UK. Another social dimension concerns levels and types of pro-environmental or activist activity present in a location. Some (including Josie, Ryan and Kristina) found the study site had a less dynamic "scene" than other locations they had lived in, with consequences for their own activity levels. Josh noted that urban areas tend to have more marches and demonstrations than rural areas. He felt that being in a city had enabled him to become involved in activism, as in the early stages of his involvement he would not have been prepared to travel outside his local area to participate. A dynamic environmental/ethical/radical scene can also mean there are facilities such as cafes, shops, community centres, veg box schemes, events and entertainments tailored to support the kinds of lifestyles of people active on climate change.

The fifth dimension is **economic;** the economic status of an area and its population might have knock-on effects on the factors discussed above, for example, if the mainstream environmental movement is predominantly middle-class (as suggested by Ray *et al*, 2003), then more well-off areas might have more of the social conditions for deliberately pro-climate practices. Kristina and Maggie also noted differences in the availability of local food between locations, with Kristina saying, "*back home [in eastern Europe] I would be choosing food depending on which region it came from, and here you have to check for continents".* A related dimension is **political**; the distribution of political power, and the parties and personalities concerned, may shape individual practices. For example, Giles had developed good relationships with local officials that he was able to find common ground with, which he used in his campaigning. Legal frameworks may also differ; for example, Maggie noted that Ireland took measures against plastic bags before the UK.

Finally, an important dimension of place is **relational**, involving the participant's own position relative to it. For example, whether they are a student or not, and whether they are local, a newcomer or a foreigner, will affect how they experience the place and the practices they engage in within it. This happens mainly through the social processes already mentioned in Chapter Eleven; for example, Kristina said that when she moved house:

> "*I don't think I did all that much in terms of green stuff. 'Cause I didn't really know that many people in [city] yet. And didn't know much about what was going on".*

So loss or lack of social networks can contribute to plateaus in action and negative trajectories. Josie and Ryan both found that being a student changed their experience of places and practices; being a student was associated with dense social networks and intensive activism, and even periods of "explosion" in their practices. Relations to place may change even while a person stays in the same location; for example as they grow older or their circumstances alter, so time and place/space combine to create the conditions for practice.

These dimensions are all interrelated, and as with the management of time, participants were not passive in accepting the constraints of space/place, but actively attempted to shape their conditions. For example, Gillian had deliberately chosen to live in a place where there were good public transport links to her workplace. Kitty had chosen to live in a place where she could walk to shops and the school, and her children could play in the local area, to minimise car travel. James suggested that one reason he had moved to the city was because of the ease of travel by bike and his desire to live in an urban area, as he believed these to be more sustainable than rural areas. Gillian had chosen a house with good energy efficiency, and others had chosen houses with space for vegetable production or other activities.

Many were also actively engaged in changing their homes; creating their own micro-scale infrastructure for sustainable living. Ray was the most committed of these, describing himself as:

> "*from the sort of Dick Strawbridge brand of environmentalists... I can plumb my own central heating system, and solar hot water heating system, I can um, build sort of strange composting facilities outside*".

Giles, Patricia, Paul and James were all engaged in home improvements aimed at improving environmental performance, and others were considering similar measures. Many participants also engaged in campaigning aimed at making the local environment more conducive to sustainable practices, such as promoting cycle lanes and recycling facilities. So participants are not simply constrained by dimensions of space and place, but also actively engage with and change them; as they do with temporal aspects of their lives. The result is a pattern of life-phases that is partly, but not wholly determined by dimensions of space and place, as well as dimensions of time.

5. Discussion: the Intersections of History, Biography and Space/Place

Pred (1981:20) said "*history and everyday life incessantly penetrate one another*" and this data supports this idea, showing complex connections between historical change and individual daily-paths and life-paths. The distinction made here between historical time and biographical time is not a rigid one; these are interrelated and often act together to produce change. For example, Jeremy's career in environmental campaigning was made more difficult by the fact that when he was a young novice activist in the early 1970s it was "*the early days of everything*" radical and ecological, and information was not easily accessible. Here, the intersection of historical time with biographical time (the fact that Jeremy was young and inexperienced) acted to limit the practices he could perform and stalled his career progression.

Furthermore, it is necessary also to consider the spatial dimension and how it intersects with these temporal dimensions. Josh highlighted this idea when he said, *"It's amazing how place names become events when you're an activist"* and described milestones on his path, including "*Kingsnorth*", "*Drax*" and "*Copenhagen*"; these refer to events at specific times, as well as specific, symbolic places. Josh went on to use these events to label particular years of his life using these place/event names, in the same way that some native American tribes count years by significant winter events (Lopez, 1981), saying, for example: "*2008. Oh, that year was called Kingsnorth, how could I forget?*".

Many other participants also described how experiences involving key places at certain times in history and their own lives shaped their careers in campaigning. For example, as mentioned previously, Jeremy remembered how when he was fourteen a beloved park where he played with friends was threatened by a road. This led him to perform a campaign practice for the first time; calling a radio station to challenge a

policy-maker. As noted above, Josh believed the Iraq war had radicalised him and launched his campaign career. However, closer examination reveals that it was not just historical time that produced this change, but the intersection of biographical time, historical time and place. In the biographical domain he was 18, and just about to leave home, so was becoming increasingly independent and perhaps seeking a sense of excitement and inspiration. In the historical domain, it was March 2003 and the Iraq war was declared, despite widespread opposition. Finally, in the space/place domain, he was living in a city, where there were many large demonstrations on his doorstep, which acted as a convenient way to pick up the activist habit. So the intersection of biographical time, historical time and place needs to be considered in explaining careers of campaigning.

Equally in other areas of practice, many temporal and spatial factors come together to create a complex landscape. For example, in some life-courses, there were times when several factors came together to demand either a high or low level of overall mobility, and this was reflected in use of several modes. For example, Kitty had a period of high overall travel when she had to commute to another city to work and also had young children. As noted in Chapter Nine, compared to campaign graphs, car use graphs tended to involve more sudden changes. The importance of context could be one reason for this; changes in car use were strongly shaped by changing contexts, for example moving house, or changing job, and these were often clearly defined life-changes rather than gradual progressions. Crucially, this study highlights that fact that car use is not just determined by spatial distance and infrastructure, but by the temporal demands of multiple, entangled daily routines; and the fact that these are linked with life stage.

Finally, the interwoven influences of place and time may extend even beyond the lifetime of the individual and to places that are geographically distant from their present location. For example, as mentioned in Chapter Ten, one participant described her husband's attitude to food waste as being rooted in his Russian heritage. Similarly, Maggie's strong awareness of Irish history, especially the famine, has shaped her attitudes to food, population, biofuels and development. She said:

> "*I've always been concerned with the developing world...I do think it's because of the famine in Ireland. Yeah. Because we have tremendous memory, Irish people*".

This serves to reinforce the highly complex and entangled nature of the processes labelled here as "context" or "landscape".

The ideas discussed here also link to the concept of path-dependency; as Pred notes, individuals' paths through space and time inevitably involve impacts of the past on the future. Biographies are inherently path-dependent, with ongoing careers of family and work, and the continuous processes of ageing. Social and historical processes may also contain path dependent elements, though there is not scope to discuss this complex issue here. However, the diversity of the individual stories in this study, and the ways in which participants actively manage, organise and balance their practices despite the constraints of biography, history and space/place, suggest that their careers are also shaped by their own agency. This combination of dependency and agency supports the idea that *"…we are not creators of our lives, so much as reworkers of the raw materials yielded to us by history and biography*"(Haluza-DeLay, 2008:10).

How this shifting landscape shapes individual careers of practice around climate change is an important and under-addressed question. While its impacts vary greatly between participants, it is possible to highlight some key changes associated with: life-stage; shifts in social understandings of climate-related practices; innovation and infrastructure; wider social and economic transitions; and seven dimensions of space and place. It can therefore be concluded that an understanding of the changing contexts in which individual careers are embedded can add a valuable new dimension to knowledge of why practices change.

6. Chapter Summary

This chapter has discussed the various dimensions of context that form the landscape in which all practice is embedded. First, biographical time shapes individuals' priorities, capacities and time-allocation. Secondly, historical time affects their careers, by creating a changing background of economic, political, social and technological conditions. Thirdly, space and place are implicated in careers in many ways, from simple considerations of distance to complex issues of social connectedness. Finally, these three dimensions are interconnected, since all actions take place at a certain moment in historical time, biographical time and space, and they are often shaped by the combined effect of all three locations. The conclusion from this discussion is that to understand individual action on climate change, it is essential to take a broad view of the wider context to that action. This completes the results section of the thesis; the next chapter offers a concluding discussion.

Chapter Thirteen

Concluding Discussion

““Is there a fertile field for social research to try to disentangle complex webs of causation [around behaviour change]?” My answer is yes, I am sure there is. It is a fascinating and undeveloped area of social research”

(Oliver Letwin, House of Lords Science and Technology Select Committee, 2011a)

1. Introduction

The previous chapter presented the final part of the discussion of findings. This chapter serves to conclude the thesis by evaluating the work, highlighting key results and discussing its policy implications and relevance to theoretical and methodological debates. It concludes that despite some limitations, the findings are sufficiently robust to form the basis for a useful contribution to debates on theory, methodologies and policy interventions in this important field.

This study has addressed four questions:

1. How is “action on climate change” understood by the people performing it?
2. How does performance of these practices develop throughout the individual life-course?
3. What are the key processes that influence this development?
4. What lessons can we learn for the promotion of sustainable practices?

This first part of this chapter evaluates the findings of the study, highlighting strengths and weaknesses of the research, and discussing their implications. The chapter then highlights key findings that answer Research Questions One, Two and Three, drawing on the discussions that have been presented in this part of the thesis. Section Six then turns to the final Research Question and explains the policy implications of this work, with particular reference to the key policy issues raised in Chapter Two. Section Seven explains how all these findings contribute to the advancement of theoretical knowledge on sustainable practices,

and makes recommendations for further work. It also highlights the study's contribution to methodological debates. Finally, Section Eight summarises the chapter and concludes the thesis.

2. Evaluation and Limitations of the Study

Chapter Seven explained how this research was designed in order to meet the ethical and evaluative criteria laid out in Chapter Six, and reflected on the methods used. This section builds on this in light of the results that have been discussed, and reflects on the limitations of the methods, the strengths and weaknesses of the findings, and the implications for the conclusions that can be drawn. A first limitation is that, despite the careful design of the fieldwork, there are some challenges inherent in a narrative methodology; certain conventions may exist and narrators generally try to "*tell a good story well*" (Jackson, 1988:279). For example, they may focus on sudden changes if they feel these will make an interesting story.

To deal with these processes, narrative researchers reflect on what kinds of distortions may be occurring, and the implications for the conclusions that can be drawn. In this study, it seems that one area likely to be subject to distortion is the impact of certain key moments or events on behaviour. Given the circumstances (including generally good rapport and assurances of confidentiality) participants are unlikely to seriously distort events; their timing, background, characters and so on. However, it might be tempting to overplay the *impact* of such events in order to create drama, justify their inclusion in the account, and create a satisfying explanation for current actions. This methodological limitation represents an important caveat to the findings, suggesting a need for further research using complementary methods. However, it should be noted that similar ideas about moments of change have recently been suggested elsewhere (such as in Prillwitz *et al*, 2007; Behrens and del Mistro, 2010).

Another potential methodological limitation is that participants may have over-emphasised their levels of action in order to appear more sustainable; however, the desire to justify oneself, and the display of pride or shame associated with "good" or "bad behaviour" seemed to apply mainly to current practices. Since comparing or evaluating current practices was not a key aim of this study, this is a relatively minor concern. A related and more serious issue concerns the potential desire to portray one's life as involving a positive trajectory of action on climate change. There is some evidence to suggest participants preferred

to discuss positive trajectories; when they did “confess” to a negative trajectory, some seemed to feel a need to justify or excuse this. The study aimed to minimise such distortion, by promoting an atmosphere of trust and acceptance, and by using several different data-collection tools, which might highlight inconsistencies. However, narrative researchers suggest that people will often present their life as conforming to some kind of pattern, genre or plot; this may even be a subconscious process, involving the way they understand their own past (McAdams, 2004). As such, there is no way to prevent such ideas influencing self-reported biographical data; the only alternative would be to observe or monitor behaviour throughout the life-course, a method with its own limitations.

