MICRO AND MACRO APPROACHES TO ENVIRONMENTAL EDUCATION

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Abstract

The root cause of the majority of environmental problems lies not in surface manifestations such as carbon dioxide and ozone, but with social and cultural factors that encourage people to consume far more than they need. Environmental education can be divided into two main kinds: micro approaches, which the majority of current approaches fall under, and macro approaches, which are currently emerging. Micro environmental education considers environmental problems in terms of surface manifestations, and proposes micro-changes such as recycling to address them, without questioning the possibility of a cultural shift away from consumerism. This form of environmental education typically seeks to change the behaviour of social actors by building and appealing to their environmental consciousness in the expectation that they will act rationally. It is argued here that this expectation fails to recognise that social actors are subject to plural rationalities and that their behaviour is driven by complex interrelationships with other social actors. As a result, micro environmental education, despite its best intentions, often fails to adequately address and change the environmentally unsustainable behaviour of the social actors it targets. This thesis firstly aims to uncover why micro approaches to environmental education exist and persist. Primary qualitative research with environmental educators drawn from formal, free-choice and accidental channels of environmental education was conducted and is presented alongside a review of the historical development of environmental education. The second aim of this thesis is to argue against a reliance on micro approaches to environmental education and environmentalism in general and propose instead that environmental education becomes embedded within a wider macro approach. Macro approaches seek to change behaviour through the development of a critical understanding of interrelationships among social actors, leading ultimately to environmentally positive changes in them. Findings from the primary research also help reveal the conditions necessary for macro approaches to emerge from the current environmental education infrastructure. The thesis concludes that macro environmental education is both necessary and possible and calls for further research into its development and practice.

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of this thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas

Any views expressed in the thesis are those of the author and in no way represent those of the University.

Signed ..... Date 20TH November 2008

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Contents

			Page
		Abstract	ii
		Declaration	iii
		Acknowledgements	iv
		Contents	v
		List of boxes	ix
		List of figures	ix
		List of tables	ix
Chapter 1		**Introduction**	**1**
1.1		**Thesis Introduction**	1
	1.1.1	The origins of this thesis	1
	1.1.2	Micro and Macro approaches to environmental education – a brief introduction	3
	1.1.3	Aims and Research Questions	7
	1.1.4	Thesis outline	8
1.2		**The Knowledge-Action gap**	8
	1.2.1	A Simple linear model?	8
	1.2.2	The dangers of using an information deficit model	13
1.3		**The Macro Approach**	20
	1.3.1	Macromarketing	20
	1.3.2	Complexity	21
	1.3.3	From micro to macro	23
1.4		**Conclusion**	24
Chapter 2		**Consumerism and the Root of Environmental Problems – a macro perspective**	**26**
2.1		**Consumerism is built on sand**	26
2.2		**Consumption and the Environment**	26
	2.2.1	Population, technology and social interrelationships	27
	2.2.2	The root of environmental problems	30
2.3		**The Consumer culture**	32
	2.3.1	Entering the age of Affluenza	33
	2.3.1.1	The Commodity-sign relationship	35
	2.3.1.2	Consumerism and spiritual impoverishment	36
	2.3.1.3	The birth of a project – striving for happiness	38
2.4		**An ongoing project – sustaining economic growth**	45
	2.4.1	Demand Creation	46
	2.4.2	Endless cycle of self-deception	50
	2.4.3	Buying an identity	51
	2.4.4	Luxury fever	51
	2.4.5	Oniomania	52
2.5		**Conclusion**	53

Chapter 3		**The Human-Environment relationship and the Environmental movement**	**55**
3.1		**The Human-Environment relationship**	56
3.2		**Dualism, nature loving and the environmental movement**	56
3.3		**Environmentalism and consumerism: Happy together?**	57
3.4		**Can we go a bit deeper?**	59
Chapter 4		**Environmental Education in the 21st Century**	**63**
4.1		**A brief history of Environmental Education**	63
	4.1.1	The birth of Environmental Education	63
	4.1.2	Education for Sustainable Development	71
4.2		**Formal Environmental Education**	76
	4.2.1	Rhetoric and action?	78
	4.2.2	Sustainable Education?	84
4.3		**Informal, Non-formal, Free choice and Accidental Environmental Education**	91
	4.3.1	The Environmental Education Infrastructure	91
	4.3.2	Education for and against the environment	93
	4.3.3	An expanding environmental education infrastructure	100
	4.3.4	Issues in an expanding environmental education infrastructure	104
	4.3.4.1	The Alarmist repertoire	104
	4.3.4.2	Optimistic Repertoire 1: It'll be alright	107
	4.3.4.3	Optimistic Repertoire 2: It'll be alright if we do something	109
4.4		**Conclusion**	114
Chapter 5		**Methodology**	**116**
5.1		**Quantitative or Qualitative research?**	117
5.2		**The Semi-structured interview**	119
	5.2.1	The nature of semi-structured interviews	121
5.3		**The Case Study in Environmental Education**	123
	5.3.1	The Qualitative Case Study	123
	5.3.2	The use of case study in Environmental Education	127
	5.3.3	Issues in case study design	130
5.4		**Interview design and conduct**	132
	5.4.1	Accessing and selecting a sample of environmental educators	132
	5.4.2	Initial Contact and Pre-Interview communications	134
	5.4.3	The interviewer – interviewee relationship	136
	5.4.4	Interview preamble	137
	5.4.5	The Interview schedule	139
	5.4.6	Interview transcript and amendments	141
	5.4.7	Coding the data in preparation for analysis	142

5.5		**Participant profiles**	142
	5.5.1	Cam Paine	143
	5.5.2	Clare Parks	143
	5.5.3	Dev Sustain	144
	5.5.4	Ed Townsend	144
	5.5.5	George Teacher	144
	5.5.6	Georgina Young-Teach	145
	5.5.7	Laura Green-Schools	145
	5.5.8	Nat Charity	146
	5.5.9	Phil Maker	146
	5.5.10	Rhian Cycler	146
	5.5.11	Simon Chat	147
	5.5.12	Sundae Reader	147
	5.5.13	Walter Native	148
	5.5.14	Woody Learner	148
	5.5.15	Artie Pilot	148
	5.5.16	Conner Sultan	148
5.6		**Conclusion**	149
Chapter 6		**Exploring the factors shaping micro approaches and the potential for macro approaches to emerge – part 1**	**150**
6.1		**Re-cap of Sample studied**	151
6.2		**Internal factors influencing design and delivery of Environmental Education**	152
	6.2.1	The impact of educators' beliefs	152
	6.2.2	Coping with the knowledge action gap	157
	6.2.2.1	Settle for awareness raising approaches and/or carry on regardless	159
	6.2.2.2	Environmental education on issues for which increased knowledge can lead to observable behaviour change	162
6.3		**External Factors influencing design and delivery of Environmental Education**	166
	6.3.1	Funding	167
	6.3.1.1	Entrepreneurial Environmental Education?	170
	6.3.2	The National Curriculum	172
	6.3.2.1	National Curriculum and formal educators	178
	6.3.3	The influence of natural resources on issues covered and approach taken	183
	6.3.4	The effect of audiences on the design and delivery of environmental education	185
	6.3.4.1	Attracting, engaging and retaining an audience	185
	6.3.4.2	The impact of audience's perceptions of the environmental educator	188
6.4		**Identifying the potential for macro approaches**	192
6.5		**Conclusion**	200

Chapter 7		**Exploring the factors shaping micro approaches and the potential for macro approaches to emerge – part 2**	201
7.1		**Artie Pilot**	201
	7.1.1	Designing 'Sustainability and the Arts'	203
	7.1.2	Delivering 'Sustainability and the Arts'	207
7.2		**Conner Sultan**	210
	7.2.1	A macro approach to environmental education - Exploring the detail	211
	7.2.2	Delivering macro approaches to environmental education	217
7.3		**Conclusion**	220
Chapter 8		**On the possibility of macro environmental education**	**221**
8.1		**The Emergence of Macro Environmental Education?**	223
	8.1.1	Edward Bernays and The Hidden Persuaders	223
	8.1.2	Happiness as Feeling or Happiness as Authenticity?	227
	8.1.3	Recent evidence of macro environmental education	230
	8.1.3.1	Downshifting	231
	8.1.3.2	The Idler	232
	8.1.3.3	Do good lives have to cost the Earth?	233
	8.1.3.4	Enough	233
8.2		**The Big Question – if not growth then what?**	235
Chapter 9		**Conclusions and recommendations**	238
9.1		**Limitations**	239
9.2		**Recommendations**	240
		References	242

Appendices

		Page
Appendix 1.1	Initial approach to participants	256
Appendix 1.2	Follow up letter	258
Appendix 1.3	Informed consent form	263

List of boxes

Box		Page
5.1	Interview Schedule	139-140

List of figures

Figure		Page
1.1	A rationalistic model of action for sustainable development	9
1.2	The Knowledge-Action gap	9
1.3	Barriers between environmental concern and action	11
2.1	Journey of one unit of natural resource	30
2.2	Maslow's Hierarchy of needs	39
2.3	The relationship between income and happiness in the United States	40
2.4	Life satisfaction and income growth in Japan, 1958-1992	41
2.5	'Shopping is Cheaper than a Psychiatrist' Photo of shopping bag taken by M. Phillips, 2006.	52
4.1	Map of the development of different aspects or emphases of environmental education	70
4.2	Influencers on the behaviour of a social actor	95
4.3	A linear model of micro environmental education	96
4.4	Influencers on the behaviour of a social actor with added inclusion of environmental education	97
4.5	Increased influence of environmental considerations on the behaviour of a social actor	98
4.6	Approximate illustrative representation of growth in environmental education over time	102
4.7	The 'shape' of the climate change discourse now	103
7.1	The Seven Capacities of the U-Movement	215

List of tables

Table		Page
6.1	Environmental Educators Studied	151-152
6.2	Defining Environmental Education	153-154
6.3	Educators and the knowledge-action gap	157-158
6.4	Key contributions to Education for Sustainable Development by subject	173

Chapter 1 - Introduction

1.1 Thesis introduction

Whether or not environmental education receives the level of support from the UK government that it so badly needs, it is becoming increasingly clear that there is a desperate need for, not only more environmental education, but also more successful environmental education in this country. The aims of this thesis are to explore the historical origins of environmental education, investigate the factors shaping the design and delivery of the environmental education conducted by a sample of environmental educators, question current assumptions and approaches to environmental education and to argue for, and explore the form of, potential alternative approaches.

1.1.1 The origins of this thesis

In September 2004 I completed an MSc in Environmental Science, Policy and Planning at the University of Bath. The taught part of this course dealt with nearly all aspects of the environmental field, from the science and the economics, to the policy and architecture. This MSc gave me a good grounding in the 'language' of The Environment, but did not really allow for specialisation in one area. Following the Phillips family tradition I became interested in the role of education and decided to base my dissertation thesis in the sub-field of environmental education. Initially, I naively assumed that an individual's behaviour could be changed to more closely fit the principles of sustainable development simply by increasing the amount of knowledge about, awareness of, and emotional attachment to the environment an individual has. The dissertation thesis taught me that I was not alone in this assumption and that it was an assumption that underlies most environmental education, specifically education *for* the environment. As highlighted by Kollmuss and Ageyman (2002), the assumption that a linear relationship exists between knowledge, attitudes and action is largely a false one. A gap exists which prevents a translation of a motivation to act, into actual action. Papers by O'Donoghue and Lotz-Sisitka (2002), Gough (2002), Courtenay-Hall and Rogers (2002), Maiteny (2002), Payne (2002), Clover (2002) and Jensen (2002) in a special 'gap' edition of the journal *Environmental Education Research* and other work by Scott and Gough

(2003) and Barr (2004) all seek to explain this gap. Section 1.4 of this chapter will take a closer look at the gap and review the possible explanations for it. The reasons for its existence are complex and remain poorly understood. However, the fact that it does exist helps to explain why the task undertaken by environmental educators is not an easy one.

During my MSc dissertation research I came across the work of Paddy Dolan, a researcher in the field of marketing. He highlighted the limitations of the term sustainable consumption and argued that 'acts of consumption are not in opposition to, and prior to, macro structures and processes; they are macro processes at work' (Dolan, 2002, p. 170). His argument is that consumption acts are what fuel relationships between social actors, be they individuals, businesses or governments (to name just three). To ignore this and assume that consumption acts are independent of these social interdependencies is, according to Dolan (2002) micro practice. It is from this work that I borrowed the terms micro and macro approaches to apply to education for the environment. The conclusion I reached (Phillips, 2004) was that for education for the environment to be more successful, it needed to appreciate in its design and delivery, that the behaviour of an individual was only *partially* influenced by the values they place on the environment. The work by Dolan (2002) and later work by Connelly and Prothero (2003) shows that values placed on many other factors also contribute to the decision-making process and that environmental values can sometimes be only a small and often marginalized influence. They also both point out that factors contributing to decision-making are dynamic and that the interrelationships between social actors fuel this dynamism. For instance, the reaction an individual receives from his/her contemporaries after an action may change the value they place on the influences of that action. It follows that they will behave differently in relation to that influence in the future. The action of this individual may also influence the values that others place on things, like the environment, their family, shopping, food and so on (an example has been set). This work strengthens the argument that a linear relationship linking knowledge, awareness and motivation to act for sustainable development to actual action, is at best weak and at worst non-existent amongst social actors. This thesis will explore why environmental education has come to be based on a potentially futile attempt to develop this relationship. It will

also question the wisdom of a reliance on this (micro) approach and argue that an alternative (macro) approach is necessary and possible. The next section will introduce the terms micro and macro in an environmental context.

1.1.2 Micro and Macro approaches to environmental education – a brief introduction

This thesis will explore a wide range of approaches taken to environmental education contributing to the wider research into why, despite a growing awareness and concern for the environment and environmental issues, the human population continues on a path of unsustainable development. The thesis will focus on the limitations of what I term micro approaches to environmental issues and the possibilities presented by macro approaches. Put simply, micro approaches tend to seek solutions from within social actors (at both individual and structural levels) and hope that a change in the status quo can be initiated from there. Micro environmental education is education that aims to change how social actors relate to the environment, but it aims to do this from within the cultural and social structure that they inhabit; it is environmental education in spite of cultural and social setting. Macro environmental education also seeks to change how social actors relate to the environment. However, macro approaches aim to do this by challenging the cultural and social structures that are the root causes of environmental problems. Under a macro approach the interrelationships between social actors, that are the bases of cultural and social structures, are questioned. The intention is to reshape these interrelationships to instigate a cultural shift to a culture and society that is more environmentally sustainable.

Micro approaches are well established in environmental education. They are largely based on the presentation of information about the environment in a format designed to motivate individuals to change their behaviour, or to take an action, for the sake of the environment (however that is defined). Macro approaches encompass, rather than replace, micro approaches. Macro environmental education aims to draw attention to what happens in the spaces between social actors. Education about and study of the interrelationships between social actors is nothing new, but learning about these relationships with the intention of changing them, for the sake of the environment, has been neglected. Evidence of a more macro approach to environmental education is

growing. It appears to be on the increase for two main reasons. Firstly, there are growing concerns and assertions that modern Western consumerist lifestyles are detrimental, not only to the environment, but also to human beings, both individually and collectively. Secondly, the relative lack of success of traditional, micro approaches to environmental education has spurred concerned environmentalists to seek an alternative approach.

The exact forms of macro approaches to environmental education are still somewhat unclear given that they are currently at a stage of experimental growth. They may represent a radical departure from current, traditional environmental education. For example, I will argue later in this thesis that it is entirely possible to design and deliver environmental education that does not mention the environment, climate change or sustainable development etc, in any way. Macro environmental education is however still at the margins. Currently, macro environmental education is mostly delivered by those who would not define themselves as environmentalists, in that sense, it is happening accidentally. This thesis will explore the need for and potential shape of macro environmental education. At present, however, micro approaches still dominate environmental education.

On May 1st 2006 I was lucky enough to attend a one-off concert organised by Friends of the Earth (a major environmental non-governmental organisation). The event titled 'Big Ask live' formed part of a wider campaign that was aiming to pressurise the UK government into taking action on climate change. Thom Yorke, the celebrity rock star figurehead of the campaign, headlined the event with fellow Radiohead band member Jonny Greenwood. This campaign typifies a micro approach. As the host for the evening pointed out between the acts, we were not being asked or educated to change or think about our own behaviour in any way. The impression given was that by simply being there we were doing our bit. Looking around at the excited faces waiting for the arrival of one of the biggest bands in the world it seemed unlikely that anyone was here for purely environmental reasons. While the climate was changing we were travelling to and from a live music venue, (crammed with the latest hi-tech electronic equipment) by train, bus, car and possibly even airplane, to burn energy photographing and recording our cultural icons using our latest mobile phones and

digital cameras. The star of the show, Thom Yorke, appears to be fully aware of this contradiction. As an increasingly outspoken environmental activist, he has recently spoken of his desire to quit excessive promotional tours, citing the environmental cost of the transportation of band members, crew and fans as well as the energy requirements of each live stage show, as his reasons (NME.com, 2006).

The example above illustrates the convenience (one of the reasons for its popularity) of a micro approach. At the time of the concert, 60,000 people had taken indirect action by 'asking' their government to do something about climate change through very little effort and almost no conception of the cultural and societal change the government would somehow need to initiate to effectively combat climate change. In terms of adding names to a petition, the 'Big Ask' campaign is likely to be hailed a success; its impact on climate change, however, remains to be seen. It is successful in the first sense because of its fatalistic nature. Throughout this campaign and on the night of the 'Big Ask Live' event, Friends of the Earth were basically saying: 'Audience member; it is OK, we understand. Climate change is too big an issue for you to do anything about on an individual level – we're going to get government to do something about it while you carry on your lifestyle as it is now.' The consequence being that 1000 people stood back enjoyed the show and went home talking about how good Radiohead were. If the government truly does want to do something about climate change (as a result of environmental campaigning or not) then it will be reliant on effective education for the environment and the work of organisations such as Friends of the Earth. An effective response to the dangers of climate change, whether it is government or grass roots led, will involve huge cultural, societal and infrastructure changes at a macro level and consequently huge changes in the lifestyles of individuals. Although taking political action is essential, that action needs to demand and show willingness to accept changes in culture. As will be explored throughout this thesis, macro environmental education could have a crucial role in developing this willingness. Giving individuals the false impression that their current lifestyle is not under threat and that current societal and cultural conditions can persist while the government solves climate change is a micro approach to a macro problem.

Unfortunately, the problems with micro approaches do not end here. The policies of the Department of Education and Skills (which will be reviewed in chapter 4) are, I consider, largely micro and reflect the current government's wider micro approach to sustainable development. It seems that the government is happy to make changes to policy and infrastructure so long as these changes do not affect its citizens' way of life. It may be pessimistic of me to imply that the government does not have a deep concern about climate change. However, it seems that while the messages that individuals receive from informal and non-formal education on the environment are largely micro, it is likely that the government will follow suit in its actions. It will provide formal environmental education, safe in the knowledge that this micro approach is what the majority of the population deems appropriate. Despite the increased awareness of the threat that human behaviour is having on the environment and all of the relative successes of micro approaches, things are, in the words of Jonathan Porritt (2006, p. 3), 'going from bad to worse, and they'll get worse yet.' Porritt recognises that change is needed and shares a macro view with an increasing number of environmentalists that the changes needed to allow true sustainable development are indeed possible.

Education is the focus of this thesis. I will be investigating the origins of the current micro approaches to environmental education, why they continue to dominate and why their dominance is a problem. I will discuss what macro approaches are, why they are important, and I will explore the conditions that allow macro approaches to flourish. If education is to help sustainable development and then eventually help us live sustainably as a global society, micro approaches need to allow room for macro approaches to come through and make a real difference at a culture shifting level. To be clear at this point, I am not arguing that micro approaches should be forgotten completely, far from it. It is important for people to be educated about the environment, know how they can make practical changes to their everyday living to lessen their impact on it and to develop a concern and connection with the natural environment. My point is that, through macro education, these important changes in the way we live our lives will not be viewed as being in opposition to our ideas of a happy, healthy and fulfilling quality of life. These changes will complement new lifestyle choices and values, resulting specifically from a re-evaluation of the values

attached to material goods and services. Micro environmental education can sit within a broader macro approach to environmentalism.

1.1.3 Aims and Research Questions

Before moving on to an outline of the thesis as a whole, it is important to briefly introduce the main objectives of this thesis and the research questions. The research questions are:

1. What are the factors driving micro approaches to environmental education?
2. How can a macro approach be applied in environmental education?

The overall objective of the study is to argue for the importance of tackling environmental problems at a macro rather than micro level and to explore the conditions necessary for the integration of macro approaches into environmental education. The sub-objectives of the study are, therefore, fourfold. Firstly, there is a need to uncover the social and economic roots of micro and macro approaches. Secondly, there is a need to determine the factors that lead to the adoption of micro approaches to macro problems. Thirdly, there is a need to highlight the conditions necessary for macro approaches. And fourthly, the exact form of macro approaches must be explored. Two sub-questions therefore emerge from research question 2:

2a. Is there potential for macro approaches to evolve from within the current Environmental Education Infrastructure (EEI)?
2b. What exactly is a macro approach to environmental education?

The aim of this PhD thesis is to contribute a new lens through which to analyse approaches to education for the environment and education for sustainability. The thesis will highlight the weaknesses of micro approaches and exemplify how these approaches can be identified to allow analysis of environmental education using the terms micro and macro. By analysing elements of a macro approach in action it will also contribute to the field by highlighting the possibility of macro approaches to environmental education. This thesis is potentially very important to the field of

environmental education, as it not only provides further critique of micro education for the environment but also an exploration of a growing workable alternative to it.

1.1.4 Thesis outline

The second and third sections of chapter 1 of this thesis will look at micro and macro approaches in detail. The second section (1.2) will review the phenomenon of the knowledge–action gap and how micro approaches to environmental education tend to reflect an effort to close this gap. The third section (1.3) will introduce macro education, reviewing the work that has called for a macro approach and highlighting literature that lends strength to the argument for macro approaches to environmental education. Chapter 2 will look at consumerism and will discuss why it is the most important issue for environmental educators to deal with.

Chapter 3 will look briefly at the development of the human-environment relationship to shed light on how this has influenced the nature of the environmental movement. Chapter 4 will take a detailed look at the origins and current form of environmental education in the UK.

In chapter 5 the research questions and aims of the project's empirical research will be discussed followed by a discussion and description of the research methodology. Chapter 6 will present findings from the first phase of the primary research. It will highlight the factors impacting on the environmental education delivered by fourteen environmental educators. Chapter 7 will discuss findings from the second phase of the research, two ethnographic case studies. Detailed analysis of the factors driving the environmental education, designed and delivered by two further environmental educators, will be presented. Chapters 8 and 9 will conclude the thesis by arguing the potential for macro approaches to emerge.

1.2 The Knowledge–action gap

1.2.1 A simple linear model?

Early attempts to model action for sustainable development were based on the assumption that human beings are rational. A simple linear model emerged to explain

action for sustainable development, known as the information deficit model (figure 1.1). This model works on the presumption that, in order to stimulate an individual to act, they simply need to be provided with information about an issue, which will lead to motivation to act and actual observable action (Burgess *et al.* 1998, p. 1447)

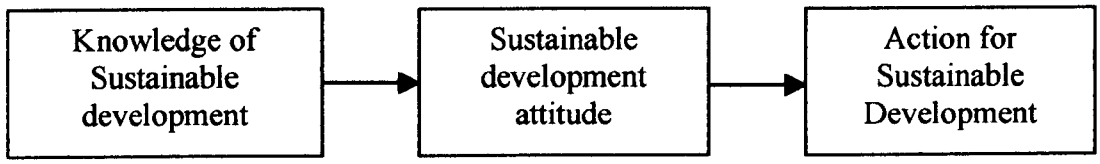

Figure 1.1: A rationalistic model of action for sustainable development

'Research [has shown] that in most cases, increases in knowledge and awareness did not lead to pro-environmental behaviour' (Kollmuss & Agyeman, 2002, p. 241). A *gap* (figure 1.2) between knowledge and behaviour had been discovered and many authors subsequently have been striving to explain this gap.