Another potential limitation of this methodology concerns the role of the researcher; as noted in Chapter Seven, my positionality as an environmentalist presented both advantages and disadvantages in the study. On reflection, the key limitation here seems to be the potential exacerbation of the problems outlined above concerning exaggerated levels of action and positive change. This interviewer effect could have contributed to the rarity of negative trajectories, so is a potential limitation of the methodology. However, these issues were considered at the outset, and an awareness of these risks meant that I took care to use a non-judgemental tone as an interviewer, and not to present myself (through language, appearance and so on) as a very highly-committed activist. It should be noted that issues of co-construction and the influence of the interviewer apply equally to many other methods; researchers are never “neutral” when interacting with participants (Rapley, 2001).

Another limitation is the small sample size. While the findings do allow some theoretical generalisation, the small and localised sample places limits on how far results are likely to be applicable to other contexts (as discussed below). Recognising such limits to the data’s verifiability, this study offers suggestions for further examination, rather than firm statements. Complementary methods could be used to test these; for example, longitudinal diary-studies could examine impacts of experiences on behaviour over time. While subjectivity, distortion and co-construction are issues for any methodology using individual responses, an advantage of narrative approaches is their explicit consideration of these challenges. However, as with other qualitative methods, these issues around verification and validity may affect the acceptability of narrative findings as “evidence”; both in the broader academic sphere and in the policy domain. UK environmental policy in the past has been guided mainly by large-scale quantitative studies, though Defra is currently supporting some smaller-scale evaluative work. However, given that important issues remain unresolved, and are perhaps irresolvable by conventional means, innovative approaches

such as narrative inquiry could have a valuable contribution to make, as part of a diverse methodological toolkit.

In evaluating the findings, it is important to consider their applicability to other contexts. As has been emphasised throughout the thesis, the study aims for theoretical generalisability, not representation of a population. Based on the holistic and inductive approach, the rich data generated, and the links with existing theories (discussed below) it seems likely that the findings would reflect, to a large extent, the experiences of other people taking action on climate change in the UK. However, the homogeneity of ethnic backgrounds in the sample may mean results may not be applicable to non-white ethnic groups. The fact that the study was based in a town may also affect the results; though it should be noted that participants had lived in a range of urban and rural locations during their lives. Since most participants did not provide data only regarding climate change, but on a wider set of practices, it seems likely that the findings would also be of relevance to people attempting to live ethical and sustainable lives more generally.

However, an important question is to what extent these findings are likely to be of value in understanding the practices of people not currently engaged in such action. The study has only included people who are currently active on climate change; this means that while certain findings might also apply to the broader non-active population, such suggestions must be made with caution. Nonetheless, all these people started out as not active on climate change, and made a transition to action. This study has examined how this process occurred, and so suggests ways in which non-active individuals' lives may change in future. More generally, while the processes of performance, co-ordination and path-dependency, and the impacts of biographical time, historical time and space/place might play out in different ways in the lives of non-active people, it is plausible that the same basic types of process might be significant in shaping their practices that impact on the environment. For example, non-engaged people are likely to know fewer engaged people than other engaged people do. This would change the nature of the social processes that shape action; communities of practice based around environmental action would probably not be influential. However, other communities might help shape norms and practices in other ways. Such hypotheses could form the basis for further research focussed on different population groups. A final, and much larger issue of generalisability, concerns the extent to which these findings apply to *all* practices. While there are many intersections between these results and the literature on Social Practice Theory (as outlined in Chapter Four), this complex question is beyond the scope of this thesis.

Reflecting on the research journal, it is apparent that many potential avenues for analysis had to be left unexplored. However, as concepts emerged from the data they were evaluated and those most relevant to the Research Questions were chosen as the focus for in-depth exploration; this meant that the key concepts that related to the research questions were fully investigated. The results are undoubtedly rich; a very large number of concepts were generated, and for each of the main themes there was a wealth of relevant detail, from a range of perspectives. Though some preliminary reading was used as background to the fieldwork, analysis was essentially inductive. Concepts first emerged from the data, and were developed, categorised and connected, before being expressed and discussed in terms of existing theories. Findings reflect this approach; including some surprising ideas that would not have been included in a more structured or deductive approach (for example, Carrie's sense of a strong link between animal rights and climate change). However, a potential methodological limitation is that the holistic and inductive approach, encompassing many forms of behaviour, prevented an in-depth exploration of specific daily routines. This is true to an extent, though having realised this risk early in the fieldwork, I addressed it by selecting two areas of practice as exemplars. This helped to ground the analysis in specific details, and facilitate comparison of cases.

The research also aimed to adopt a contextual approach, and has achieved this by exploring context-related themes within the data, and devoting a chapter of the thesis to these. The results are also sensitive to the specific contexts of each case; this is due to the narrative-based approach and the attention to participants' daily lives and interconnected paths. A challenge for the research was to draw out cross-cutting themes, while still retaining an awareness of the details of each case, and their impacts on the data. This was partly achieved by the use of participants' pseudonyms whenever data from their accounts were presented, rather than de-personalised lists of numbers of participants falling into certain categories (though this was occasionally used to provide an overview on key topics). This ensured that the details of the person were present in my mind as I wrote about them (and the in-depth analysis ensured that I was very familiar with each case). It had been intended that brief biographical sketches of participants would be included to help readers visualise them; however, it became clear that these would pose an unacceptable threat to participant anonymity so they were not included in the thesis.

Crucially, the results encompass a temporal dimension, describing and explaining change over time. This is the product both of the biographical interview and visual tools, and analysis that emphasised processes of change. An advantage of the narrative method was its emphasis on the analysis of data as part of an

individual's life-story, not as isolated codes. One technique that might have made these findings even more useful would have been a more structured and comparative analysis of life grids and graphs; for example, a detailed comparison of the timings, durations and rates of change involved in certain transitions. This was not possible because of the subjective and diverse ways in which participants completed the grids and graphs; the strategy was designed to facilitate free expression, not collection of comparable data. A more structured approach would have opened new avenues for data analysis but would also have raised problems. For example, participants who were slightly uncomfortable with graphs might have found this much more intimidating, and even those happy with the techniques might have found the approach limiting; they may not have been able to represent all the events they wished to, in the ways they wished to.

Finally, the results are closely grounded in participants' lived experience. Participants' own words were central to every stage of the process, and considerable attention was paid to language. Unstructured interviews allowed participants to choose what events to describe and what words to use, and so represent practices as they understood them. This produced some unexpected results; notably the very diverse frameworks and projects within which practices on climate change were understood. Providing retrospective accounts encouraged participants to reflect on their experiences, select salient aspects, outline the context and explain how various elements came together to create change. Therefore, narratives provide a very clear, comprehensive picture of participants' lives. The use of life-grids and life-graphs, whereby participants actively reflected on the meaning of events also meant that participants were involved in the first stage of analysis. Ideally, larger sections of text would have been presented in this thesis, with in-depth analysis of sections of narrative. This would have helped to develop the findings concerning the meanings and motives associated with action on climate change, and to illuminate themes around identity. However, the broad scope of the study meant that discussion had to cover many diverse themes, so this kind of detailed analysis of specific text sections was not possible.

Having evaluated the findings, and presented some issues that affect the way these should be understood, discussion now turns to each of the four Research Questions, and how they are answered by the findings.

3. Research Question One: *How is "action on climate change" understood by the people performing it?*

A key finding regarding this question is that action on climate change is not a well-defined or static category for participants, neither does it necessarily have a clear and salient meaning within their lives. While many participants described their practices as organised into a coherent project; this was generally not one centred on climate change. Rather, these projects involved broader goals around ethical and environmentally-friendly ways of living. This highlights a limitation of this study; despite its efforts to take an inductive approach, the most fundamental concept in the research; "action on climate change" proved not to be a particularly meaningful category to participants. However, there does not seem to be a single concept or label that would serve as an alternative, as people held very diverse sets of motivations and meanings around these practices. Some definition of topic area is required in any research, and useful lessons may be learned if a researcher remains sensitive to any challenges to this definition throughout the work. Here, this has been the aim, and has involved discussing in detail the ways in which these practices are actually understood and organised within projects.

At the same time, this issue forms an important finding of this study, as it suggests that policy interventions that have focussed on promoting engagement with "action on climate change" *per se* have had limited impact on these participants (who are "positive greens" in Defra's terminology). However, some specific aspects of these messages may have had more impact, and effects on other population groups cannot be addressed by this study. Nonetheless, this raises questions for future interventions, and also for future research; when talking to some individuals and communities about these practices, the phrase "action on climate change" may not be useful. Rather, it is recommended that such work considers or gathers detailed evidence about how its target audience actually understand these practices, and uses this to develop concepts that are meaningful to them. This resonates with Spaargaren's (2003) call for research and policy to use categories based on domains of daily life.

However, the Research Questions of this study, together with dominant discourses in policy and practice, are founded on the concept of action on climate change. In order to answer the Research Questions, while recognising the complexity of individual understandings of the category, this study has conceptualised action on climate change as a "basket" of practices. This approach recognises that participants do understand the term, and that they can list the practices that they see as falling within that category, but that it is not necessarily one they would normally use when thinking about their

activities. For example, they might think instead about reducing waste, protecting wildlife or living an ethical life. Using the concept of a basket means it is possible to explore the ways in which participants understand “action on climate change”, while bearing in mind the caveats above.

Across the sample, this basket includes diverse practices, but the most common concern reducing energy use at home, minimising waste, and trying to travel in sustainable ways. These are three of the five groups of behaviour that make up Defra’s Headline Behaviour Goals (Defra, 2008a) (the others being using eco-products and using water sustainably). Within this basket are not only “ways of doing” campaigning, car use and other activities, but also associated ways of thinking and talking. For example, some participants reject terms such as “waste” or label themselves as “activists” and “campaigners”. Others use strategies in their narratives to justify certain unsustainable practices that they perform. There are also a range of “practices of not-doing” performed by participants, with the most committed people giving up or significantly reducing practices that are generally seen as essential, such as heating a whole house or using an indoor toilet.

The meanings of this action also varied greatly between participants, and it was common for one participant to associate a range of motives and meanings with their own sustainable practices. The issues mentioned as relevant included animal rights, human rights, justice, poverty and development, peace and UK social problems, as well as a wide range of more conventional “environmental” issues (such as biodiversity, deforestation, pollution, resource depletion, and of course, climate change). However, there was also a wide range of more personal and practical motives and meanings, including those around money; identity and status; friendships, families and social relationships; memories, morality and spirituality; political ideologies; and a multitude of needs and desires (including happiness, health, convenience, community, personal consistency, security and many more). As well as diverse images, a wide range of skills and materials were involved with these practices; for example, the skills involved ranged from specific technical abilities and expertise to more fundamental skills such as persuasive communication and team-working. However, these elements, and the practices they make up, were found not to be static, but evolving other time, as explored within Research Question Two.

The study also found that the two exemplar areas of practice; campaigning and car use, were understood in quite different ways. Campaigning was a set of practices in its own right; a distinct, visible and definable group of activities that participants could be recruited to or adopt. The car use practices that

participants described were different, because they largely involved modification of a practice that is very widely performed. Though some were involved in active practices to replace car use, such as cycling, many continued to perform the practice of car use, but tried to do so in more “sustainable” ways. This difference between campaigning and car use seemed to have implications for the ways both were performed and understood. For example, campaigning was more likely to be associated with participants’ identities; as was sometimes expressed through the use of terms such as “campaigner”. The development of an identity linked to campaigning seemed to be an important aspect of a career in that practice, but the same was not true of sustainable car use. It might be easier for a practice to become linked with identity if it is one that involves a public and visible commitment, than if it is one that can be performed through more private and subtle variations on “normal behaviour”. However, there was also a sense that negative connotations might attach to such campaigning-based identities; this seemed to be a barrier to further engagement with campaigning for some participants. There did not seem to be an equivalent stigma associated with sustainable car use.