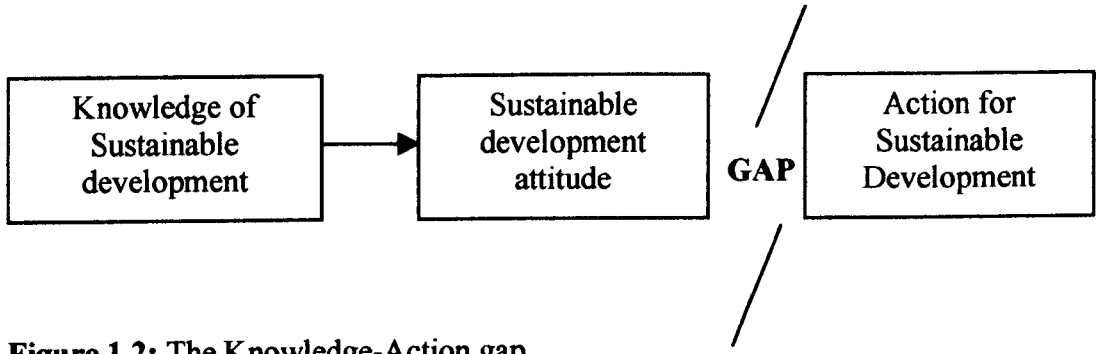

Figure 1.2: The Knowledge-Action gap

Kollmuss and Ageyman (2002) cite Rajecki (1982) who listed four possible explanations for the gap. The first of these was to do with direct experience. Rajecki (1982) argues that when a student receives a direct experience of an environmental problem they are more likely to develop a strong correlation between attitude and behaviour. This is the argument for education in/through the environment. Direct experience of an environmental problem is seen as better than indirect experience through a text book, video or in a classroom (in terms of promoting action for sustainable development). Secondly, normative influences such as social and cultural norms are likely to have a strong influence on one's behaviour. If the dominant culture supports a lifestyle that is unsustainable, then individuals within this culture will have greater difficulty converting their attitudes towards sustainable development into action. Thirdly, we have temporal discrepancy, which is the effect of a space in time,

for example, after a major environmental disaster has struck. Soon after an environmental disaster individuals may show a huge willingness to change behaviour, but as the event loses its prominence in the consciences of these individuals, the willingness to adjust their attitudes and behaviour diminishes. Fourthly, Rajecki (1982) points to the problem that the attitudes that environmental researchers measure are often much greater in scope (they may ask, for example: do you care about the environment?) than the actions they measure (they may ask, do you use energy saving light bulbs?) to test the conversion of attitudes to actions. This discrepancy in research methods means that the size of the gaps and the reasons for the gaps are often difficult to describe.

Hines, Hungerford and Tomera (1986) published a Model of Responsible Environmental Behaviour based on Ajzen and Fishbein's (1980) theory of planned behaviour. They concluded that the following variables (as listed by Kollmuss and Ageyman (2002, p. 243) and repeated here) are closely associated with responsible pro-environmental behaviour.

- *Knowledge of issues:* The person has to be familiar with the environmental problem and its causes
- *Knowledge of action strategies:* The person has to know how he or she has to act to lower his or her impact on the environmental problem
- *Locus of Control:* This represents an individual's perception of whether he or she has the ability to bring about change through his or her own behaviour. People with a strong internal locus of control believe that their actions can bring about change. People with an external locus of control, on the other hand, feel that their actions are insignificant, and feel that change can only be brought about by powerful others.
- *Attitudes:* People with strong pro-environmental attitudes were found to be more likely to engage in pro-environmental behaviour, yet the relationship between attitudes and actions proved to be weak.
- *Verbal commitment:* The communicated willingness to take action also gave some indication about the person's willingness to engage in pro-environmental behaviour.
- *Individual sense of responsibility:* People with a greater sense of personal responsibility are more likely to have engaged in environmentally responsible behaviour.

Kollmuss and Ageyman (2002, p. 243) point out that the list above does not do enough to explain actual behaviour; it merely explains attitudes and sometimes intentions to act. Hines *et al.* (1986) acknowledge this fact and concede that

'situational factors' such as economic constraints, social pressures, and opportunities to choose different actions all influence behaviour as well. This is an important point, as it is recognition that environmental knowledge, attitudes and intentions to act are not the only influences on behaviour. It is very important that environmental educators recognise this point and do not seek to merely make the environmental influences stronger in the vain (micro) hope that the information-deficit model is accurate.

Kollmuss and Ageyman (2002) extend their review of explanations for pro-environmental behaviour to the work of Fietkau and Kessel (1981). They listed attitudes and values; possibilities to act ecologically; behavioural incentives; and perceived feedback about ecological behaviour and knowledge as influences or constraints. Blake (1999) talks of a value action gap and attributes it to three barriers (see figure 1.3): Individuality, Responsibility and Practicality.

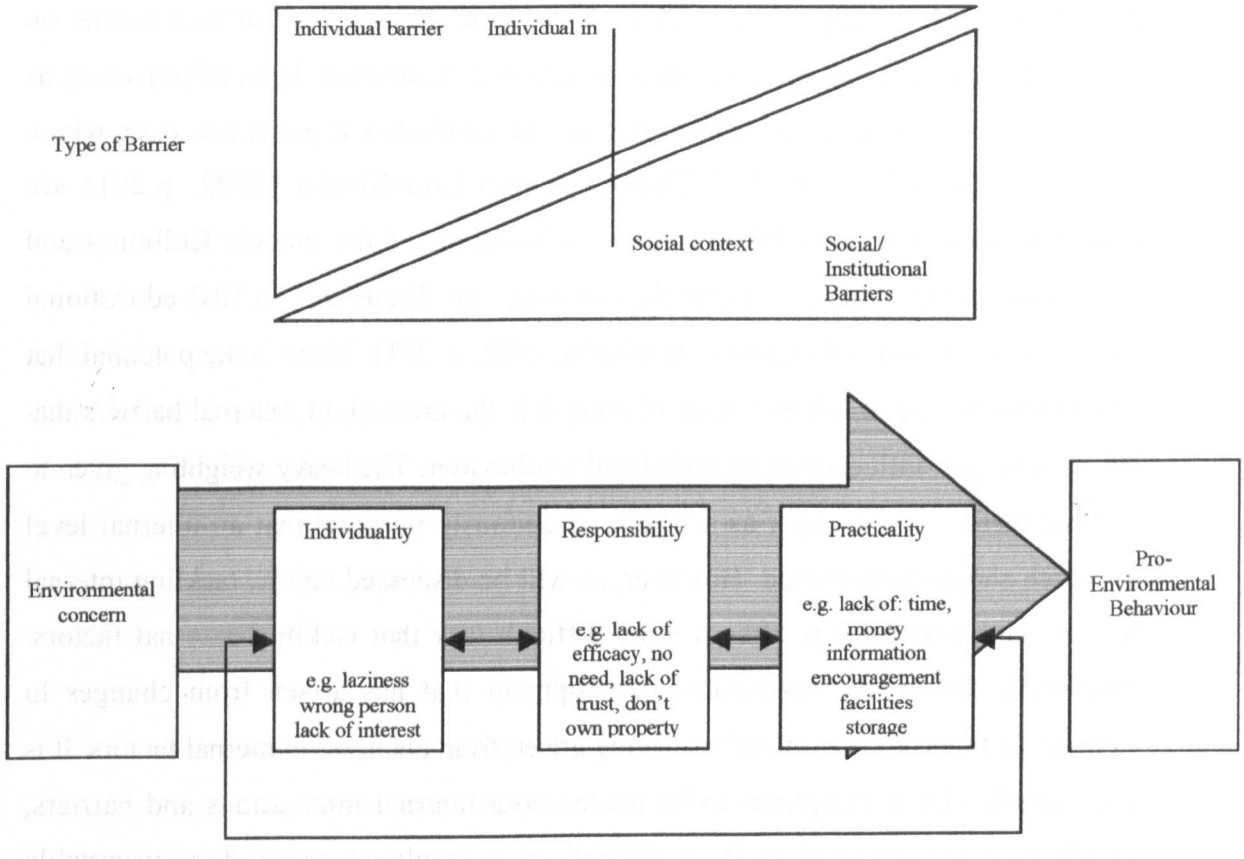

Figure 1.3: Barriers between environmental concern and action (Blake, 1999, in Kollmuss and Ageyman, 2002, p. 247)

Kollmuss and Ageyman (2002) go on to summarize the main influences (positive and negative) on pro-environmental behaviour as they work towards their own highly complex model of pro-environmental behaviour. They discuss two demographic factors, arguing that women are more likely to behave pro-environmentally and that years of education about the environment has an impact on behaviour (they usefully concede that this impact may or may not be positive). They state that externally, institutional factors, economic factors and social and cultural norms have an influence. Internally, motivation to act pro-environmentally; environmental knowledge, values and attitudes; environmental awareness; emotional involvement; locus of control and responsibility and priorities all have an influence on an individual's behaviour towards the environment, be it positive or negative.

Kollmuss and Ageyman (2002, pp. 256-257) conclude with a 'model of pro-environmental behaviour'. Their model identifies many barriers to 'pro-environmental behaviour' but lacks any meaningful attempt to rate the influence of each barrier on shaping behaviour. I will not re-produce it here as it deteriorates in its effectiveness as a tool for environmental educators due to the confusion it generates over which barriers need to be tackled. O'Donoghue and Lotz-Sisitka (2002, p.261) are disappointed that this model is just an 'elaboration' of the models Kollmuss and Ageyman (2002) critique and that they provide 'no discussion on [its] educational implications' (O'Donoghue and Lotz-Sisitka, 2002, p. 261). There is the potential that an educator would be left uncertain whether it is the internal, or external barriers that have the biggest influence on an individual's behaviour. The heavy weighting given to internal factors in the paper as a whole, circuitously purports that an internal level approach should be favoured. However, as will be discussed below, tackling internal barriers and influences is often a more difficult task that tackling external factors. Potentially, action for sustainable development that has arisen from changes to external factors can be confused as having arisen from changes in internal factors. It is also possible for assumptions to be made about internal motivations and barriers, which may be assumed to have altered as a result of action for sustainable development arising from changes to external factors.

The focus on internal influences on behaviour despite an acknowledgement that external influences have a huge impact suggests one striking thing about all the models discussed so far. That is that they see action for sustainable development as being very much in opposition to the barriers provided by external factors. These models, especially the Kollmuss and Ageyman (2002) summary, suggest that the job of the environmental educator is to break down these barriers and the method suggested involves the use of education to strengthen the internal motivations, values, attitudes and emotional attachment to the environment to allow 'pro-environmental behaviour' to flourish. It is a very micro view because it anticipates the breaking down of external barriers by increasing pro-environmental behaviour driven by strengthened internal influences and removed internal barriers.

The Kollmuss and Ageyman model of pro-environmental behaviour (2002, p. 257) shows how difficult it would be to change the internal drivers of behaviour, due chiefly to the difficulty involved in changing the priority attached to values and attitudes towards the environment and the difficulty involved in acceptance of environmental knowledge. These difficulties can be attributed to two barriers: 'Existing values prevent [environmental] learning' and 'Existing knowledge contradicts environmental values' (Kollmuss and Ageyman, p. 257). Drawing on the assertions of Dolan (2002), I am proposing in this thesis that these barriers are almost impossible to remove through (micro) environmental education that takes the environment or sustainable development as its starting point. A more macro approach and possibly more effective approach would be to challenge contradictory (to sustainable development) values and knowledge, such as the value attached to certain resource dependent commodities, service or leisure activities and the consequent overconsumption of them.

1.2.2 The dangers of using an information deficit model

What the work of those summarised by Kollmuss and Ageyman (2002) does show is that there are many barriers preventing a simple linear progression from knowledge about the environment to action for sustainable development and that if an environmental educator seeks to make a real impact, they should avoid falling into the trap of assuming this linear progression occurs. However, despite information deficit

models being proven as very limited descriptors of the reaction of the informed to the receipt of environmental education as early as the 1970s (Kollmuss and Ageyman, 2002, p. 241), those involved in the design and delivery of environmental education, in the main, continue to persist with it as the basis of their education for the environment. Scott and Gough (2003, p. 112) are highly critical of this persistence. They find the 'resistance (one might say denial)' of the fact that the gap exists as highly irrational. Kollmuss and Ageyman (2002, p. 241) also find it difficult to comprehend, describing this persistence as 'surprising.' I would describe it as very worrying, for its implications run deep. I feel it necessary here to highlight why it is dangerous to base environmental education on simple linear models of behaviour change.

The first danger is associated with which issues are tackled by environmental educators. It is possible to apply a simple linear model of behaviour change to some net positive changes in behaviour. For example, many urban areas in the UK are benefiting from the introduction of kerbside recycling schemes. Prior to the introduction of this service the effort required by individuals to recycle their waste was often great enough to discourage this behaviour. Individuals would have received information regarding the importance and value of recycling waste and as rational human beings would have felt motivated to act appropriately. However, as is the case with many other environmental problems, somewhere between intention to act and actual action, obstacles would be met creating the infamous gap (figure 1.2). The introduction of kerbside recycling schemes, which involve the distribution by the local authority of a box specifically for the collection of recyclable materials, complete with instructions detailing which items can and cannot be recycled using this service and calendars specifying collection times (usually fortnightly), has undoubtedly increased the amount of waste diverted from landfill. For example, in Cheltenham, Gloucestershire, UK, the percentage of household waste that was recycled almost doubled in the period between 2001/2 and 2004/5 from 7.9% to 13.8%. During this same period the percentage of Cheltenham households served by kerbside recycling services rose from 0% to 91% (Cheltenham Borough Council, 2006). This equates to a closing of the gap. For the individual the activity of recycling has changed from taking recyclables to a recycling centre to taking them to the kerb, often unsorted. Now that it

is easier to recycle an increasing number of individuals are taking up the habit. Attitudes and intentions to act may not have changed at all, but action amongst the public as a whole has increased.