However, the fact that participants’ car use practices were often modifications of dominant patterns of behaviour did not make them simple to perform; rather, it raised its own challenges. The key problem for participants was how to maintain their subverted form of car use practice in the context of the dominance of the conventional, unsustainable form. In other words, how can a person continue using biofuel, driving rarely, or relying on taxis (for example), when the people, ideas, infrastructure, technology, and economic structures around them are promoting a very different way of using cars? Participants described how family and other people found their actions strange or inconvenient, how they encountered technical problems because they were pioneers, and how there was a lack of facilities, services and infrastructure to support their choices. Meanwhile, there was a constant temptation to give up the modifications and adopt “normal” forms of practice, which would not involve these difficulties. This was especially true of those participants who owned a car and could drive, and so always had the option of driving (which sometimes seemed an appealingly comfortable, safe and convenient choice). It was in recognition of this risk that some participants refused to own a car or learn to drive.

While De Certeau’s ideas about subversive practices have been mentioned, there has been very little attention paid in the literature to the differences between practices that are adopted outright (such as campaigning) and those that are modifications of dominant practice (such as sustainable car use). However, this is an important issue for debates on sustainable practice. In particular, many policies for

behaviour change (as outlined in Chapter Three) focus on modifications to dominant practice, but with little consideration of the multiple challenges and pitfalls awaiting those who try to subvert the norm. Policy implications of the study are discussed further below. However, it is clear that the two exemplar practices were understood in different ways, with different “drivers and barriers”. The use of these exemplars, even though only two practices have been considered here, highlights a critical way in which practices of action on climate change may differ from each other.

4. Research Question Two: *How does action on climate change develop through the individual life-course?*

As explained in Chapter Seven, several different approaches have been used in this study to describe changes in participants’ levels of action. These have revealed that while participants experienced diverse pathways to action on climate change, it is possible to identify some common patterns and themes. First, analysis considered the phases within each person’s history of action on climate change. In many cases, there were quite clear phases, generally lasting from several months to several years. The key finding regarding these phases is that they were usually linked with phases in other life domains, with the boundaries between phases being marked by biographical turning points or “moments of change”. As noted above, there are methodological caveats relating to the significance of these events, but this idea is supported by some other findings (for example, unpublished work by the New Economics Foundation for Defra in 2009, and Prillwitz *et al*’s 2007 findings on transport behaviour).

Next, analysis examined trajectories; whether action was increasing, decreasing or stable at each point during the life-course. Positive trajectories were the most common form in the graphs, and negative the rarest. While it is not surprising that action was generally low in childhood, due to limited opportunities, it is a very interesting finding that most trajectories showed a positive trend throughout adult life. As noted in Section Two, this is an area where issues around narration and identity might be important; participants may wish to see their lives through a “positive” lens and present themselves to others as consistent, committed and on a path of personal growth rather than one of regression or even failure. For this reason, findings concerning the frequency of positive trajectories need to be presented with some caution. However, there are some alternative or complementary explanations for the positive

trajectories, which relate to “real world” processes rather than methodological bias; these are discussed in Section Five.

After considering the magnitude and gradient of action, the next step was to begin to set this in its context, and explore what these trajectories meant in terms of people’s experiences, ideas and practices. This approach showed that there are certain types of trajectory that recur across cases. Those identified here have been labelled as early exposure; learning curve; explosion; plateau; distraction; and burnout. It is likely that a larger study would reveal more patterns of action, especially those relating to negative trajectories (which were rarely mentioned here). While these processes occurred across many cases, the precise transitions and their sequence varied between people.

A final approach to describing action was to examine the specific practices performed in each phase. Most people began with low-commitment actions, and gradually took on higher-commitment actions while following a positive trajectory. A common pattern was to start with actions involving energy or waste, while the domains of eco-products and transport-related changes seemed associated with later stages of the career. This may be partly because the energy and waste domains offer many simple and accessible actions (such as switching lights off or recycling), while transport changes (such as reducing car use) may tend to involve higher levels of effort, and, as discussed above, a degree of deviation from extremely dominant, socially-embedded practices. In some cases, eco-products seemed to be associated with the presentation of a “green” identity to others, and with the extension of a related project into new areas of the lifestyle. These could both contribute to its association with later career stages; though the pattern could also be linked to age and income; past sociodemograpic research suggests that older people have greater resources for sustainable consumption (Diamantopoulos *et al*, 2003).

The key finding here is that when action on climate change is considered as a whole, it develops as a continuous process, with each phase partly shaped by previous phases. As the discussion chapters have shown, a helpful concept in understanding this kind of change is that of a “career”. In this study, most participants seemed to follow a career of increasing levels of action and increasingly high-commitment practices. However, most careers also contained some flat or regressive periods. As in a professional career, progressions are not always smooth, but can be interrupted by breaks or “sabbaticals”, periods of tension or distraction and times when the person no longer feels challenged or inspired. Careers of action on climate change can also be interrupted by a kind of “maternity-” or “paternity-leave”, sometimes

lasting several years, when parental responsibilities supersede pro-environmental practices. Careers of action on climate change, like professional careers, often involve increasing levels of skill, responsibility and respect from others, and a transition from a learning to a teaching role. Therefore, the career concept seems a useful way of understanding how action on climate change can develop over the life-course. However, it is important to note that some specific practices involve more of a career-path than others. In this study, campaigning trajectories often showed a clear career pattern, but car use trajectories rarely did. Reasons for this difference, and its implications, are discussed in the next section.

5. Research Question Three: *What are the key processes that influence this development?*

The analysis outlined above concerning phases, trajectories and patterns of action formed the starting point for an exploration of *why* practices change throughout the life-course. As noted above, phases of action can be identified in each career, and these are generally linked with phases in other life domains, with the boundaries being marked by biographical turning points. The most frequently mentioned factors shaping phases were moving house and changes in family roles and responsibilities, such as the birth of children. These often had major impacts across all life domains and all areas of action on climate change. As noted above, six forms of typical trajectory were also identified, revealing the conditions and personal changes associated with positive, negative and stable graph-sections. This first stage of analysis, drawing largely on the life-grids and life-graphs, suggested concepts which were explored in more detail in later phases, and synthesised to give three broad themes concerning reasons for change.

These themes have been presented here in three chapters, starting with the micro-scale of an individual's performance of practices; then moving to the ways in which those are embedded within their life and connected with immediate networks of other people; and finally turning to the macro-scale dimensions of time and space. However, this tripartite distinction is merely a useful way of ordering the rich and complex data; these categories are not presented as distinct or exclusive definitions, but are deeply interconnected. A fourth theme; path dependency, runs through all three. The remainder of this section summarises this multi-level framework for understanding careers of action on climate change.

On the micro-scale, performance of practices seems to be a crucial factor shaping future ways of thinking and acting. This reflects the idea that practices may recruit or capture people; as soon as a person

performs a practice, that practice begins to change them. They will learn new skills, new meanings or images, and new ways of using materials, and if the conditions are right, this may be the beginning of a career of continuing commitment to the practice. A set of acquired dispositions or habitus develops and evolves through the performance of practices which serves to embed certain tendencies; such as that in favour of the "radical", "ecological" and "simple", within individuals' minds and bodies.

Moving to a slightly wider view, it can be seen that individual practice is shaped by processes of co-ordination and sharing. Practices around climate change intersect with and are affected by practices in other life domains, with which they must be co-ordinated. In this study, the domains of family and work emerged as most significant in this respect, but leisure was also quite commonly mentioned. This entanglement was often manifested through the competing time demands of different practices (as has been noted in the literature); if a practice aimed at addressing climate change has to compete with a practice linked to work or family projects, it may be "squeezed out". However, entanglement can occur in other ways; as Shove (2009a:22) expresses it, practices are "C*ompetitors: For Time and Other Resources*". For example, practices may also compete for resources of money and mental and physical energy, and careers in various domains have long-lasting impacts on individual capacities and dispositions (as suggested by Becker, 1963).

Practices are also entangled with those of others, and the associated demands for time and other resources. However, the role of others in shaping practice also goes beyond such practical constraints; social norms, networks and interactions play a key part in promoting, and sometimes retarding, the development of a career. Joining a community of practice can be a trigger for a positive trajectory of action; processes of social learning (including legitimate peripheral participation) often lead to a career of increasing involvement and identity-formation. However, tensions within the community can hinder this process. An understanding of these related processes of performance, co-ordination and sharing offers a new perspective on practices around climate change. While the individual is not eliminated from the model, they are seen as embedded in a complex network of inter-related practices; both their own and those of others, which are constantly being balanced, negotiated and organised by the practitioner.

Furthermore, these processes produce a certain pattern of practice at any given moment, but these moments need to be seen as linked over time in a continuous path; every performance of practice has an effect on the future trajectory. This means that within the career there are processes of path

dependency. This study has found that careers involve both a degree of personal choice and a degree of "lock-in"; crucially, there seem to be key moments in each life when decisions can be made that have long-term implications for practice. In some cases, these are the same as the biographical turning points or moments of change already highlighted, but they vary according across areas of practice; for example, the decision to learn to drive is critical to future transport practices.

Finally, moving out to an even broader view, the various careers within the life can all be seen as embedded in a changing landscape, made up of the social, economic, technical, political and natural contexts they occupy. However, the same context can affect different people in very different ways; individual practices are shaped by the intersection of a personal trajectory with larger-scale social processes. Action on climate change is a recent concept, but these practices have origins in other social movements, as well as older practices around frugality. The data show that the ongoing evolution of shared ideas about what is involved in "action on climate change" is continuing to shape people's activities on a daily basis. This view is very different to social-psychological approaches, which focus much more closely on the individual scale. However, as shown in Chapter Twelve, exploring the contexts in which careers are embedded can be a useful way of investigating how changes in social norms, technologies and shared understandings create an evolving structure of opportunities and constraints to individual action.

This multi-level framework has been developed from participants' narratives about all their practices of action on climate change. However, different elements of the framework will play a greater or lesser role depending on the precise practice in question. This is particularly clearly shown by the two exemplar practices used in this study. As noted above, trajectories of car use were less consistent across cases, and showed less of a clear trend than trajectories of campaigning (which often rose continuously over the life-course). The key reason for this seemed to be the impact on car use of geographical context and relationships with others; crucially, the locations in which people lived and worked, and their family responsibilities. These were the main factors shaping car use practices, and geographical context, in particular, changed in ways that were not predictably linked throughout a life-course, or comparable between cases.

Meanwhile, for campaigning, processes of learning and social interaction seemed to be key factors. Many communities of practice existed around campaigning, but none specifically around car use. This is clearly

linked to the nature of the two practices; as discussed above, campaigning is a visible and public activity which a person can choose to "sign up to"; unlike sustainable car use, which is a modification of everyday routines. This difference seemed to have implications for participants' careers; communities were very important to the development of their campaigning actions. In these networks, they not only shared ideas and practical advice, but also developed a shared identity. These communities formed a space in which alternative visions of normality could be developed and could support increasing involvement in certain "unconventional" practices. No such support existed (except indirectly, through loosely-related groups) for their car use practices. When participants described social interaction in the context of car use, they often mentioned only the opposition they met from others, and the difficulty of resisting dominant norms. In general, there were relatively few communities of practice around practical forms of action on climate change. Where exceptions existed (such as composting, and certain make-do-and-mend activities) they seemed to play a role in promoting these practices. The potential of such networks in interventions is discussed in the next section.

These findings highlight the ways in which different practices may, to an extent, be shaped by different processes, and so attention should be paid to specific activities and how and why they change. However, considering the two exemplars also shows the strength of the framework, because, while they may vary in power, all of the elements of the framework do nonetheless apply to both of these very different practices. For example, this study provides evidence that campaigning is partly shaped by geographical context and family roles, and car use is influenced by learning and interaction, albeit in different forms to campaigning. This suggests the framework has the flexibility and comprehensiveness to help us understand why a wide range of practices change.

6. Research Question Four: *What lessons can we learn for the promotion of sustainable practices?*

The question of whether social practice approaches can or should offer policy recommendations is currently controversial. For example, Rip (2006) argues that because social scientists and policy-makers are a part of the complex system they seek to change, any attempt at intervention will inevitably be unpredictable in its outcomes. Despite this, some practice researchers have begun to engage actively with policy debates, and especially to challenge existing social-psychological approaches to behaviour change (for example, Shove, 2010; Lancaster University, 2011). While research-policy relationships are

complex, weaknesses in the dominant theoretical models may limit the effectiveness of interventions. For example, the unresolved issue of the "value-action gap" restricts the impact of attitude-based behaviour-change campaigns (Anable *et al*, 2006); a deeper understanding of this issue could provide a framework for more sophisticated approaches. Furthermore, if behaviour is changed, the change may not endure unless the factors that promote maintenance/reversion are accounted for; this means that policy requires an understanding of the processes underlying both rapid and long-term change (De Young, 1993). Finally, insights into how pro-environmental practices are perceived by individuals could improve the effectiveness of communications, and facilitate the design of interventions grounded in daily routines (Spaargaren, 2003). For these reasons, this section aims to offer some reflections for policy and practice in the field of sustainability, based on the findings of this study. However, the small sample size means that these should be treated as cautious suggestions for further consideration.

The findings call into question the assumption that values and attitudes precede behaviour in a mechanistic fashion. This is an argument that has been made by other theorists within the social practice field, such as Spaargaren (2011), and is gaining currency within studies of sustainability (though is still relatively little recognised in the policy field). This study does not suggest that attitudes are irrelevant to behaviour; in fact, they are an important set of "images", which are a key element of any practice (Shove and Pantzar, 2005), including those investigated here. However, this study does not support the kinds of approaches outlined in Chapter Three in which attitude is the key "independent variable" determining behaviour through a one-way causal relationship. This offers a further challenge to communications campaigns that aim to change behaviour simply by changing attitudes, which, as outlined in Chapter Two, have already been widely critiqued as lacking evidential support (for example, Owens and Driffell, 2008). Instead, this study supports the view that a person's ways of thinking both shape and are shaped by their ways of acting. In other words, the images associated with their practices are changed by the performance of those practices. In some cases, a person may experience a positive spiral of increasing cognitive, emotional and practical commitment to sustainable practices, as part of a career. Rather than trying to achieve a one-off attitude change, policy could aim to facilitate this spiral.

This study can offer some tentative suggestions as to how this could be achieved in practice; one key finding concerns the role of past performance in shaping future practices. This implies that policy could create opportunities for the development of new practices by promoting the experience of performing them. For example, this could involve promoting access to experiences of low-carbon living through local

demonstrations of technologies (such as microgeneration devices and smart meters) and techniques (such as simple home energy efficiency measures), or free trials of products (such as energy-saving devices, electric cars, low-carbon food or bikes). Crucially, these findings suggest that it might be beneficial not only for people to see the relevant product, practice or modification to practice, but to actively engage with it, preferably in the context of everyday routines. This might facilitate the formation of new images and skills associated with the practice and begin to normalise it in the same way that recycling became normalised for James. It might also result in the practice, or modification to an existing practice, beginning to become established in relation to existing routines. For example, a scheme providing bikes to commuters for a trial period might bring about changes to the time-schedule of their day. While there can be no guarantees as to the nature and durability of such changes, it is possible that new habits may be established in this way. Certainly, the findings of the study on the entangled nature of daily activities suggest that unless new products, practices or variations on practices can come to "fit" around existing projects and practices, they are unlikely to produce lasting change.

It should be noted that the current context of public spending cuts presents a particular challenge to the development of these policies. However, such experiential measures could form part of existing sustainability education programmes in schools (to the extent that these are able to continue). Alternatively, such measures would be an ideal field for collaboration between the state and voluntary organisations; this would resonate with current governmental emphasis on partnerships with the third sector, and with the "Big Society", as discussed in Chapter Two. For example, many environmental charities and community organisations possess great resources of knowledge about sustainable lifestyles, and could be supported in developing programmes based on the principles of active engagement and "trial practices" to engage an audience wider than their existing members.

A further key finding of this research, related to the above point about organisations, concerns the potential significance of social interactions and networks in shaping individual practices. A similar finding has emerged from the Social Movements literature concerning the role of social networks in the recruitment and retention of participants in environmental organisations (for example, in the many studies described in the edited volume by Diani and McAdam, 2003). However, these issues have been largely neglected by the literature on environmental behaviour, and their potential to support policy interventions has not yet been fulfilled. This may change in the near future, as the ESRC and Engineering and Physical Sciences Research Council have launched a new funding stream on "Energy and

Communities", Defra is exploring community and social-network-based interventions, while a project in York is trialling a "Green Neighbourhoods" programme (Climate Talk, 2011). This study supports this focus, as findings suggest that interventions could benefit from paying attention to the communities within which values are negotiated and shared, which could serve as conduits for messages about sustainability. Peer to peer communication seems an effective way to spread ideas and advice about new practices, as well as information about issues (as noted elsewhere, for example, Collins *et al*, 2003). Again, this approach complements the current policy agenda of localism and "the Big Society", as it emphasises grassroots knowledge and community-based action.

In practice, this could mean Government Departments working in partnership with existing local groups and organisations, such as Parent-Teacher Associations, sports clubs and religious groups to develop and disseminate practical strategies for low-carbon living. Key individuals could be identified and invited to act as "brokers" (Gladwell, 2000), helping to pass knowledge between different communities. A strategy of this kind has been successfully implemented in London to promote responsible dog ownership; a trusted, passionate and well-connected member of the dog-owning community was used by the council to pass messages to other dog-owners (Sharp, 2011). While some past interventions have aimed to involve communities (such as the Low Carbon Communities Challenge, and some others listed in Table One in Chapter Two (p38)), there has been little systematic evaluation of the role of these networks in transmitting knowledge. A new project at Keele University is now exploring this subject, and aims to generate policy-relevant findings (ESRC, 2010a).

Another important finding concerns the processes of path-dependency which have been identified within individual careers of action on climate change. As described above, various forms of lock-in occurred in most participants' lives. This does not mean that the "C" of choice should be entirely removed from the "ABC" models (as discussed in Chapter Three); there is still a role for the encouragement and enabling of sustainable choices. However, this could operate with a recognition of the lock-ins and self-reinforcing paths which may trap individuals in particular patterns of action. The implication is that we could seek to identify exactly where moments of choice occur in individual lives; further work could explore their nature, timing, and value in policy interventions. To give an example of the kind of approach this could lead to; if the ages of 17 and 18 seem especially critical to choices about car-driving and car-ownership, then people at these ages could be targeted with information, incentives and infrastructure that facilitate the use of alternative modes. This might take the form of free passes for public transport, subsidised

bikes or the promotion of car-share schemes. Of course, this example raises very clearly some of the challenges of intervening in practices; car use for young people is about much more than just transport (it involves shared images of independence, freedom and maturity, for example). The idea of whole-system approaches is discussed below.

On a related topic, this research supports the idea of life-transitions as a valuable concept for intervention design. Tailored measures could be designed to be applied at key moments of change such as leaving home/starting university, moving house and the birth of children. For example, carefully selected measures could be promoted in partnership with Universities, estate agents and neonatal groups. For students, measures might focus on saving money, and on practices amenable to shared living in rented accommodation, such as switching off electronic devices and cooking in energy-efficient ways. For new parents, measures might focus on child health and comfort, such as sustainably-produced and healthy food, or insulation to keep homes warm, as well as sustainable baby products. People who have just moved house may be in an especially good position to install measures that are normally inconvenient, such as loft or wall insulation or a new boiler. They may also be forming new travel habits, and so be influenced by information and incentives specific to the new area. Such measures would highlight the new opportunities for practice that are opened up by the transition, as well as encouraging reflection on existing habits, which this study suggests may become “unfrozen” at such moments.

On a related point, policy could also pay greater attention to the entanglement of trajectories in different life-domains; here, as noted above, family and work were especially important in shaping practices. New practices will be more easily adopted if they fit around the other time-demanding practices and routines associated with these domains. Recognition of this fact could lead to more sensitive and appropriate policies, recognising the demands imposed by these paths and seeking solutions that allow them to be reconciled with sustainable practices. Examples might include improvements to lift-share schemes for schoolchildren to reduce the need for parents to drive, or subsidised veg-box delivery services for people who may not have time to shop at farmers’ markets and local shops. They could also include improvements to public transport services targeted at people who may experience an especially high level of “harriedness” (Southerton, 2003). In this study, commuters and parents seemed to fall into this category, so could be target groups for interventions such as discounts and extra services.

Another finding concerns the complexity of personal understandings of action on climate change, as noted in Section Three. It seems that current measures may be focussing narrowly on just a few motives, and missing other opportunities; further work could assess how these understandings could be recognised in interventions. Evaluative work on how these meanings resonate with different social groups (including those in Defra's (2008a) segmentation model) could help policy address the current problem of issue fatigue (Maibach *et al*, 2010), by framing messages in new ways. For example, groups not usually interested in the environment may be engaged by messages focussing on status, health, community or security. Communications could also make greater use of the overlaps between climate change and issues such as animal rights, development and justice, which were all highlighted by participants as related to their action. Use of images and arguments based around these issues might be especially valuable in promoting "cross-over"; in other words, encouraging people who are already actively engaged with other issues (through campaigning or lifestyle change) to adopt practices of action on climate change. In this study, cross-over from other issues was a common way for people to begin their career of action on climate change, and it suggests opportunities for policy that have so far been neglected.

A related point is that attentiveness to the genealogy of practices in individual lives adds a new dimension to the conventional segmentation models used to design social marketing schemes, such as Defra's model of environmental behaviour groups (Defra, 2008a), mentioned in Chapters Two and Three. Larger-scale studies of how practices change over time could feed into such models, to suggest how certain groups, based on their biographies, might be more receptive to certain messages. This would create dynamic models, recognising the trajectories that people travel in order to 'arrive' in their categories, and the ways in which they may move in future. For example, building on Anable's (2005) segmentation, researchers could identify and compare "consistent carless crusaders" (in other words, those who have remained in this category over a time period) with "converted carless crusaders" (those who have recently entered it).

In particular, it appears from this study that many people may move from a concern for simple lifestyles to a concern for climate change. While Defra's current model includes a group who are committed to frugality practices, this static approach does not fully reveal the potential for such people to move into more explicitly pro-environmental practices. This study suggests there might be value in evaluating interventions designed to help "waste-watchers" become "positive greens". For example, these people could be targeted with messages about how practices of recycling, composting and "make-do-and-mend" are beneficial to the environment. They might be reached through Freecycle, charity shops, car boot

sales, craft groups and composting groups, among other channels. Defra has already conducted research on each of their segments, so should be able to identify and access people in this group. A process of self-labelling might eventually lead them to identify as "sustainable" people and to adopt other pro-environmental practices.

Most fundamentally, social practice approaches raise questions relating to the political rationalities that underpin contemporary environmental policy (Shove, 2010). Butler argues that;

> '*The application of policies underpinned by notions of rational individuals, free in their 'choices' (but also implicitly morally governed to make the correct choice) airbrush from view the complexities involved in addressing climate change in a context where the causes are endemic to industrial, capitalist societies*' (2010:184).

Practice-based approaches conceptualise the individual not as a free decision-making agent, but as a "carrier" of practices. This means that every action is shaped by a set of shared understandings about what it means to perform that action. It is the expression, in a specific time and place, of an enduring social phenomenon, or practice. So while the individual may perform the action in a particular way in their specific context, they are enabled and constrained by the images, skills and materials that make up the practice on the social scale. This study highlights the situated nature of practices and the impact of the various landscapes in which individuals are embedded. This theoretical development has important implications for policy; crucially, it implies that attention should be focused on cultures, norms, technologies and infrastructure within a whole-system approach to sustainability (POST, 2010) rather than on individual choices alone.