On the surface this looks like great news, but the implications of the success of increased recycling of domestic waste are hidden and potentially damaging. Recycling waste is without doubt an important activity and its benefits are obvious, however it is not necessarily the most sensible or effective response to the waste problem. As the much touted slogan 'Reduce, Reuse, Recycle' and its many derivatives imply, reducing waste is the most sensible response to the waste problem, followed by the reuse of materials rather than the disposal of them. Recycling waste, (a highly energy dependent activity), is a final resort before sending material to landfill. Question: Persons A and B both claim to be keen environmentalists and send exactly the same (low) amount of waste to landfill every week. Person A states 'I recycle loads of materials every week', while Person B states 'I recycle very little.' Who is behaving with the most care towards the environment? Answer: Person B, for Person B is consuming the least; keeping their environmental impact as low as possible by reducing how much waste they create through lower consumption and reuse of as many materials as possible. Person B is prioritising at the correct end of the scale of response to the waste problem.

Kerbside recycling appears to be closing the gap between environmental values and behaviour by removing some internal barriers (laziness, lack of knowledge, reduction of impact of the new behaviour on competing behaviours) and some external barriers (lack of infrastructure, monetary cost) and by adding influences (for example, recycling becomes a social and cultural norm). It appears, therefore, that attitudes towards the environment have improved. Darnton (2004) in his report on sustainable development and public behaviour cites a study by the National consumer council (Holdsworth, 2003), which showed that those who recycled regularly were in fact less likely than average to take steps to reduce the volume of household waste they produced. Darnton (2004, p. 10) states:

> If attitudes were the deciding factor in driving pro-environmental behaviours, recyclers might reasonably be expected to be waste reducers as well, but this was found not to be the case.

For the individual, then, recycling at the kerbside is a very micro response to an environmental problem. The individual is able to carry on their highly waste-generating lifestyle, as this is not challenged. The effect on their lifestyle (the lifestyle that is generating the problem in the first place) is minimal due to the ease associated with kerbside recycling. This is dangerous because the individual is made to feel that they have changed their attitude towards the environment, when in fact the priority attached to action for sustainable development has changed very little.

Century of the Self (2002) argues that the UK government has developed a public service system (mirroring the private sector) based on the setting of targets by managers that are to be met by employees left to their own creative initiative. Within this socio-economic system projects that have tangible and measurable results are the most likely candidates for political support and funding. Initiatives like kerbside recycling are therefore likely to prosper. The impact of the information/educational campaign is highly observable and measurable. The rational information deficit model of behaviour appears in this example to be correct, the obstacles to action have been minimised and the gap is closed for many individuals. However, the barriers removed are external rather than internal (the values, attitudes and motivations driving the behaviour of the individual have changed very little). The drivers of the problem (waste creating lifestyles) have not been addressed; all that has happened is the development of more efficient ways of dealing with the problem (post-consumer waste). The approach therefore is a micro one. A macro approach would work on the internal barriers, notably addressing the factors that lead to waste creating lifestyles. This would coincide with the removal of external barriers and the development of external influences. Micro approaches take the social and cultural drivers and therefore the existence of environmental problems as a given, and deal with them once they have been caused. Macro approaches investigate the causes and question the social and cultural conditions creating the problems, the aim being to change these conditions and to limit the creation of the problems in the first place.

Successful micro approaches are very useful to those involved in their operation (in the case of kerbside recycling, the local authority government). As well as the results

being observable to funding organisations, the results are very observable to the general public (giving the impression that the local authority is prioritising the environment as an issue). Consider the introduction of a high profile local government-led campaign that challenges the foundations of our energy dependent and highly wasteful lifestyles and highlights the importance of reducing how many materials we purchase and therefore eventually send to landfill. Given that we live in a country that habitually strives for continued economic growth driven by consumerism, the chances of such a campaign being introduced are, I would suggest, in the short term, slim. I must emphasise here that I am not trying here to be overly cynical; those in charge of local authority budgets and spending may hold the preservation of the environment as a high priority and have the intention of addressing this issue in the most efficient way. The prioritisation of kerbside recycling as a strategy may well, for them, be the most rational response to the waste issue.

The recycling example given above seems to fit the rational information deficit model, the public are informed of the environmental need for recycling are motivated to do something about it, learn how to and then act accordingly. However it fits only because the external barriers to action for sustainable development have been removed, which allows the unchanged internal attitudes to be translated into action. The danger, therefore, is that issues chosen for environmental education may be chosen on the basis of how easily they fit the information deficit model. Issues that may well be of more importance to the progression of sustainable development may be marginalized because of their incompatibility with the information deficit model. In other words, if external barriers cannot be removed or if external incentives cannot be put in place to solve a problem, it is less likely that it will be tackled.

The second danger is that environmental educators who see the success of the information-deficit model for projects such as kerbside recycling, may, in ignorance or perhaps denial of the existence of the knowledge-action gap, try to tackle other environmental problems by simply providing information and education about an issue and a proposed behaviour change to deal with it. If the issue they choose is not compatible with the information-deficit model, then much time and resources are likely to be spent but they will not produce the desired results.

The problem is one of a misconception. If a micro initiative has been successful in closing the gap between attitudes and action through changes to the external circumstances but in doing this has appeared to influence internal attitudes or barriers, then onlookers may attribute this success to internal rather than external influences. Unless internal influences are successfully addressed, any closing of the gap through manipulation of external factors is a micro approach and will only have a benefit for the specific issue being tackled, as the example highlighted by Darnton (2004) illustrates (see above). For deep change and a more secure closing of the gap, that is, closure of the gap for more than the one specific issue, approaches that tackle internal attitudes, values and knowledge are more appropriate. Research by Maitney (2002, p. 304) strengthens this argument. He states that:

> The likelihood that behavioural and attitudinal change founded on inner beliefs, convictions and experience of the environment as *meaningful* to the person concerned is more likely to last in the long term than behaviour that has changed solely in response to externally imposed regulations and incentives.

Changes in external circumstances are useful when they complement internal changes. However, we have a problem; as has been stated, there is no inevitable, direct link between knowledge, attitudes and values in relation to the environment and action for sustainable development. Exceptional cases aside (which may well include those studied by Maitney [2002]), it does not matter how strongly people care about the environment, their observed behaviour commonly contradicts their stated values, attitudes and intentions. Individuals have beliefs, knowledge, attitudes and place value on more than just the environment or sustainable development, and the values they attach to these other parts of life can often outweigh the value attached to sustainable development. Maitney's (2002) argument is based on the individual finding value in acting for sustainable development, and that this is based on both altruism and on a personal sense of well-being that is associated with acting for sustainable development. Maitney (2002, p. 304) usefully recognises that 'human beings, as species, societies and individuals, need to find new non-material ways of seeking satisfaction and well-being for ourselves'. He also states that 'when pro-environmental is not framed and experienced as also contributing to personal well-being, it is less likely to endure in the long-term' (Maitney, 2002, p. 305).

One question I would ask is whether an environmental awakening, through the sort of experience that Maitney (2002) and other authors who champion the value of significant life experiences and emotional connectedness with the environment (Chawla, 1998a; 1998b; Palmer *et.al* 1998; 1999; Sward, 1999) describe, is enough to trigger a desire to find new non-material ways of fulfilling needs? I would suggest that for most people probably not, as the existence of the knowledge-action gap proves. I would argue that, although Maitney (2002) recognises that individuals need to seek non-material ways of living, his approach remains micro. He suggests that emotional attachment to the environment, rather than a questioning of competing behaviour motivators and the underpinnings of consumerism, should provide the stimulus for an individual's hunt for alternative lifestyles. I would argue that, because of the existence of the knowledge action gap, a questioning of the drivers of the behaviour that currently form our consumerist lifestyles would be of more value.

Gough's (2002, p. 276) discussion of 'plural rationalities' describes why an individual does not act for sustainable development at all times, even if they have a rational reason for doing so. Our attitudes towards the environment vary depending upon the context we find ourselves in. As a citizen, we may act for sustainable development as much as possible, given that the barriers preventing us from doing so are not as great as when we are, for example, in the context of an employee. As an employee we may be expected to behave in a particular way, a way that contradicts a rational way of behaving from a citizen's point of view (in relation to sustainable development). It is rational to behave in a fashion prescribed by our employer and this competing rationality is often of more importance than our rational response to knowledge about sustainable development. The same is true when we find ourselves in different contexts, as parents, as friends, as sportspeople, as shoppers or as travellers, for example. The danger for environmental education is that an assumption is made that individuals act and think as citizens at all times and individuals are taught from that perspective. In reality this is far from true, as environmental attitudes, values and motivations are often outweighed by the value we attach to feeding our family, for example, or keeping our jobs. This explains to a large extent the existence of the knowledge-action gap and explains why the values we attach to non-environmental

things are something that should be discussed by environmental educators. Acceptance of this by environmental educators and environmental policymakers may help progress environmental education. Unless competing rationalities are challenged they will continue to remain more prominent in the minds of individuals than sustainability rationalities.

1.3 The Macro Approach

Section 1.2 discussed the phenomenon of the knowledge-action gap and how efforts to close this gap can lead to micro environmental education. In 1.2.2 the problems of using an information deficit model in the design and delivery of environmental education were highlighted This leads to an assertion that limiting environmental education initiatives to a micro approach is both inefficient (in that large amounts of resources may be used with very little result) and dangerous (in that the misconceived success of micro environmental education can lead to reproduction and repetition of ineffective environmental education). If this is the case, then a discussion of an alternative approach is warranted. The aim of this section is to discuss the origins of what I will term macro environmental education or the macro approach.

1.3.1 Macromarketing

To briefly re-cap, I stated in section 1.1.2 that macro environmental education aims to draw attention to what happens in the spaces between social actors. The term macro is used in this context in a slightly different way to the meaning of macro as an aggregate of individuals. It is used in a similar way to the term macromarketing. An understanding of the term macromarketing will help with an understanding of the term macro environmental education and what is meant by a macro approach. The origins of the term macromarketing can be traced back to the late Charles C. Slater. Slater, described as a 'humanist' by Nason and White (1981, p. 4), was concerned with the social consequences of marketing. His determination to highlight the fact that 'marketing is a part of the whole social process system rather than only a function within each firm or institution' (Slater and Jenkins, 1979, p. 374) and his use of the term macromarketing paved the way for a macromarketing sub-field within the discipline of marketing. Nason and White (1981, p. 5) make a key observation about Slater's view; they state that 'he felt that in any social system it was possible to

examine the impact of marketing on its environment and the impact of the environment on marketing.' The point being made here is that marketing is not a one-way linear process; it is the result of complex interrelationships between social actors.

Slater was concerned with the welfare of individuals as a result of the marketing system. Marketing exists largely within a consumer/ producer environment. Marketing affects the consumer (a social actor) and therefore the consumer environment and consumer welfare. As the consumer acts, buying or not buying products and services this environment is changed. The producer (another social actor) responds to the new environment by producing and marketing new or altered products and services that better fit the consumer environment. The consumer again responds to the new environment and the cycle continues. To illustrate how this cycle is driven we can consider just two examples of factors that have an impact on the dynamism of the interrelationships between social actors and shape the consumer/producer environment (there are many more). Firstly, differences in the disposable incomes of individuals are often displayed purposely by individuals through their conspicuous consumption. Secondly, businesses actively seek out and where possible mould the needs and wants of consumers. Following Slater's description; Macromarketing infers that if a firm or organisation is truly concerned with the quality of life of its customers and society as a whole, then it must take into consideration the wider societal and environmental impacts of its operations. The interrelationships between social actors are constantly changing, meaning that firms must remain aware of what its customers needs and wants truly are and then provide for them accordingly.