While this is in stark contrast to many of the past and current policy approaches outlined in Chapter Two, it does overlap to an extent with the "nudge" approach (Thaler and Sunstein, 2010) that is currently popular with policy-makers. However, it demands a more universal scope; rather than isolated interventions designed to facilitate specific pro-environmental practices, all the various systems that underlie daily life must be re-engineered to support sustainable routines. This includes large-scale infrastructures and systems of provision; such as transport, energy and food networks; as such it is a policy challenge on the global scale. This new approach does not focus on behaviour change *per se*, but rather on '*the making and the erosion of "envirogenic" environments, these being ones that favour the*

reproduction of variously sustainable ways of life' (Shove, 2010: 1282). A parallel move has already taken place in the field of health research, where there is a long history of behaviour change interventions, and the paradigm of "obesogenic environments" is well established in research and policy circles (for example, Egger and Swinburn, 1997). Detailed recommendations on the application of these principles are beyond the scope of this small-scale study. However, it is hoped that the findings presented here will contribute to the lively emergent debate on these important questions.

In conclusion, the ultimate goal of practice-based approaches is to generate '*the kinds of solutions that can "make sense" to citizens'* (Butler, 2010: 189-190) in the field of climate change. While this is a relatively recent area of work, researchers of social practices and sustainability are already beginning to challenge policymakers to think about "behaviour change" in a new way; as a reconfiguration of social practices. As this brief discussion has suggested, this paradigm shift has important practical implications which could support effective sustainability policy. The tentative suggestions offered here are intended to contribute to this on-going debate.

7. Contribution to Knowledge

7.1 Theoretical contribution

In assessing the theoretical contribution of this study, it is necessary to consider it in relation to two very different fields of inquiry: the social-psychological study of behaviour, and the sociological study of practice. As outlined in Chapters Three and Four, these approach the subject of individual action, including that aimed at protecting the environment, in widely-divergent ways, with different concepts, units and even research questions. Some suggest that the two fields are so incompatible that efforts to bridge them are futile (Shove, 2011). However, in recent months, others have attempted to do so, and have begun to open up an innovative new approach to human behaviour and sustainability; examples include the work of Hargreaves (2011) and the Smart Communities project at Kingston University. The research presented here aims to contribute to this pioneering work, which explores the intersections of social and cognitive processes, and micro and macro scales, with the aim of developing what could be called a "psychology of practice" (Hargreaves, 2011, personal communication).

Specifically, the present study starts with a set of questions that are the core concern of social-psychological approaches to environmental behaviour: how and why does individual action to protect the environment change? However, it addresses these questions in a very different way to conventional "Attitude-behaviour-choice" studies, by drawing on a social practice-based approach, which has several important implications for the research. First, it means rejecting the conventional assumption that attitudes produce behaviours in a simple, one-way relationship. Rather, it entails an awareness of how ways of thinking and acting are inter-related, and how practice can shape ideas as well as vice versa. Secondly, it means recognising that all practices are social; they involve interactions with others, and an awareness of norms, widely-shared rules and patterns of action. These must be considered when analysing individual behaviour.

Thirdly, the practice-based approach means attending to how practices are organised within a person's daily life; including how they relate to each other, and compete for time and other resources. This entanglement is generally neglected by the "ABC" approaches outlined in Chapter Three. Fourthly, it demands an understanding of action as an ongoing process, not a one-off event; many psychological models present only a snapshot of behaviour, but in fact past actions influence future ones. Finally, it requires a broader and more contextual view of action, locating it within a landscape created by the political, social, technological, economic and physical conditions. This work has applied all these lessons from Practice Theory to the questions of how and why individual behaviour changes, and so has generated a range of new answers to those questions.

While this work has aimed to draw on some of the key ideas of Practice Theory, it is important to note that this is not a social practice study in the strictest sense, because of its emphasis on the individual as the focus of analysis. However, it could be suggested that Practice Theory's attempts to move analysis beyond the individual mean there is a risk of neglecting personal traits, choices and trajectories. Most practice-based studies focus on larger-scale processes such as shifts in technologies and norms. This study aims to contribute to the "rehabilitation" of the individual within the social practice field, by focusing on what Lave and Wenger (1991) call the "person-in-the-world", and attending to the individual scale, the social scale, and the relations between them. This task is not only valuable from a theoretical perspective; it may also help to demonstrate and communicate the value of Practice Theory in advancing the debate on behaviour change and sustainability. This is currently a controversial area, as evidenced by

the recent debate between Shove and Whitmarsh *et al* in *Environment and Planning A* (Shove, 2011, Whitmarsh *et al*, 2011).

This study suggests that these new, social approaches help answer some key outstanding questions in the theoretical field of environmental behaviour; for example, those around the value-action gap (Blake, 1999; Kollmuss and Agyeman, 2002). They also have much to offer to policy and practice on behaviour change. However, this vital exchange of ideas can only occur if researchers within both fields build conceptual bridges. For these reasons, this work attempts to forge connections between the sociological and psychological approaches, by linking the micro-scale of personal ideas and actions to meso and macro scale processes, such as social trends and technology. As such, its findings are of relevance to both the social/structural and cognitive/individual literatures, and contribute to the emerging area of work at their intersection.

Turning to the more specific contribution of this work to knowledge, the study offers several new findings concerning the nature of action on climate change. First, it reveals that the label "action on climate change" is not generally one that people use when thinking about their practices; this has not previously been discussed in the literature. Rather, low-carbon lifestyle practices and campaigning on climate change are bound up with a range of other projects and practices, and have many and varied motives; the findings of this study indicate the complexity and diversity of these personal meanings of action on climate change. Second, these sets of practices do not just involve the kind of simple impact-reducing activities ("headline behaviours") listed by Defra and other sources, such as recycling. They also involve a range of practices of not-doing, and modifications to dominant practices, as well as particular ways of thinking and talking. All these aspects of action on climate change have been relatively neglected in the past. For example, they are not generally included in the classifications of pro-environmental behaviour listed in Chapter Three (such as Hunter *et al* 2004; Corning and Myers, 2002). It is also notable that the practices that can be incorporated into climate-related projects can be in almost any domain of life; not just the five areas listed by Defra, and mentioned in Chapter Three, but also in domains such as work, family and leisure.

Thirdly, this study has developed a new understanding of action on climate change as potentially involving three forms of habitus. Two of these, radical and ecological habitus, have previously been identified (Crossley, 2003a; and Haluza-Delay, 2008, respectively), but not examined specifically in relation to action

on climate change. The third, simplicity habitus, is identified here for the first time. This is particularly useful because, unlike the ecological and radical habitus, the simplicity habitus does not seem to be predominantly a feature of the middle-classes (though it should be noted that this study is not designed to compare socio-demographic groups). This concept has links to the literature on voluntary simplicity (such as Shaw and Newholm, 2003), as well as Defra's category of waste-watchers. However, understanding the tendency towards a "simple" lifestyle as a habitus allows a more complete recognition of the ways it is instilled, and then modified, through life-experience. In addition, this work has explored the nature of the radical and ecological habitus, building on the work of Crossley (2003a) and Haluza-Delay (2008). It has shown how these are instilled during childhood through processes such as observation, social interaction, proto-practice and repeated performance, and then continue to evolve throughout later life.

The study also provides new insights into how action on climate change develops over time. Crucially, it shows how this behaviour must be understood as an on ongoing process, in which actions affect future actions. While similar ideas have been noted before (for example, Defra, 2008a; Beyerlein and Hipp, 2006), the ways in which this process occurs are relatively little understood. As noted in Section Six, Defra's segmentation model does not consider how and why people come to enter a certain category; the same is true of the many other segmentation models mentioned in Chapter Three. Therefore, a key contribution of this study is to begin to bring the dimension of time into such models. In particular, this study shows how this change can be understood as a career. Understanding action in this way helps to illuminate the ways in which the performance of practice shapes the individual, including their skills and ideas, and thus has an ongoing influence on future practice. The result is a trajectory that involves the co-evolution of a mind, a body, and a set of practices; and includes a degree of path-dependency. It is important to note that while the careers studied here generally involved an overall increase in action, the concept of a career does not necessarily entail such a "positive" trajectory. The processes of path-dependency and co-evolution also occur during negative trajectories[13], so the concept could be a useful addition to studies of behaviour change more generally.

[13] However, it should be noted that the term career may have connotations of positive change, so studies of regressive careers might consider using an alternative term, such as trajectory or path. The principles of the approach remain the same.

More specifically, the study provides new insights into the topical question of what factors or processes bring about change in individual practice throughout the career. As described in Chapter Three, there is a very large literature based on the development of attitudinal-behavioural models that attempts to answer this question, but "*no definitive answers have been found*" (Kollmuss and Aygeman, 2002:240). This literature indicates a wide range of factors associated with pro-environmental behaviour, including: attitudes, values and beliefs; emotions; social and moral norms; cultural factors; socio-demographic characteristics and contextual factors. This study confirms the importance of many of these factors, but goes further, shedding new light on the ways in which a range of different factors interact within an individual's career and synthesising these concepts into a multi-level framework for understanding practices of action on climate change.

This multi-level framework is a key result of this study, serving to order and integrate a range of concepts that have emerged from the data under the headings of performance; co-ordination and sharing; context; and path dependency. Some of the specific processes considered reflect similar concepts identified by past work, but these have not previously been integrated in a systematic way to explain an individual's career. For example, Olli *et al* (2001) considered social context, Chawla (1998) considered experiences, and Stern (2005) considered habits. This framework is not proposed as a definitive explanation of sustainable practices, and the processes involved are inter-related and not truly distinct. However, it is proposed as a useful tool for thinking about the complex processes and interactions that shape practices over time. While it is not necessary to repeat the explanation of the framework provided in Section Five, it is useful to highlight the specific ways in which it represents a novel contribution to theory.

The first element of the framework; the impact of performance on future performance, has been very much neglected by literature on environmental behaviour. The only field of work which has touched on this area is the Significant Life Experience literature, which, as noted in Chapter Three, has focussed on children, rather than the lifelong processes of learning that make up a career of practice (for example, Palmer, 2003). Crucially, this study adds further evidence to challenge the idea of a simple, uni-directional relationship between attitude and behaviour, building on the work of researchers such as Bem (1967) and Shove (2010). The study suggests that ways of thinking and acting are mutually-constitutive, and shows some of the ways in which this interaction may occur, such as normalisation through repeated behaviour, and the learning of new identities through performance.

The second process, co-ordination and sharing, has been explored by some social practice or time geographic literature (such as Pred, 1977; Southerton, 2009), but not specifically regarding sustainable practices or changes in practice over the life-course. Again, it has been neglected by the psychological literature, though some of the literature on social movements touches on related ideas, such as biographical availability (for example, McAdam, 1986). This study suggests that these ideas could usefully be developed through greater attention to how the demands of difference practices (such as family and work-related practices) are balanced and entangled within daily lives. It also draws attention to the critical role of communities of practice for some areas of action. These have not previously been studied with regard to sustainable behaviour, though a new project at Keele University is examining community knowledge networks and energy use, and intends to draw on the communities of practice literature (ESRC, 2010a). In the past, social networks have been explored by the social movement literature to explain recruitment and retention (for example, Karki, 2006), but rarely by the literature on environmental behaviour (which has very little exchange of ideas with the social movement literature; perhaps another example of the sociology / psychology divide). As such, this study may assist in cross-fertilisation between these disciplines by highlighting how communities of practice shape both practical and political action.

Even in the social movement literature, most work has focussed on mapping where networks exist, and on their role in initial recruitment to organisations, rather than the ongoing processes of learning and development that go on within groups. For example, this is largely true of contributions to Diani and McAdam (2003). The concept of communities of practice goes beyond a static network approach, and explores how roles and relationships change as an individual participates in a network over time, with the attendant consequences for practice. These findings suggest that applying the theory of communities of practice could offer new insights into the evolution and adoption of sustainable practices.

Some recent social-psychological models have attempted to include certain contextual factors, for example that of McFarlane and Boxall (2003). However, this study has aimed to take a more holistic and thorough approach to the role of context. It has considered all the different aspects of context that participants mentioned in their accounts, and used a framework based on biographical time, historical time and space and place to explore the diverse effects of context on careers of practice. While some of these effects on environmental behaviour have been considered by past studies this has generally been in a fragmentary or descriptive fashion. The final element of the framework presented here is path

dependency. The contribution of the study here is to illuminate the interacting processes of lock-in and agency within individuals' careers of action on climate change. While many different factors have been identified as creating path-dependency, the findings also highlight the ways in which individuals actively manage, engage with, and subvert these processes.

The framework described here offers an approach to change in practices that contrasts with conventional social-psychological approaches. Rather than listing groups of factors affecting action at one moment, it situates the performance of an action within a personal career of practice, within the entangled routines of daily life, within social networks, and finally within the wider landscape made up of changing social, economic, technological, political and physical conditions. To answer the question of why action on climate change develops in a particular way through an individual life-course, we need to consider each of these elements, and furthermore, to consider their interactions; the multi-level approach offered here is one way in which these diverse and interconnected processes may be understood.

Finally, while its findings are of cross-disciplinary relevance, this thesis also offers a contribution specifically to the field of Social Policy, particularly the relatively new field of environmental social policy, developed by authors including Fitzpatrick and Cahill (2002). This field focuses on the interactions between society and the environment, and the role of policy in managing these interactions. The findings of the study help to advance understanding of this important issue. By offering a range of practical suggestions, grounded in the analysis of data, this study aims to contribute to the application of social scientific knowledge to the policy and practice of sustainability; the key task of environmental social policy.

7.2 Contribution to methodological debates

In addition to its theoretical contribution, this work has also employed an innovative methodology, and the lessons from this experience may be of value to debates around qualitative inquiry and the newly-emerging field of social practice methodology. Narrative methods have only been rarely used in this field, though interest in them is growing. While researchers at the University of Bath are currently using narratives within a project on sustainability, biographical narratives as a data-collection tool appear to have only been employed by one other study on specific practices of sustainability; an ongoing project by researchers at the University of Surrey concerning food practices (White *et al*, 2009). Some related work

in the field of environmental education has also used biographies of activists and environmental educators (for example, Chawla, 1999), though these have tended to use more structured interviews or even written accounts. This relative lack of applications seems surprising, given that change in behaviour is a key concern in the field, and that biographical data could provide a rich source of relevant insights.

In particular, this study provides evidence that narrative biographical methods can produce data that is holistic and contextual; situating experiences and actions within people's lives. They can also generate data that has a temporal dimension, crucial in understanding the nature and causes of change. Furthermore, they produce data that is thoroughly grounded in participants' words and experiences; this means they can explore the meanings that life-events hold for people. In this way, such methods can provide a vital complement to the broader-scale data on attitudes and behaviours that has generally influenced theoretical and policy discourses in the past. However, the study has also highlighted some challenges and issues to be considered when using such methods, including problems around time management, topic structuring, researcher effects, rapport, distortion and accuracy of recall. Tools and techniques have been suggested, based on actual experience, for dealing with these challenges; for example, avoiding interruptions, finding common ground, and using additional methods such as life grids to stimulate recall.

The application of visual biographical methods is also an innovation in this field, and one which has proved extremely helpful in this study. The use of life-grids and life-graphs, as discussed in Chapter Seven, was valuable in the data-collection, analysis and evaluation (consistency-checking) phases and contributed significantly to the quality, quantity and richness of information gathered from participants. As with narrative methods, the study has also highlighted some challenges associated with these tools. A key problem is that not all participants are equally comfortable with drawing graphs; this means that future studies should consider their participants when selecting a method of this kind. For some, especially older people, those not familiar with the use of graphs and perhaps those who do not feel confident in their mathematical or scientific abilities, this might not be an appropriate method. Other visual methods, such as the use of pictures and photographs, might be more suitable for these groups.

Throughout the course of this study, its methodological approach has been presented and discussed with other researchers, for example, at conferences and in journal papers. It has generated considerable interest, including inquiries from academics wishing to apply narrative or visual-biographical tools in their

own future work. This supports the idea that the methods explored here could have a greater role to play in future research on sustainable practices. In particular, the experiential, contextual and temporal approach of narrative and life-course methods meets a recognised need within the field of sustainability; to address the question of what pro-environmental behaviour really means to individuals, how it fits into daily life, and how and why it changes over time.

7.3 Suggestions for further work

This study suggests a number of directions for further work. Arguably the most important form of research needed is the practical testing of interventions that are designed along practice principles, or that evaluate the application of particular elements of the framework discussed here, such as performance. Social interaction in particular appears to be a largely untapped resource for the promotion of sustainable lifestyles. Research is now beginning to address this gap; for example, as discussed above, the programme "Energy and communities" includes work that evaluates the role of social norms and community knowledge networks in reducing energy use. Based on this study, it seems that communities of practice could be an especially valuable area for further investigation.

Another valuable area for further work concerns those who are currently not engaged with sustainable practices. A necessary limitation to this study is its focus on engaged people; comparative work to assess the changes in practices amongst those who are currently not active would be an extremely useful endeavour. In particular, it could address the question of whether the same framework of reasons for change is equally applicable to these groups. As noted in Section Two, a plausible hypothesis is that the same broad categories would apply, but the specific processes within these would be significantly different. In addition, future work could explore in greater detail the ways in which the framework developed here applies to different practices. This study has necessarily taken a broad-brush approach, in order to encompass the whole life-course and all practices aimed at addressing climate change. Despite the use of two exemplars, many areas of practice could not be examined in detail.   A useful next step would be to investigate more closely the specific practices, such as practices of shopping, cooking and cleaning, which are involved in the project of action on climate change, and their development over time. This would entail a greater focus on the "daily path" or everyday routine, as a complement to this study's

focus on the life path or biography. To gain the fullest possible understanding of an individual's changing practices, a knowledge of both the daily and life scale is required.

Another area warranting further work concerns biographical transitions and moments of change in relation to sustainable lifestyles. As noted above, this area offers significant potential for policy-relevant findings, and has so far only been explored by one unpublished study (by Defra and the New Economics Foundation). More fundamentally, research on sustainability needs to continue to examine the relations between individuals and the systems and contexts in which they live. An area that has recently attracted the interest of many researchers is that of the systems of provision and socio-technical structures that can facilitate or obstruct sustainability. For example, a project called "Challenging Lock-in to Urban Energy Systems" is currently being led by University College London, while research at Manchester University launched in 2011 will examine the carbon-reduction potential of changes to the food supply chain. Such work forms an important complement to the continuing micro-scale work in social psychology. However, it is important that future research continues to explore not only large-scale systems, or individual practices, but also the interactions between these levels; a vital dimension that is too often neglected. For the same reason, a key task for future work is to build bridges between the diverse disciplines and approaches that address this topic, and so develop a richer and more holistic understanding of practices of sustainability.

Finally, in future, useful advances in methodological knowledge could be made through further testing of visual biographical methods in sustainability research. The use of life grids and graphs to explore practices here is highly experimental, and these techniques could be refined so as to gather more structured and comparable data while still allowing participants relative freedom of expression. A valuable development would be exploration of other innovative and visual methods for describing behaviour change over time; such as video and photo diaries, timeline collages, and house, garden and workplace tours. Such creative methods might not only provide rich and new data, but might also help a wider range of participants express themselves. New technology such as smart phones and the social networking site Twitter also offer great potential for collecting data on the daily-path scale. Another area rich in new opportunities is the intersection of narrative methods with social practice approaches. A key question concerning practice researchers at present is how to study practices on both the individual and social scale, and while narrative methods have often been used in sociological research, they have not been applied within this

specific theoretical approach. However, their emphasis on context, change over time, and the expression of people's daily experiences would seem to make them appropriate in this field.

8. Conclusion

In conclusion, it is suggested that this work makes a useful contribution to theories of sustainable practice; adding to knowledge within both the psychological and sociological fields, as well as to work in environmental social policy. This study has taken an interdisciplinary approach, drawing on concepts from a range of fields. Such a broad approach is still relatively rare, and it is hoped that this work could contribute to the exchange of ideas about sustainable practice across disciplinary boundaries that is only now beginning to emerge. It also helps to move forward methodological debates, by testing an innovative approach based on narrative and visual biographical tools.

The initial reviews of policy and literature in this area suggested several key characteristics of an approach that could significantly advance understandings of sustainable practice and address the research questions. These guided every step of the study, from the design of the methodology, through the analysis, to the final discussions. First, the approach to the subject was inductive, because the research aimed to generate new insights into unresolved issues in the field. Secondly, it was in-depth and experiential, aiming to remain grounded in the words of participants. This is in contrast to much social-psychological work, which uses pre-defined categories and quantitative measures. Thirdly, it was holistic, including all practices that participants understood as "action on climate change" and situating these within the context of complex daily routines. Fourthly, the approach was temporal, in contrast to much previous work. This was aided by the narrative biographical method, which helped to illuminate the processes of change, not just static states of "being active". Rather, it explored processes of "becoming active"; an idea in keeping with the concept of sustainable practice as an ongoing process. Finally, the study aimed to achieve theoretical generalisability by using a relatively diverse sample of people, performing a wide range of practices. This means it has produced findings that are grounded but reveal abstract themes which may transfer to other contexts.

As a result of the application of these core principles, the study has generated some findings that are of cross-disciplinary relevance, and that shed new light on the questions of how and why individual action on

climate change develops over time. They offer new insights into the important theoretical issues of the value-action gap and nature of behavioural change processes over time. As this chapter has shown, these provide useful lessons for policy, which also complement the findings of other recent and ongoing work in this fast-moving area. While the application of Social Practice Theory to human-environment relations is a relatively new field, it is an area rich in potential for further research. In particular, it offers an opportunity to bridge the divide between sociological and psychological accounts of individual values and behaviours. Increased communication between these disciplines could facilitate the breakthrough in understandings of sustainable practice that is now so urgently needed.

Appendix One: Bibliography

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Appendix Two: Online Survey Questions

Individual Action on Climate Change: Survey of [City] Residents

Thank you for taking the time to complete this survey, which is part of PhD research by Sarah Hards of the University of York.

1. **Email address:** ____________________

2. **Which age group do you fall into?**

   18-30
   31-45
   46-60
   61-75
   76 or over

3. **What is your gender?**

   Male
   Female

4. **What is your occupation?** ____________________

5. **Do you take any practical action deliberately aimed at tackling climate change? (For example, avoid using a car, or use energy efficient light bulbs)**

   Yes, some
   No, not really

6. **If you answered Yes, please give examples of the main things that you do, and how often you do them. (For example, cycle to work – 3 times a week)**

   ____

7. **Do you take any political action deliberately aimed at tackling climate change? (For example, write to the press or lobby policy-makers)**

   Yes, some
   No, not really

8. **If you answered Yes, please give examples of the main things that you do, and how often you do them. (For example, go to a campaign group meeting – once a month)**

   ____

Thank you very much for completing this survey. Please tick the box to confirm that you consent to have your responses used in this research.

I consent to participate in survey research on individual action on climate change.
I agree that I may be contacted in the future, and invited to take part in an interview. However, there is no obligation to give an interview.
I understand that all information I provide is confidential will **not** be seen or used by anyone other than the researcher and supervisor. I understand that the information will be used in a PhD thesis and related publications, and that my name and other identifying features will **not** be used anywhere in these publications.
I understand that I may withdraw from the project, so that none of my information is used, at any time until 31st July 2009.

Appendix Three: Email to people who had taken the online survey

Dear (name),

Thanks very much for taking my survey on individual action on climate change - I really appreciate your help with my PhD research. I'm now following this up by doing some interviews with people in (city) who are taking action to tackle climate change, and was wondering if you would be able to give me an interview?