1.3.2 Complexity

The questions of how a society operates and how its future is shaped require highly complex answers, far beyond the scope of this thesis. What we can say is that advancements in complexity theory have made it clear that the determinants of the structure of society at any point in time are sensitive to the complex interrelationships between social actors. The behaviour of the individual is determined as much by the way they interrelate with other social actors in a macro way as it is by micro rational decision making. Societies are highly complex systems, and complex systems are inherently chaotic in their progression. A tiny change in the action of one factor can

have consequences within a complex system vastly different to the consequences that may have arisen as a result of that change being, for example, of a greater magnitude. This is why it is so difficult for economists to predict what is going to happen to the stock market with any great accuracy and why meteorologists have great difficulty making accurate long term weather forecasts. Dean (1997, p. 115) illustrates this through his discussion of 'sensitive dependence on initial conditions'. He asks the reader to imagine the record of the path taken by a ball released from the top of a mountain. He then asks them to consider a second run. If on the second run the ball was released from a minutely different point at the top of the mountain it would be highly likely to take a different path down the mountain. The conclusion that can be drawn from this mind experiment is that the resultant path of the ball is highly dependent on its initial conditions. The same concept can be extrapolated to economic and weather forecasts. In both these types of forecasting innumerable factors can have an affect on the development of the complex system. Observing, measuring and calculating how they will interact with other factors is an almost impossible task.

Returning now to social science, Ball (2004) is keen to point out that physics can help to deepen the understanding of social scientists in their study of the interrelationships between social actors. Ball (2004, p. 373) argues that:

> Sociologists have stressed their studies are concerned not with the individual but with the group. Yet, frequently they have been able to do little more than embed their subjects within a pre-existing set of cultural norms.

Through physics he argues that it is possible to 'examine how, through the interplay of personal choice and interpersonal exchange such norms exist' (Ball, 2004, p. 373). The success of this approach in predicting the behaviour of a highly complex system such as a nation's society is likely to be limited. Arguably though, this type of macro exploration of the interrelationships between social actors and the functioning of society is the best way to gain understanding of the way one complex system (the individual) behaves within another complex system (their society) and provides a starting point for effecting changes to both.

1.3.3 From micro to macro

The macro approach to environmental education, as I define it, descends from a discussion of the differing views of consumption and how these relate to sustainability. Dolan (2002), Connelly and Prothero (2003) and Schaefer and Crane (2005) highlight why how one views consumption can have a very big impact on how one views the best way to tackle unsustainable consumption. There are two main differing perspectives, which can be linked to the two different approaches to environmental education I have identified. Schaefer and Crane (2005, p. 79) firstly identify the view of consumption as a process of information processing and choice. Researchers who take this viewpoint will seek to gain an understanding of why an individual consumes certain goods and services by uncovering the individual psychological processes that lead to the choice being made. This echoes with the rationalistic model (figure 1.1) discussed in section 1.2, of action for sustainable development. Schaefer and Crane (2005, p. 79) point to many examples of research that seek to explain *green* consumption by uncovering the values, attitudes and motivations within the individual enacting the consumption. The natural progression from this sort of research is to suggest that sustainable consumption can be achieved by providing, through appropriate marketing, more information and greater awareness of the link between the consumption of certain goods and services and sustainable development. This very micro viewpoint and resultant micro marketing seems to ignore the existence of the knowledge-action gap discussed in section 1.2 and is linked very closely to micro environmental education.

Dolan (2002) in his critique of sustainable consumption was keen to discourage micro marketing as a strategy for encouraging sustainable consumption. Dolan (2002) points out that consumption is a macro process. A failure to recognise this and to seek to encourage sustainable consumption by building and appealing only to an individual's environmental values equates to applying a micro solution to a macro problem. Dolan's (2002) argument can be expanded to discourage the use of micro environmental education for the furthering of sustainable development. Dolan (2002, p. 170) criticises the 'static, individualistic and rationalistic tendencies' of current sustainable consumption marketing, arguing that they 'neglect the significance of consumption practices as embodying the relations between individuals.' In the same

way, micro education for the environment that relies on the rationality of individuals presented with information about the environment and environmental problems, neglects the fact that individuals are subject to competing rationalities (Gough, 2002). It also neglects the fact that information processing and choice may not solely drive an individual's consumer behaviour.

Schaefer and Crane (2005) present a detailed comparison of two differing views of consumption and how these relate to sustainability. Consumption, be it sustainable or unsustainable, is of great concern to environmentalists. A greater understanding of consumption and its drivers is, therefore, of importance to those who seek to lessen the negative impact of the consumption of goods and services on the progress of sustainable development. Schaefer and Crane (2005), as well as Dolan (2002) and Connelly and Prothero (2003) recognise that those who seek to influence patterns of consumption need to take into account how complex consumption is; they need to understand that it is much more than just the basic satisfaction of needs and wants; consumption is a social and cultural activity embedded within a complex social system. Chapter 2 will go into more detail with regard to consumption and the phenomenon of consumerism and its complexities. At this point it is enough to state that consumption is complex and that decreasing its negative impact on sustainable development requires an approach of more depth than that currently practised within micro environmental education.

1.4 Conclusion

Micro and macro approaches to environmental education differ in one essential way. A micro approach seeks to instigate a positive environmental change in spite of the cultural and societal setting it exists within. A macro approach, in contrast, takes a critical understanding of the cultural and societal setting as its starting point. Macro approaches seek to instigate positive environmental change by addressing these settings directly. The aim being to shift cultural and social norms so that the behaviour resulting from them is more in tune with sustainable development.

Chapter 2 will take a detailed look at the phenomenon of consumerism and how it relates to the pressing environmental concerns of our time. The history, development

and consequences of consumer culture will be examined in an attempt to illustrate why a shift in, or possibly a removal of consumer culture is the central task faced by macro environmental education.

Chapter 2 – Consumerism and the Root of Environmental problems - a macro perspective

The terms micro environmental education and macro environmental education were introduced in chapter 1. This chapter will discuss the phenomenon of consumerism, discussing how it has developed, its implications for the environment and how a critique of its origins offers a possible path for macro environmental education.

2.1 Consumerism is built on sand

The consumer society (Baudrillard, 1998) and its relentless overconsumption of materials and energy, contributes extensively to the escalating environmental problems of the twenty first century (Myers and Kent, 2004). This crisis is largely the result of the inclination of the majority of the consumer society to buy into the ideology, championed by those who have a vested interest in the nourishment of consumerism. Consumerism, however, is not a completely stable process, it can and has been challenged. The problem that those with a vested interest in sustaining consumerism have, is illustrated by the fact that disenchanted members of the consumer society are beginning to surface and rebel. These people are often called 'downshifters' (Hamilton and Denniss, 2005, p. 153). Although they remain, at present, a (growing) minority, their existence alone indicates that the underlying ideology propping up consumerism and the consumer society is far from watertight. This ideology is founded on the assumption (put simply here) and belief that greater material wealth brings greater contentment. I will argue in this chapter that this belief and this ideology need to be challenged. Challenging it could lead to the kind of change to modern western culture that is needed for sustainable development to become a reality.

2.2 Consumption and the environment

Macro environmental education deals with the complex interrelationships of all social actors to firstly, understand some of the reasons why these interrelationships work; secondly, to critique the drivers of these interrelationships; thirdly, to remove the drivers that lead social actors to behave in a way that is damaging to the environment; and fourthly, to promote interrelationships that have a net positive impact on the

environment. In a consumer society consumption of energy and material resources is a major contributor to the complex interrelationships between social actors (Dolan, 2002). To illustrate this we can look at the actions of social actors in relation to consumption and the environment. The actions of social actors are influenced by decisions surrounding what they consume, how they consume, where they consume, why they consume, with whom they consume, the quantity and quality of what they consume and so on. Much postmodern thought on consumption argues that the decisions made and actions taken, by social actors, send messages to other social actors (Featherstone, 1991). This in turns influences their behaviour, thus feeding and sustaining the relationship. Predicting the effects of these influences is very difficult, and this is why the interrelationships between social actors can be described as highly complex.

Consumption, or more correctly, overconsumption of energy and material resources is at the heart of most, if not all, the environmental problems the planet currently faces (Myers and Kent, 2004). Consumption and all the behaviours that surround it are also at the heart of the modern consumer society and they are central to the interrelationships between social actors (Dolan, 2002). Consumption need not be at the heart of these interrelationships, and it may be beneficial for individuals, society and the environment if it is not (De Graff *et al.*, 2002; Hamilton and Denniss, 2005; Layard, 2005). Sections 2.3 to 2.6 of this chapter will discuss the importance of consumption to the interrelationships between social actors. In this section the focus is on clarifying the relationship between consumption and the environment to highlight the importance of focusing on the issue of consumerism.

2.2.1 Population, technology and social interrelationships

The global environment is a complex interrelating system of which the human population is an increasingly influential factor. As the human population grows, so too does its impact on the environment. It is, however, not such a simple relationship. For contextualisation we must firstly, briefly, deal with this common misconception. By using tools such as The Ecological Footprint ('The Ecological Footprint is a resource management tool that measures how much land and water area a human population requires to produce the resources it consumes and to absorb its wastes under

prevailing technology' (Global Footprint Network, 2006)) we can see that contributions to environmental problems are inequitable across the globe with inhabitants of the richer nations having much larger footprints than those in poorer regions, despite having smaller population growth rates. The problem, therefore, is not simply one of a rapidly expanding population, it is a problem of the way this population behaves.

Feeding, housing and reducing the environmental impact of a global population that is set to increase to 9 billion by 2050 (Naish, 2008) are huge challenges. Meeting it within the ideology of a spreading consumer society will require either remarkable technological solutions or radical changes to the way society interrelates (or a combination of the two). Assuming that technology will advance to a level that will allow the materialistic consumer society to persist within a framework of sustainable development is, I would argue, a micro view. In fact, it could be seen as the ultimate end result of a micro approach, with technology allowing the consumer society to persist under a fitting definition of sustainable development. Much progress has already been made through technology. Relative to the burning of fossil fuels, hydropower, wind farms and solar power all generate cleaner electricity. Also, much progress has been made in dealing with industrial and domestic pollution, as well as waste disposal. Whether technology does advance to a sufficient level to deal efficiently (in environmental terms) with the consequences of the consumer society remains questionable; assuming that it will is, in my view, a huge risk to take.

A cautious approach is to take the second option; radical change to the way society interrelates. This approach does not conflict with continuing to research and develop technological solutions; it complements it. Changing the way society interrelates, so that it uses up less energy and creates less waste and pollution, lessens the problems that technology needs to find solutions for. Leaving society to interrelate in a way that sustains and promotes a materialist consumer society increases the problems that technology needs to deal with. While technology may advance to deal with these problems, it must be remembered that, under the ideology of a consumer society, technologies may also advance to worsen the problem. For example, as new ways of computing are invented and delivered to the mass market, they render their

predecessors redundant, the result being that outdated computers end up as waste. The faster the technological advancement, the sooner the outdating and the bigger the waste problem becomes (unless of course waste management technology can be advanced to a level that allows the waste created to be recycled, reused or disposed of in a way that has no net negative impact on the environment). It has also been argued (for example: Slade [1996]) that manufacturers engage in the practice of planned obsolescence, lowering the lifespan of products to make outdating inevitable and ensure the existence of markets for their new products. If technological solutions are to help ease our environmental problems, they will be helped by social interrelations that complement them, rather than ones that do not.

The consumer society and its associated materialism, inevitable waste and environmental problems is currently spreading as more and more of the growing global population aspire to join it. For example, Maslin (2004, p. 119) estimates that if India and China achieve their aim to have the same car to family ratio as Europe, there will be an extra billion cars in the world. According to Dolan (2002) the materialism observable within the individuals of a consumer society results from the way social actors interrelate. A macro approach is to directly address the social interrelations that breed materialism in an attempt to reduce its importance in society. Thus, Sagoff (1988, p. 39) states that:

> In view of the doubling of world population that demographers expect over the next fifty years, there surely will be more than enough people on earth to destroy Nature and imperil the environment. Indeed, even the five or six billion of us alive today could do that. Accordingly, we must look to changes in our political, economic and social relationships – as well as to more benign technologies - if we are to keep any remnants of nature intact for future generations.

By adding to this quote we can interpret that Sagoff (1988) is inferring that we need to shift away from a consumer society, in a macro way, allowing technological solutions to complement this effort. Relying on technological solutions alone to keep nature intact in spite of current economic, political and social circumstances is a micro response. I have added my comments to the quote in brackets below:

> In view of the doubling of world population that demographers expect over the next fifty years, there surely will be more than enough people on earth to destroy Nature and imperil the environment [if we continue to interrelate in the

way we do today]. Indeed, even the five or six billion of us alive today could do that. Accordingly, we must look to [fundamental macro] changes in our political, economic and social relationships – as well as [not only] to more benign technologies – if we are to keep any remnants of nature intact for future generations. (Sagoff, 1988, p. 39)

So, if it is the behaviour of a growing population, driven by how its social actors interrelate that is the root cause of environmental problems, not growing population *per se*, we need to illustrate the consequences of this behaviour to provide a justification for challenging it. These can all be linked to a consumer society that promotes materialism.