It would involve talking about the things that you currently do to tackle climate change, as well as looking back at how you first got involved, and how the things you do have changed over time.

It would take about an hour, and we can arrange a date, time and location that are convenient for you.

I've attached an information sheet, which tells you more, but feel free to get in touch if you have any questions at all. You can email me at this address, or call on (number).

Thanks again for taking the survey, and I hope I'll hear from you soon.

Best wishes,

Sarah Hards

Department of Social Policy and Social Work, University of York

Appendix Four: Information sheet for participants

Individual Action on Climate Change: Research information for interview participants

Thank you for taking part in this research. Below is some information about the project. If you have any questions regarding the information, please get in touch using the details below.

Who is doing the research?

I am Sarah Hards, a postgraduate student in the Department of Social Policy and Social Work at the University of York. This research forms part of my PhD work, which looks at the ways in which individual people try to address the problem of climate change.

What is the purpose of this study?

This research aims to find out how and why people's action on climate change changes over time. This action can include both practical action (e.g. lifestyle changes) and political action (e.g. campaigning). The study will include people who take either one of these kinds of action, and people who are involved in both.

What will happen next?

If you reply to this email saying that you are happy to be interviewed, I will contact you to arrange an interview at a time convenient for you. The interview can take place in your home or at another location, such as a quiet cafe.

What **will the interview involve?**

The interview will take up to an hour and will be recorded, if you are happy with this. I will conduct the interview, and there may also be an assistant present. The interview will involve talking about things you have done to try to tackle climate change in the past. Also, during the interview we will fill in a timeline showing things you have done at different times in your life. If you are uncomfortable with any questions please let me know. You do not have to answer any questions you are not comfortable with.

What will happen after the interview?

The information will be transcribed and your name and personal details will not appear on any part of the transcript. At your request you will be sent a copy of the recording and/or interview transcript. Computer files will be stored on password-protected computers and only the researcher and supervisor will see the information. Later on, when the project is nearly finished, you will have the opportunity to see the results and to provide feedback on them.

Ethical standpoint

Your name will not be used anywhere within the research, and quotes used in the PhD report or in other publications will be checked to ensure that they cannot be used to identify you. I will not use the information you provide for anything other than this project.

Contact details: Sarah Hards
HYMS Building (2nd floor),
University of York,
Heslington,
York YO10 5DD
(phone number)
(email)

Contact details: University Department
Department of Social Policy and Social Work,
University of York,
Heslington,
York YO10 5DD
(phone)

Consent Form

I, ……………………………, consent to participate in an interview about the things I do to try to tackle climate change.
I understand that I may request a copy of the recording of the interview and/or a copy of the interview transcript.
I understand that the interview is confidential and the transcript and tapes will **not** be seen or used by anyone other than the researcher and supervisor. I understand that the information will be used in a PhD thesis and related publications, and that my name and other identifying features will **not** be used anywhere in these publications.
I understand that I may withdraw from the project, so that none of my information is used, up until 31st July 2009.

Participant	***Researcher***
Signed…………………………..	Signed…………………………..
Date…………………………….	Date…………………………….

Consent Form

I, ……………………………, consent to participate in an interview about the things I do to try to tackle climate change.
I understand that I may request a copy of the recording of the interview and/or a copy of the interview transcript.
I understand that the interview is confidential and the transcript and tapes will **not** be seen or used by anyone other than the researcher and supervisor. I understand that the information will be used in a PhD thesis and related publications, and that my name and other identifying features will **not** be used anywhere in these publications.
I understand that I may withdraw from the project, so that none of my information is used, up until 31st July 2009.

Participant	***Researcher***
Signed…………………………..	Signed…………………………..
Date…………………………….	Date…………………………….

Appendix Five: Interview Structure

1. Introduction

- Brief overview of the research
- Statement about confidentiality and how the data will be used
- Reassurance that there are no wrong answers, and answers can be as long as they like
- Opportunity for questions

2. Current practices

- Questions about current level and type of action, as ice-breaker and to set the scene

3. Main narrative

- An open question on how they first became involved with action on climate change.
- Further questions as needed; mainly open generative questions such as "then what happened?"

4. Life grid

- Participant is asked to fill in a life-grid representing their life-course, showing all the events and episodes mentioned during the interview, plus any more that they remember
- Elements are discussed as the grid is created

5. Life graph

- Participant is asked to draw a graph representing their action over time, using the x-axis to represent time, and the y-axis to represent their level of action
- Questions are asked to fill in any gaps, and to draw out causation and key factors; longer narratives are not discouraged

6. Closing

- Participant is asked if they have anything to add
- Participant is asked for feedback on the interview
- Participant is thanked for their time
- If appropriate, participant is asked to suggest other contacts

Appendix Six: Example life grid: Campaigning

Age / year	'97	98–2002	2003 Early	2003 late	2004	2005	2006	2007	2008	2009
Groups I took part in	Jubilee Debt Campaign	none (Church?)	[CITY] Against The War; Palestine Solidarity Campaign	[CITY] People & Planet	European Social Forum London	~~Make Poverty History~~ DISSENT	Climate Camp; [CITY] eco-actions	Critical Mass; No Borders		Climate Justice Action/Now!
Issues I worked on	Global Debt	Fairtrade	Iraq; Palestine; Anti-BNP		Sweatshops; American/Nuclear Bases or [illegible]	Debt Aid Trade; World Social Forum	Climate; Lebanon Crisis	Immigration	Copenhagen; ESF Malmo	Carbon Trading; Tar Sands; Financial Crisis
Relevant events e.g had children	Petitioning		First Demo; Iraq war	Work to uni; George Bush visited		G8; first Climate Demo	Drax	Heathrow	Kingsnorth; Jan–feb 2month break	G20; Copenhagen
Other notes						Wake up for trade Justice		media team	first trip to Cph.	

Appendix Seven: Example life grid: Car use

Age / year	16	19	21 ⟶	26. 28 ⟶	30.
Where I lived		Uni		[CITY]	[CITY]
Relevant events e.g. learnt to drive		learnt to drive	[JOB]		
Reasons for travel choices e.g. time, money	Health	limited car use.	Had to travel for work. (v. rural)	Walking to work + running home. → Health. → Ease. → limited parking.	Train + Walking.
Other notes e.g. I was passenger	Close proximity to town.	No real need.	No other transp. choices.		- Car travel last resort.

Appendix Eight: Summary of findings sent to participants

Pathways to Action on Climate Change: Summary of Findings

This PhD research set out to answer three questions: 1) How does action to tackle climate change develop through people's lives? 2) Why does it change in this way? 3) What lessons can we learn to help promote sustainable behaviour?

The study used interviews with sixteen people (eight men and eight women), aged from 24 to 73, who were found using environmental groups, websites, email lists and stalls, and by asking interviewees to suggest others I could contact.

All participants were making some lifestyle changes to reduce their carbon footprint, most commonly saving energy, reducing waste and trying to travel more sustainably. All but two participants were also involved in campaigning on climate change or closely-related issues, through a mix of national and local organisations.

How does people's action to tackle climate change develop over their lives?

Most people found that their action on climate change had increased throughout their life, either as a continuous upward trend or in a series of steps. Often this was a learning process, as people gradually found out about new issues or new ways to live sustainably. Any decreases in action were fairly rare. An exception was action involving transport choices – people's use of cars and other forms of transport generally went up and down throughout their lives, largely depending on where they lived and worked.

Regarding lifestyle change, most people started with fairly easy actions such as avoiding waste and saving energy at home, and then gradually began to do more. Some eventually went on to take much more challenging actions such as giving up flying, or generating energy at home. Regarding campaigning, most people had started by signing petitions or donating to charities, and some went on to be very committed activists.

Many people had certain key moments when they made changes in several areas of behaviour. These were often linked with broader changes in their lives, such as a new house, job, relationship status or baby.

What factors shape people's action?

Upbringing: Parents and mentors teach us a lot in childhood, with long-lasting effects. The most common ideas that were instilled in childhood and shaped later choices were: respect for nature, a tendency to avoid waste, and a willingness to challenge the status quo.

Diverse motives: Most people aren't motivated just by concern for climate change, but also by other environmental concerns, or beliefs about development, justice and animal rights. For many, saving money is also important. People's concerns change over time - they often move from one campaign to another.

Social networks: Having like-minded friends or participating in local groups can promote action, because people share ideas and advice and encourage each other to do more. However, a bad experience in a group can lead to a person taking less action.

Family, work and life-stage: Having children, or a time-consuming job, can limit the time available for “green” activities, and create demands such as an increased need to travel. These kinds of demands change depending on the stage of our lives we are in. More generally, throughout our lives our priorities and abilities change, for example; children may be limited in their skills and knowledge, teenagers may have other priorities, and older people may find some active tasks more difficult.

Experiences: Many kinds of experience have knock-on effects on future actions. We can learn through what we do and develop skills that help us take more action. Or we can become tired and need a break. Sometimes there are “feedback effects”, for example, if someone becomes interested in green issues they may seek out like-minded people to be friends with, and then gradually become more active because of their friends’ influence.

History: We are all shaped by the society we live in. Environmental problems have changed, as has media coverage of them. People’s expectations about lifestyles have changed, with consumption and disposable income higher than in the past. But there are also new technologies available, such as renewable energy for home generation. These changes all create new opportunities and barriers to action.

Location: Where we live and work shapes our actions, especially our transport choices, which are strongly affected by the distances we need to travel and the options available (such as public transport). Local recycling services, ethical shops, community centres etc. make a difference to what we can do. Another important factor is the people and groups that exist in a place, and whether we feel connected to them.

What does this mean?

I have identified eight lessons for getting more people involved in taking action to tackle climate change:

- Childhood is a crucial time; instil values of sustainability through improved environmental education, with hands-on experience of nature, how to “make-do-and-mend” and other relevant skills.
- People are influenced by trusted friends; use social networks to communicate messages.
- Support organisations that build people’s skills in green living and encourage them to teach others.
- Use “moments of change” in people’s lives; target people when they are going to university, moving house, getting married, retiring and so on.
- Consider the priorities and constraints of the specific people you wish to target; use language and ideas that mean something to them and suggest actions that are appropriate.
- Recognise that climate change isn’t just about the climate; for many people it is linked to other issues like development, community, animal rights or the transition to a just, sustainable society.
- Work towards a shift in social norms; people can be constrained by stigma / opposition from others.

- Ensure that the facilities are in place to support sustainable choices, such as public transport, recycling and local shops; individuals can't solve this problem on their own.

What have I done with these findings?

- Presented posters or talks at eight conferences for policy-makers and/or researchers
- Written a parliamentary briefing influenced by this research project: www.parliament.uk/documents/post/postpn347.pdf
- Written two academic articles - ask me if you'd like to see them (warning: lots of jargon in these!)
- I am also hoping to present my results to Defra and Friends of the Earth soon

As part of my evaluation of this project, I'd be very grateful to hear your thoughts on these findings. Do they reflect your experiences? Have I missed anything important? If you have comments on how I carried out the research, those would be useful too. Finally, I would like to say a huge **thank you** to everyone who gave up their time to share their experiences. I hope you find the results interesting, and look forward to hearing any feedback. If you would like to see the full thesis when it is finished, just let me know.