2.2.2 The root of environmental problems

Figure 2.1 illustrates, very simply, the life of one unit of a resource from its natural state through the processes of resource extraction, product production, distribution, consumption and finally wastes. Although somewhat simplistic and lacking in detail with regard to feedbacks such as the recycling of waste, this diagram does show some of the ways a material product impacts on the environment. Figure 2.1, therefore, illustrates some of the key impacts humans have on the environment. There is no need here to go into great depth about the impacts of humans on the environment. This is covered in numerous textbooks (Goudie, 1993; Hardy, 2003; Pickering and Owen, 1997; Maslin, 2004).

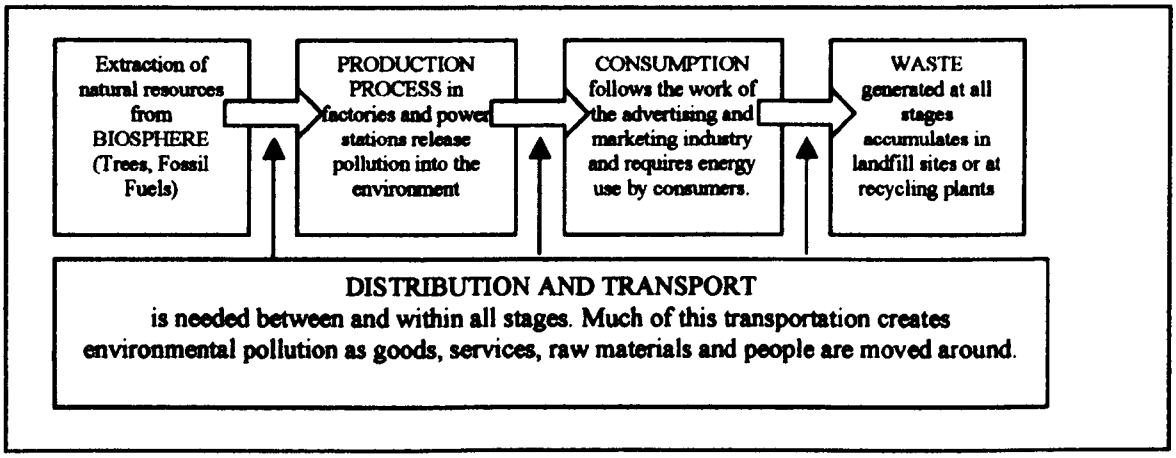

Figure 2.1: Journey of one unit of natural resource (adapted from Jackson, 1996, p.3)

Environmental problems such as air and water pollution, soil erosion, climate change and habitat destruction arise during the journey of one unit of natural resource. The

reason they take this journey is that at some point they are bought and sold in the marketplace. Put simply, if there was no demand for their consumption they would not be extracted from the biosphere, transformed through production processes, distributed to the market, consumed and discarded. As well as dealing with the consequences of the production and consumption of goods and services, I would argue that the environmental and sustainable development movement should look closely at consumption itself.

'Reduce, reuse, recycle' is a much-used slogan in the environmental movement. By understanding consumption, most importantly what drives consumption, environmental educators will be in a stronger position from which to help the public engage in the most effective of these strategies: reduction of how much of the earth's natural resources they use. However, reducing the quantity of goods and services a person consumes is a far from simple task. The existence of the knowledge-action gap observable in many environmental education initiatives that seek to use the environmental concern of individuals as a motivating force for them to reduce their consumption illustrates how complex the drivers of consumption are. Consumption occurs as a result of a hugely complex assimilation of factors; no two consumption decisions are ever likely to be based on the exact same decisive factors. Environmental concern is just one input into the decision making process. Micro environmental education is usually designed to strengthen this environmental concern to a level of high enough importance in the decision making process, that the decision made is the right one for the environment. As explored further in chapter 4 (section 4.3.2), competing inputs often hold greater importance in decision-making; individuals have plural rationalities (Gough, 2002). If the environmental importance is not high enough, the factors that motivate the individual to consume win through and the good or service is consumed. Macro environmental education looks at consumption and consumer culture directly, questions why consumption occurs and uses this as a starting point for its efforts to reduce consumption.

This sort of macro education has potential, as it can be strongly argued that the consumer culture that is central to all environmental problems has many flaws. Consumption and more importantly, over consumption is a function of complex

interrelationships between social actors (Dolan, 2002) and does not necessarily benefit individuals and society in the way it promises too.

I have argued that consumption, consumerism, materialism and the consumer culture that drives them are the most important issues for environmental education to address. The remainder of this chapter will look in detail at the consumer culture. By understanding this culture in detail it is possible to identify how society can make a macro shift to a newer more sustainable culture, less reliant on consumer goods and services, and interestingly, a potentially happier, safer and healthier society.

2.3 The Consumer Culture

Macro environmental education can draw heavily on the common misconception that exists within the consumer culture. Put simply, this misconception is that increasing material wealth correlates with increasing general happiness. Belief in this myth is strong in a consumer culture and it is reinforced by the complex interrelationships between social actors that Dolan (2002) identifies. Macro environmental education recognises these interrelationships and how they shape modern western culture. Only by understanding the interrelationships that perpetuate the material wealth = happiness myth can environmental education begin to initiate the shift in how social actors interrelate that is necessary to develop a sustainable society. The core difference between a sustainable culture and the current consumer culture is that in a sustainable culture individuals will want far fewer goods and services, therefore consuming less. If the material wealth = happiness myth persists any (micro) efforts that seek to encourage individuals to consume less will be in opposition to the belief within individuals that consuming more will make them happier.

This section will look at why the material wealth = happiness belief exists, how it affects individuals, communities and society, why it perpetuates and how a questioning of it has the potential to remove its core position at the heart of the modern western culture.

Kasser *et al.* (2004) describe how individuals who hold the belief that the possession of material goods and the spending of money on financially expensive and exclusive

services will maximise their happiness or utility, as having a high materialistic value orientation (MVO). They define MVO as follows: 'an MVO involves the belief that it is important to pursue culturally sanctioned goals of attaining financial success, having nice possessions, having the right image, and having a high status' (Kasser *et al.*, 2004, p. 13).

The reasons why individuals can develop a high MVO are complex; I will deal with this first. The consequences of having a high MVO will be discussed second. It is, however, difficult to make this separation coherently; overlap exists as will become clear. The perpetuation of a materialistic, consumer culture is one of the consequences of the belief in the positive relationship between material wealth and happiness; a positive feedback exists. As consumer culture strengthens, the strength of the MVO of individuals increases, which in turn further embeds consumerism in society. The reasons why the consumer culture persists will come out of this discussion.

2.3.1 Entering the age of Affluenza

Human beings have always needed and desired material objects. A quantity of material objects is in fact wholly necessary for humans to survive. It would not, however, be controversial to state that the majority of humans in the western world now acquire a quantity of material goods that far exceeds those that they need for basic survival. If we accept that most humans now live in a culture dominated by consumption, we must ask why this is.

In response to this question De Graff *et al.* (2002) introduced the term 'Affluenza' which has since been adopted by those who seek to further understanding of this modern condition (Hamilton and Denniss, 2005; James, 2007). Affluenza is defined by De Graff *et al.*, (2002, p. 2) as:

> a painful, contagious, socially transmitted condition of overload, debt, anxiety, and waste resulting from the dogged pursuit of more.

Hamilton and Denniss (2005) draw on two definitions of affluenza. Firstly, they adapt the definition given by affluenza.org (2004):

> Af-fl-en-za n. 1. The bloated, sluggish and unfulfilled feeling that results from efforts to keep up with the Joneses. 2. An epidemic of stress, overwork, waste

> and indebtedness caused by dogged pursuit of the Australian dream. 3. An unsustainable addiction to economic growth.

Secondly, Hamilton and Denniss (2005, p. 7) draw on the 'clinical definition' offered by Jessie O'Neill:

> The collective addictions, character flaws, psychological wounds, neuroses, and behavioural disorders caused or exacerbated by the presence of, or desire for money/wealth... In individuals, it takes the form of a dysfunctional or unhealthy relationship with money, regardless of one's socio-economic level. It manifests as behaviours resulting from a preoccupation with – or imbalance around – the money in our lives.

More recently British psychologist Oliver James (2007, p.vii) has offered a further definition:

> The Affluenza Virus is a set of values which increase our vulnerability to emotional distress. It entails placing a high value on acquiring money and possessions, looking good in the eyes of others and wanting to be famous.

The key word in the James (2007) definition is Virus. He sees affluenza as a virus; having a high MVO can therefore be seen as a symptom.

De Graff *et al.*, (2002, p. 147) argue that we are living in an 'Age of affluenza'. The first task here, then, is to discuss what led us to this age of affluenza.

Kasser *et al.* (2004) suggest how economists, historians and political scientists might interpret the rise of consumer culture. They reason that economists might argue that this culture is the natural consequence of the capitalistic economic system most westerners live in. Historians may argue that consumer culture emerged from the industrial age, pushed forward by advancements in advertising and the will of the captains of capitalism. Political scientists might suggest that it is the close relationship between governments and big business that consistently encourages individuals under their influence to consume. Aspects of all these interpretations are likely to partly explain the existence of a consumer culture. However, more depth of analysis is needed if we are to understand what drives consumption by individuals and why a consumer culture exists. Kasser *et al.* (2004, p. 12) argue that, essentially, 'individual humans simultaneously create and are created by this culture.' Expanding on this, they state that:

> In order for some dimension of a culture to exist, it must be supported by individual human beings who follow the beliefs and practices of that culture; at the same time, the individual humans who support that aspect of culture are themselves shaped by the beliefs and practices they have internalised.

These relationships are what Dolan (2002) describes as the complex interrelationships between social actors. The behaviours of social actors (individuals / government bodies / businesses / charities etc) are influenced by the social and cultural environment they find themselves in. Their own behaviour in turn influences and shapes this environment. Current interrelationships between social actors are, according to De Graff *et al.*, (2002), Hamilton and Denniss (2005) and James (2007), spreading the affluenza virus and perpetuating the consumer culture.

2.3.1.1 The Commodity-sign relationship

Within consumer culture we observe large numbers of people suffering from affluenza, a direct result of having a high MVO. Within consumer culture, our social interrelationships have converted us into anxious consumers whose buying habits are threatening the natural environment, the strength of our social and family relationships and in some case our mental health. Before exploring what led us to this consumer culture one crucial thing needs to be understood, that is the role of goods and services as signs.

Status symbols provide the most familiar example with which to illustrate this. An anonymous quote begins chapter 2 of Hamilton and Denniss's (2005) book on affluenza, it reads: 'In rich countries today, consumption consists of people spending money they don't have to buy goods they don't need to impress people they don't like' (Anon, in Hamilton and Denniss, 2005, p. 19). If this is the case, we need to ask why? The answer is partially found in the understanding of the perceived need within individuals to achieve the social status they desire. Possession and display of material goods is central to how people in a consumer society communicate their status to others. In this way commodities take on the role of a sign. Featherstone (1991, p. 15) argues that 'sign and commodity have come together to produce the 'commodity sign'.' The sign value of a commodity takes on autonomy abstract from the commodity itself. Owning an object, be it a car, a house, a bottle of wine, a coat, a

mobile phone, or anything else visible to others sends a messages to observers. In a consumer society people become defined by what they own and to an extent what services they use. The social status an object bestows upon its owner is dependent on the associations that are made with the object in question. The autonomy of the sign value of a commodity means that its value (in social status terms) can be manipulated by the media and advertising. Individuals with a strong MVO believe that, to achieve the high status that they believe is important, they must be financially successful and display this by acquiring and displaying material goods of high value (status symbols) that communicate this to others.

Manufacturers of status symbols are very aware of the commodity-sign relationship. Through the media and advertising, commodities gain and lose their significance as status symbols. Goods that position people socially are termed 'marker goods' by Featherstone (1991, p. 18). The power, or ability, of a particular marker good to position its owner at the desired tier of the social hierarchy is not fixed. A marker good dates and veers in and out of fashion. Because of this, the message sent to others by its ownership, display or use varies over time. This means that individuals have to keep consuming new goods to maintain their chosen (apparent) social status. Thus, as Featherstone (1991, p. 18) explains:

> The constant supply of new, fashionably desirable goods, or the usurpation of existing marker goods by lower groups, produces a paperchase effect in which those above will have to invest in new (informational) goods in order to re-establish the original social distance.

This is an example of how commodity sign values are used as communicators within the complex social interrelationships between social actors helping to shape and perpetuate a culture.

2.3.1.2 Consumerism and spiritual impoverishment

We now need to ask why commodities have achieved such a lofty status as modes of communication. The answer to this question is far from certain. It has been a gradual rise, but I would suggest that a central factor is the breakdown of other forms of communication. It is of course entirely possible that the development of commodities as signs has had a part to play in the demise of more traditional communication. We have here a chicken or egg situation! Featherstone (1991) offers an explanation as he

discusses the marginalisation of religion and the concurrent centring of the cultural dimension in social life. Featherstone (1991, p. 112) argues that:

> The progressive demise of the influences of religion in social life, which can be related to the processes of industrialisation, rationalisation, urbanisation and social differentiation, has been held by some to have provoked a peculiarly modern crisis of meaning or crisis in the effectiveness of the social bond, which could only be adequately allayed through the creation or emergence of some new meaning complex or *morale*.

He argues that the rise of the consumer culture meant that religion became just another commodity to be consumed in the marketplace. The marginalisation of religion as a sphere within which individuals can seek meaning has meant that individuals within a consumer culture have searched for meaning, direction and purpose to their lives in different spheres. Featherstone (1991, p. 113) argues that culture grew with 'new tastes, dispositions, experiences and ideals publicized through advertising, the motion picture industry, the fashion and cosmetics industries, mass circulation tabloid newspapers and magazines and mass spectator sport.' The result was a new model for the lifestyle of individuals: a hedonistic one. Featherstone (1991, p. 114) goes on to state that:

> It is often alleged that consumerism led to spiritual impoverishment and hedonistic selfishness with its 'live now, pay later' philosophy which ran directly counter to the ascetic regimes, industry, foresight and thrift which religion in general, and the puritan heritage in particular, taught.

This is echoed by De Graff *et al.* (2002, p. 126) who quote Calvin de Witt, a Christian theologian and environmental scientist, who argued that consumer philosophy is in direct opposition to spiritual teachings. De Witt states:

> Consume more, then you'll be happy. Remain discontented with everything so that you'll continue to strive for more and more. That's the message we hear. But the Biblical teaching is to be content with what you have, honor God, take care of creation, give your bread to the hungry, then joy comes as a by-product of service. If you take those teachings and just write their antithesis, you find yourself describing our current consumer society.

We can think of modern consumer culture as an amalgamation of many cultural spheres that are constantly reprocessed as the actions of hedonistic individuals re-shape them in search of new entertainment, experiences and ideals to pursue and follow. The cultural spheres that they engage in, in turn, shape an individual. Often

they express their level of bond to each sphere and who they are through their consumption decisions. As communication has changed, the way we relate to each other has changed. Spiritual impoverishment and the decline in the internalisation of the moral underpinnings of religion, coupled with a rise in hedonistic values championed by the growing consumer culture, has meant that the values we communicate to each other have also changed.

The marginalisation of religion is likely to be both a cause and consequence of the consumer culture. According to De Graff *et al.* (2002) the erosion of the moral underpinnings of religious orders has been a gradual process as individuals have been drawn towards a desire to accumulate money and wealth. Hebrew prophets, Christians, Buddhists, Quakers and ancient Greek philosophers such as Aristotle are all in agreement that the search for happiness through the accumulation of monetary wealth and materials is a never-ending and eventually fruitless one.

2.3.1.3 The birth of a project – striving for happiness

The search for happiness through the accumulation of material wealth was facilitated by the technological developments of the industrial revolution. During this period factory processes became increasingly efficient which led the human race to a choice, take a path of luxury or simplicity; choose money or time? The choice made seems to have been luxury and money; initially this was because of necessity. Human beings need a certain amount of goods and services for mere survival. The journey along the path to material well-being was unavoidable and both a cause and consequence of a growing population. Adam Smith's identification of the phenomenon of the 'invisible hand' had shown how individuals working in their own interests, work towards the interests of society as a consequence. This is morally justifiable so long as the work done by individuals for their own sake does not, as a consequence, impair the welfare of society as a whole. Solomon *et al.*, (2004, p. 143) explained how 'for Smith... enlightened self interest can only properly exist (in the sense of being morally justified) when complemented with concern and sympathy with others.'

It is clear that human beings need a certain level of goods and services to physically survive and lead a comfortable and fulfilling life. How we come to define this level is

highly problematic (a major problem for standard definitions of sustainable development). Beyond the goods and services that people need simply to survive, defining what we actually need is very difficult. Abraham Maslow's famous hierarchy of needs is a useful place to start (Fig 2.2).

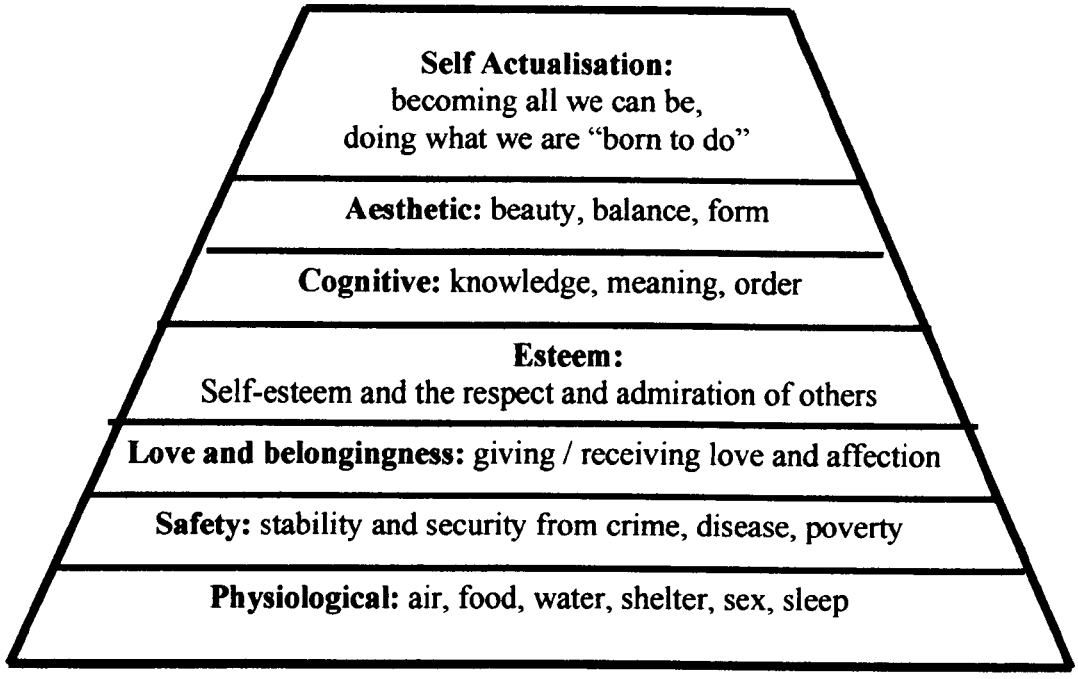

Figure 2.2: Maslow's Hierarchy of needs. (De Graff *et al.*, 2002, p. 113)

The free market worked well to get people to a point where their 'safety' and 'physiological' needs were met. Individuals had enough comfortable beds, clean water, shelter, food, healthcare, etc. They felt safe from crime, disease and poverty. It was almost as if *the project* was finished, humans in the western world, had enough goods and access to enough services to meet their needs. When Maslow died in 1969 he concluded, according to De Graff *et al.* (2002, p. 113) that 'most Americans had met the basic physical (the only ones that are primarily material) and security needs, and had progressed to at least the "love and belongingness" rung of the hierarchy.' It is safe to assume that most of the populations of the western world were not far behind. It has since become clear that around this time something significant was happening. Figures 2.3 and 2.4 suggest that the once close correlation between Gross Domestic Product (GDP) and happiness was slowly beginning to unravel. Up until this point happiness had grown in line with growth in GDP due to the impact access to material goods and services was having on general well-being and living standards.

Consumption of these goods and services was driving economic growth and happiness was on the increase, *the project* was working. Layard (2005) shows how despite increases in GDP (economic growth) in the United States between 1945 and 2000 the percentage of people who describe themselves as 'very happy' did not rise.

Figure 2.3 shows how, as Layard (2005, p. 29) puts it, 'in the United States people are no happier, although living standards have more than doubled. There has been no increase in the number of "very happy" people, nor any substantial fall in those who are "not very happy".' Hamilton and Denniss (2005) provide a graph (figure 2.4) showing a very similar trend in Japan, Life satisfaction has not risen in line with income growth.

Figure 2.3: The relationship between income and happiness in the United States (Layard, 2005, p. 30)

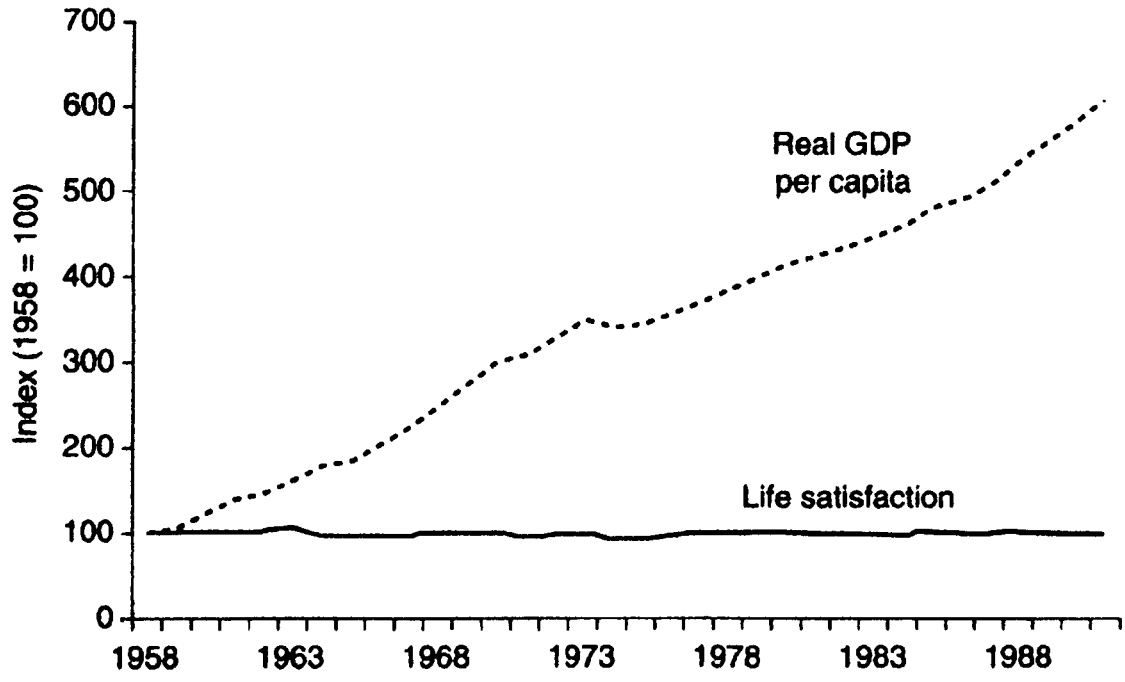

Figure 2.4: Life satisfaction and income growth in Japan, 1958-1992 (Hamilton and Denniss, 2005, p. 64)

According to Layard (2005) this trend is very similar in other more economically developed countries and he provides data supporting this for the UK (Layard, 2005, p. 31). Figures 2.3 and 2.4 suggest that economic growth and growth in happiness no longer form a positive relationship; a *divergence* has occurred. This divergence happens at different points in times depending on economic circumstances. Generally speaking it can be said that the rich reach this point earlier than the poor, on both an individual level and societal level. Although the graphs in figures 2.3 and 2.4 show a clear divergence between material wealth and happiness, it must not be automatically assumed that greater income does not bring greater happiness. Any measurement of happiness is likely to be quite subjective; Marmot (2005) contends that happiness can increase with income and his argument is worth exploring.

Marmot is concerned with the subjective measurement of well being. He argues that money does bring happiness stating that 'the higher the social position the greater the level of happiness' (Marmot, 2005, p. 86). In a society characterized by a large number of people who have a high MVO (materialistic value orientation) this may

well be true. It really depends on how they (as individuals) define happiness. He argues that we have an apparent contradiction (Marmot, 2005, p. 86).

> As a country gets richer over time, the rise in average income does not go along with an increase in happiness [see figures 2.3 and 2.4]. Comparing individuals at one point in time, within a country, the relation of income to happiness is quite clear. H.L. Mencken puts it aptly: 'a rich man is one who earns more than his wife's sister's husband'. Absolute level of resources is not the crucial influence, relative position is. Happiness levels are determined by where we are in relation to others. If everyone in the society is richer, some will still have more than others. The financially favoured are happier.