Appendix Nine: Participants' feedback on the results summary

Gary
The two page summary looks good to me and accurate in relation to my comments. I must confess we have been a little less active with like {environmental campaign group} recently due to work and {baby}, I didn't quite realise how little time I would have for extras like {environmental campaign group}.
Ray
A lot of the points in your summary ring very clear - in particular the stigma associated with us "greenies" which sometimes makes us feel a little apprehensive about following our ambitions (like that associated with tankering my kids' bathwater down to the allotment for irrigation purposes! - The old lags think I'm bonkers!! Can't think of anything else that you could have included. I think you might have realised, after talking to [another participant] followed by myself, that some people can over-enthuse and even over-exaggerate about some projects and lifestyles that they recollect to people! I refer to [their] account of the [group] that [they] and I used to be involved in, that barely got off the ground!!
Kristina
That was interesting reading, thank you! I can't think of anything to add and it all makes sense to me.
Paul
I'm impressed! Well done! Recently, I've been taking an interest in the way that language and ideas can communicate climate change messages. So I read your summary hoping for a few practical pointers. It was good to see how timing can be important - moments of change – but I suspect that the suggestion of using language that appeals to people's normal priorities and constraints only re-enforces those norms. Such language, arguably, undermines the goal of shifting society's norms to reflect the priorities and values that will support work on climate change. [Organisation] ran a skill-share workshop in December to explore the topic {weblink} Perhaps this kind of detail is outside of the scope of your research, and the WWF report was published after you'd finished researching for your PhD, and maybe I've misunderstood what you were trying to say, and... Thank you for keeping me/us up-to-date with your progress
Ryan
I would say this is very good stuff. I've just been to a talk on "eco-socialism" tonight, organised on campus by the student Green Party group. One of the questions that was asked a number of times in different guises was "what do we do to get other people involved". I've been thinking about it a lot myself over the years and I think your conclusions are very apt. I'm not too interested in childhood because mine's over and I'm quite determined not to create any. But the 'feedback effect' that you highlight is absolutely crucial. "Morality is the herd instinct in the individual" wrote Nietzsche - people will not respond so the intellectual arguments (that we campaigners work so hard to create) half as well as they will respond simply to their social environment. It is the duty of all radical people to appear completely normal - because people will instantly distrust anything that appears to be 'other'. To win we must seize the mainstream!
Jeremy
Thanks Interesting *(he also forwarded the document to some friends/colleagues, one of whom then contacted me about disseminating it further)*
Maggie
Nothing much has changed here at my home. My son and daughter in law are now recycling more so is my daughter. She and her husband decided not to have a 2nd car in spite of living in [place] which has a terrible bus service, they share the car Park/Ride he cycles often so do the children. I think you are right upbringing is vitally important. My grandmother lived in one room in central Dublin as a 3rd world poor city dweller does now. She had an Eco-life from birth to death, because she was poor and undemanding. Good luck, use anything I gave you, it was lovely to meet you.

Carrie
10.3.2011 My action on climate change did indeed increase throughout my life. It was made easier by becoming aware of new consumer choices, and actions put in place by authorities such as having dustmen collect recycling bins from my house. Indeed my use of transport has stayed relatively the same. Whilst I'll walk or use public transport when I can, I do not feel safe on a bike! Key moments do change behaviour. I was shown the film 'Meet your Meat' in a school English class which turned me vegetarian 22 years ago. 9 years later I went vegan with a helping hand from my doctor. Parental upbringing can be negative. I was ridiculed when I first brought up environmental issues and vegetarianism 22 years ago. Even now my grandmother asks, 'Won't you ever go back to the way you were?' Regarding diverse motives; yes I think you have to take a holistic approach to all ethics. Bio fuels for the looming energy crisis could have a negative impact on the environment due to pesticides used etc; they could also result in more third world hunger and the destruction of essential wildlife habitats. You have to address all problems. Also, if a paradigm shift were to take place from viewing animals as commodities to 'persons', this will have a profound effect environmentally. About 7/8 fewer resources are needed for a vegan, that's even allowing for food miles and land which is not fertile for plant crops. Yes I have moved more in the way I campaign. Please, please, please, don't take it personally when I say I will no longer work with FoE. Several people with ulterior motives are creeping in. One of their leaders in [city] was prohunting and abused the group through the newsletter. Another gate crashed a Vegan Festival in Wolverhampton arguing for 'sustainable pastoral farming' instead of veganism. Whilst I have no problem with legitimate debate in an appropriate setting, a Vegan Festival is for *supporters* of animal rights. What next at a Vegan Festival? The Countryside Alliance or ProTest? Some people are doing this cause no favours. On the vivisection debate I've changed in that I work more with the [campaign organisation] more nowadays. This debate is unique in that people (wrongly) perceive human benefit from vivisection. I moved towards the [organisation] because they are medical professionals who can't be as easily dismissed as 'nutters' or 'rabble'. They are the people who are making a dent in the ivory towers of biomedical academia due to their cast iron medical arguments. Some animal rights are put off them because there are ex-vivisectors and hunters in the campaign (as well as animal rights). This in my view only strengthens the medical argument. It differs from the FoE issue in that we all have the same issue in common without a doubt for the same reason; the lack of scientific merit in vivisection. I think I have become more active with the advent of the internet which is a very useful campaigning medium. Facebook and Yahoo in particular are very useful. I use Facebook solely as a campaigning medium. My wall is completely public. The only thing non friends can't do is reply to posts because I'd never keep up with all the trolls! On more action due to the internet; it was a chance posting on Yahoo Jain Vegans which lead to a year long row between me and [several organisations and media institutions]. I have found that the 'Editors' Code of Practice' simply doesn't apply to the vivisection debate. Whether or not it applies to the environmental and climate change debate, remains to be seen! Yes I have had to move away from certain activists in 'groups'. In the animal rights world in particular there is a certain snobbery where if you haven't 'done prison' you're not a genuine activist. There's a lot of infighting especially between the militant factions and pacifists. I hear terms

such as ‘Kumbya rhetoric’ and ‘leaflet waving fraternity’. People with mixed views on both approaches are almost certain to get fired at sooner or later! Some simply preach to the converted or alienate the non vegan masses with terms such as ‘corpse muncher’.

I’ve found myself that work has compromised my time generally, however if I’m in the middle of a specific campaign and something must be done I do it come hell or high water!

Yes the ‘knock on’ or snowball effect is powerful and social networking also magnifies and accelerates this. Yes I do get tired at times though! The influence of like minded people is powerful however I am very resistant to ‘peer pressure’ from those I don’t agree with. I am hence labelled as ‘different’.

I think disposable income will change for the worse and this will have the knock on effect in that there’ll be less waste. However on the other side people will also choose the cheap Primark shirt above the ethically produced more expensive one!

Yes I’m affected by transport choices or lack of them. As a lone female I always use a car on a night instead of walking long distances from bus stops.

Childhood is indeed crucial and a formative time. However I think I was destined to become animal rights despite my parents’ opposing influence. They didn’t like me questioning the ethics of meat when I was five. They tried to encourage me to go fishing but when I was ten I point blank refused.

I do not know 99% of my ‘friends’ on FB and they are certainly not ‘trusted’ however many have their uses in a campaigning setting!

As regards supporting organisations I have toyed with the idea of joining a community (commune).

Priorities in targeting are very important. Preaching to the converted or hard line opposition with a vested interest is a waste of time. It is best to target the midway people and ‘fence sitters’, hence the unusual becomes the norm through ‘peer pressure’ and the opposition have a harder time surviving.

As regards social norms the very brave start a movement first, they are ridiculed. A few less brave join, then a few less brave and so on, until the unusual becomes the norm and the cowards jump on the bandwagon after the ball is rolling. In creating awareness amongst the first few, it is often hard hitting films such as ‘Meet your Meat’, and ‘Earthlings’ which are the catalyst for change. The following is my favourite quote:
‘First they ignore you, then they laugh at you, then they fight you, and then you win.’ Mahatma Gandhi

Facilities do need to be in place. I’ve taken stuff to a recycling plant, found it full and had to cart it away again! One’s being closed down near me too!

As regards other important points, there have emerged unscrupulous industries which are cashing in on the ethical and ‘Green’ Revolution.
Example 1: British Gas and their ‘Green’ tariff. They are obliged by law to provide a certain percentage of green energy and are conning caring customers in to paying extra for their legal obligation.
Example 2: The Body Shop. This is now owned by L’Oreal one of the worst animal testers in the world! They just want their slice of this new ‘green’ market.
Example 3: The World Wildlife Fund pretends to care about animals with their adoption offers. These are money spinner as WWF was founded by hunters and is lobbying for more vivisection. There are countless others.

There are also those with good intentions which are misplaced. Some of the ‘charities’ which Coop collect for, aren’t as noble as they seem!

Just out of interest did you interview anyone on the opposite side of the climate change debate?

11.3.2011

There were two more things I forgot.

Firstly the idea of animals being granted the status of 'persons' is not as far fetched as it sounds. In America there is talk of reclassifying dolphins as 'non human persons' which basically means they will receive any and all human rights which can be applicable to them (dolphins can't vote for instance, but would have the same rights to freedom and bodily integrity). Some parts of America have a thing about granting 'personhood' to both non humans and the unborn child. That said the animal rights movement is very split on the abortion issue. Likewise the prolife movement is very split on the animal rights issue. There are very strong views in all combinations.

I've generally found that people are more gobby on social networking sites such as FB than they would be face to face. Hence the social norms of what is the 'done thing' are changing. They also appear to be different for the internet. The result is that more public knowledge of issues has ocurred due to the ice being broken on such networks. Friends in person have remarked that they now know about things from my FB postings. You also have the opportunity to say more to a large group in a place where they're likely to see it even when you 'miss each other' online.

Myself, I go by the rule that I don't post what I wouldn't say to someone or a group in person. That said, I try to keep politics out of work. [Sentence about work removed to preserve anonymity]. Colleagues on both sides of the animal rights fence know how I feel and both the agreements and debates are over. 12.3.2011

Just a few more bits.

http://www.indymedia.org.uk/en/ There's an article here about the end of climate camps.
http://www.lowimpact.org/ The Low Impact Living Initiative
http://www.diggersanddreamers.org.uk/index.php?one=new&two=new&sel=17 Website on communal living. Film about ecovillages and communitites in Europe.
http://www.veganorganic.net/ The Vegan Organic Network. Information on ethical farming here.
http://www.ethicaldirectory.co.uk/Shopping/Clothing_and_Footwear/?p=2
http://www.veganvillage.co.uk/
http://www.ethicalconsumer.org/home.aspx
http://www.zerowaste.org/ Zero Waste Alliance
http://ethicalduck.co.uk/ Green & Ethical Directory

Appendix Ten: Elements of campaigning and car-use

This table shows the main images, skills and materials that participants mentioned as associated with their campaigning and car use practices

	Campaigning	Car use
Images	Specific issue-based concerns that campaigners hold, especially around climate change and associated issues, such as environmental and development concerns More fundamental or abstract ideas, such as political or spiritual worldviews Ideas about other activists Ideas about activism in general Ideas about themselves and their own activism	Perceptions of the car as: a major environmental problem; a symbol of consumerism; costly; linked with traffic problems; linked with safety concerns; linked with negative manufacturing impacts; and having an uncertain future due to resource peaks Perceptions of large cars, especially sports utility vehicles, as symbols of unsustainability, but electric cars as positive Perceptions of others' car use, including good and bad driving practices and their tokenistic behaviour (for example, very minor cuts in use) and car dependence in society Ideas about their own car use; including convenience (including time, parking and the difficulty of fuel conversion), money, safety, health and environmental concerns Emotions, especially a dislike or hatred of cars and guilt about driving and negative emotions associated with alternative modes (for example dislike of taxis, or fear of bus stations); sense of not being eager to learn to drive or to change the car often Beliefs about wider issues such as biofuels and about the policy changes needed.
Skills	General skills such as research, writing and public speaking Specific skills such as running stalls and lobbying policy-makers	Ability to drive Technical know how; ability to "make do and mend" and use biofuel Expertise on transport issues; ability to engage in transport campaigning and make informed choice of travel modes

Materials	Tools used to facilitate campaigning (and sometimes as obstacles to it, for example police weapons) Money Body Material outcomes that are desired (for example renewable energy sources) or not desired (for example new roads and runways) Fundamental material elements, such as pollution, natural sites and natural resources	Car; whether people owned or had access to a car, how many cars, type of car, the car as an object for "make-do-and mend" practices Type of fuel, amount of fuel used Infrastructure for cars (such as roads, parking) Alternative modes and their associated infrastructures (such as cycle lanes, bus stations, trains) Money Body