Hamilton and Denniss (2005) recognise this and agree that this is true in consumer societies. Individuals in consumer society seem to act as though more money means more happiness. The problem is they can never have enough, because someone else always has more. Hamilton and Denniss (2005, p. 58) argue that 'when people reach the financial goals they have set for themselves they feel no happier.' This is because, as Marmot (2005) contends, in a consumer society relative wealth is more important than absolute wealth.

Marmot (2005), I would argue is correct in his assertion that happiness levels are determined by where we, as individuals, are in relation to others. The way we interrelate with other individuals is crucial to our happiness; we have an internal need for respect and identity. Solomon *et al.* (2004, p. 140) in a discussion of free-market versus communist economics point out that humans have internal needs to stick out as well as fit in to society, they state that:

> a proper understanding of human nature recognizes the simultaneous desire to pursue individual self-interest and competitively distinguish ourselves as superior to those around us (to "stick out") and to cooperate with others as members of a broader social order that serves our social interests (to "fit in").

De Botton (2004) describes the innate needs within individuals to stick out and fit in and to acquire a social status as *Status Anxiety*. This anxiety is greater in some than others. I would propose that in the modern consumer culture it can be relieved in two ways. Firstly it can be relieved within an individual's own cultural domain (their workplace/social circle etc) by building our identities and respect from others through what we do. Marmot (2005) analyses himself as an academic and observes how his happiness is affected by how one of his academic papers is received, whether or not he

gets a research grant, whether he is invited to a meeting, elected to a professional body or simply whether his ideas are taken seriously. This is just one example; it is possible to think of many other cultural domains and how identity and respect is built within them. Outside of an individual's chosen cultural domain it may be harder to construct identity and gain the respect of others. Marmot (2005) for example also observes how his salary acts as an opinion former amongst others. One would suspect that Marmot would be more interested in the respect and identity he receives as a result of his academic work, rather than his salary.

In a consumer culture, characterised as being a hugely diverse collection of dynamic cultural domains, respect is sought, and social status fought for, among a hugely diverse range of individuals with their own identities within their own cultural spheres. It would be almost impossible to understand the intricate details of all of these different cultural spheres. Because of this, it is hard for an individual to translate their identity within their chosen cultural sphere into an identity in a wider cultural setting. The result of this is that commodities are used as signs to communicate identity. Financial position and material wealth have become the ways in which individuals create their identities within a wider culture and put themselves up for social comparison. Marmot, perhaps, is fortunate to have the intellect and opportunity to form his identity and gain respect through his academic work. Others are not so lucky. Marmot (2005) points out, referring to Thomas Veblen's 1899 work, that it is our concern with our relative position in society (our social status), which leads to conspicuous consumption driven by the sign-commodity relationship (see 2.4.4). As the power of commodities as communicators has increased, so too has conspicuous consumption and a desire for material growth.

In a modern consumer culture the prevalence of a high number of people with high MVOs has meant that social status, in a wide cultural sense, is most easily communicated through displays of material wealth. I would argue that if you asked any individual if they would like others to form opinions of them based on their material wealth only, they would shiver at the idea. They would, one could argue, much rather others formed opinions of them based on their personality, their sense of humour, the value of their everyday activities to the achievement of meaningful goals

and so on. In a consumer culture in which communication is based on the interpretation of the consumption habits of the individuals within it, the resulting situation is one in which an individual's social identity is dependent on what they spend their money on. How much money an individual has spent (or is perceived to have spent) often defines, more than anything else, their social status. Although it may not be true for all, in a consumer culture, individuals create their identity through their consumption.

The function of commodities as communicators of social status has a large role to play in creating a desire for material wealth among individuals. Producers of goods and services are well aware of this and feed this relationship by producing goods and services that promise to deliver the social status that the individual craves. As discussed earlier, the need for love and belongingness is largely a non-material one. A desire for social status falls within this need. Individuals feel the need to belong within their chosen cultural spheres and want to feel loved and respected as distinct individuals within it. Because modern culture is so diverse, there may be a problem with how these needs are met. Individuals have been led to believe that material goods will meet these needs and it seems that as long as those around them believe this too they are happy when their wealth is relatively greater than those they compare themselves to. This desire for relative wealth is one of the reasons why individuals constantly strive to sustain and improve their material wealth. The consequences of this are increases in status anxiety built on an unquenchable appetite for more money to buy more things to achieve the social status required. In a cultural setting in which material wealth is a pre-requisite for social status, the long hours, short holidays and sacrifices in other areas of life are viewed as a necessary means to an end.

The constant striving for money to buy material goods and services is not, however, solely driven by a desire for a social status. It may, for some be only a minor driver. Material goods and services have, in the 'age of affluenza' (De Graff *et al.*, 2002), been positioned as ways to meet most of the non-material needs of individuals, with the result that individuals engulfed in consumer culture have become characterised by their high MVO.

The question, then, of why modern western society has continued to increase its consumption of material goods and services, without apparently getting any happier is a hugely important one. Put simply, in a consumerist society, non-material needs for love and belonging, esteem, cognitive, aesthetic (which all lead to self actualisation) can, it is perceived, be met by material goods and services. The captains of commerce are keen to continue *the project* of improving well-being materially and so design new goods and services not only to make individual's lives *more* comfortable and safer, they also design, market and produce goods that promise to meet the higher (more emotional) needs. How this is done will be discussed in the next section.

2.4 An ongoing project – sustaining economic growth

De Graff *et al.* (2002) argue that the 'age of affluenza' began in America with the election of Ronald Reagan as U.S. President. The cautious conservative presidency of Jimmy Carter had been overwhelmed by Reagan's promises to remove the excessive economic controls of government and his strong advocacy of the free market. Reagan's supply side economics dubbed *Reaganomics* was mirrored by the newly elected UK Prime Minister Margaret Thatcher. Western society on both sides of the Atlantic entered the 1980s optimistic that they could shop, shop, shop. The increasing importance of television, shopping malls and the availability of instant money on credit all combined with the decade's fastest growing industry, advertising, to characterise the 1980s as 'the decade of demand creation' (De Graff *et al.*, 2002, p. 148). Reagan believed passionately in the power of individual initiative and the phenomenon Adam Smith described as the invisible hand. In his first inauguration speech President Reagan argued that 'In this present crisis, government is not the solution to our problem; government is the problem' (Reagan, 1981). The emphasis was on economic growth driven by profit maximising private companies in a free market system unhampered by government intervention. This economic growth was to be powered by the unrestrained conspicuous consumption of individuals. As De Graff *et al.* (2002, p. 148) state, 'The message of Reagan's first inaugural ball and Nancy's $15,000 dress was clear: It's cool to consume and flaunt it.' James (2008, p. 2) dubs this Thatcherite and Reaganite Neo-Conservatism 'Selfish Capitalism' and maintains that it continues to dominate mainstream politics in the UK. This situation is certainly

not unique to the U.S. and the U.K, Hamilton and Denniss (2005, p. 7) in their discussion on the effect affluenza is having on Australia state that:

> Neoliberal economic policies have set out to promote higher consumption as the road to a better society. All the market-based reforms in the last two decades have been predicted on the belief that the best way to advance Australia's interests is to maximise the growth of income and consumption.

For a free market system, based on little government intervention and maximum economic growth, to work one major thing is needed; a population of materialistic consumers in a consumer culture.

We now need to consider how individuals become, and stay, materialistic within this consumer culture. It must be remembered that the causes of consumption, and the consequences of it, are often intertwined through a series of positive feedbacks. Consumption of one thing can lead to consumption of something else and so on. In the next section I will outline some of the many theories that seek to explain how individuals come to be materialistic, develop a high MVO and become sufferers of affluenza. The aim is to show why we have an ongoing project.

2.4.1 Demand Creation

Continued economic growth and the perpetuation of 'the project' results from consumption of goods and services by society. To sustain this project, demand for consumption must be stimulated. It is important that we look here at how this is done.

This section could be written in textbook fashion as a guide for those employed in marketing. I am interested here, however, in outlining what marketing does, not explaining how to do it. It is useful to turn here to psychology.

> The working lives of Australia's best-paid psychologists are not devoted to treating the distress of people with psychological problems: they are devoted to developing ways of increasing consumers' insecurity, vulnerability and obsessiveness. They work in marketing. (Hamilton and Denniss, 2005, p. 36)

Psychologists themselves have recently begun to question this anomaly. Kasser and Kanner (2004) edit a book titled *Psychology and Consumer Culture*. In its introductory chapter they ask a very important question: 'Why has consumer culture been generally ignored in psychology?' (Kasser and Kanner, 2004, p. 4). One reason

they point to is a telling and slightly troubling one. 'A... reason why psychology has overlooked the culture of consumption can be attributed to its collusion with this very culture' (Kasser and Kanner, 2004, p. 4).

Psychologists have had a long historical connection with consumer culture. Adam Curtis' documentary, Century of the Self (2002) identifies the American nephew of Sebastian Freud, Edward Bernays, as the man who invented public relations. Century of the Self (2002) argues that:

> Bernays was the first person to take Freud's ideas about human beings and use them to manipulate the masses. He showed American corporations for the first time how they could make people want things they didn't need by linking mass produced goods to their unconscious desires.

Bernay's observed the use of propaganda during and immediately after the First World War. He was impressed by its ability to persuade the masses at the 1926 Peace conference in Paris that his client, American President Woodrow Wilson, was a 'liberator of the people' (Century of the Self, 2002). On his return to the USA, Bernays decided that 'if you could use propaganda for war, you could certainly use it for peace' (Bernays, 1991, [interview in Century of the Self, 2002]). Due to the negative associations with the word propaganda, Bernays changed its name to public relations. He established himself as a public relations counsel in New York City. Bernays learned from the writings of his uncle Sigmund Freud on psychoanalysis and wondered if he could make money by manipulating the unconscious. He soon discovered that he could. The key insight that Bernays had was that simple provision of information was often not enough to get people to change their behaviour. Bernays, drawing on Freud's theories, recognised that by appealing to the irrational emotions of individuals he could sell them products that rationally they did not need. Century of the Self (2002) discusses Bernays' most dramatic experiment with the masses. Bernays was employed by the American tobacco corporation to persuade women to smoke. At the time it was taboo for women to smoke in public, Bernays broke down this taboo. To do this he, firstly, consulted a psychcologist to discover what cigarettes mean to women.

Psychologist A. A. Brill told Bernays that cigarettes are a symbol of the penis and therefore male sexual power. Brill told Bernays that if he could find a way to link cigarettes with challenging male power then women would smoke, because as Century of the Self (2002) puts it 'they would have their own penis.' Bernays decided to engineer an event and ensured that the media would be there to witness it; he informed them that suffragettes were planning to stage a protest at New York's annual Easter day parade. At his given signal he persuaded a group of rich debutants (posing as suffragettes) to dramatically light up their cigarettes and declare those cigarettes 'Torches of Freedom'. Bernays' planned public outrage subsequently followed. The slogan, 'Torches of Freedom', ensured that the majority of the public would support the standpoint of Bernays' girls. The result was a social acceptance of female smoking and a rise in cigarette sales.

The Wall Street Crash and the consequent decline in consumption meant that Bernays and public relations temporarily fell out of favour. However, as the economy recovered, public relations advanced and grew, drawing on the findings of psychologists and psychoanalysts. As a result thousands of psychologists have subsequently become employees of marketing and advertising firms whose aim is to influence, direct and increase the consumer behaviour of individuals. If the overall reason for studying the psychology of human beings is to help psychologists help individuals maintain a psychological well-being, which one would hope it is, the study of the psychological health problems associated with consumption should, in a modern consumerist world, be a high priority. The fact that it is not suggests that the majority of psychologists are less interested in critiquing consumer culture and more interested in supporting a consumer culture that provides them with regular employment. The situation that appears to have arisen is a battle between two sets of psychologists.

In 2004, psychologist Oliver James travelled the world to seek out examples of people who have been deeply affected by affluenza, a condition that he terms as a virus. The result was a book published in 2007 that outlined his findings and sought to explain how people contract this virus and show the effect this virus was having on them and by extrapolation the majority of citizens in the western consumer world. The James

book (2007), written as an attempt to help individuals recognise the hold that affluenza has over them and how they can weaken that hold to improve their psychological well being, is an example of recent work by psychologists who have entered the discourse on materialism. These psychologists are interested by why individuals become excessively materialistic and how such reliance can be eased. Csikszenthmihalyi (2004, p. 92) has offered a definition of materialism and defines it as follows: 'the tendency to allocate excessive attention to goals that involve material objects: wanting to own them, consume them, or flaunt possession of them.' He goes on to propose that:

> A materialist is a person whose psychic energy is disproportionately invested in things and their symbolic derivatives – wealth, status, and power based on possessions – and therefore whose life consists mainly of experiences with the material dimension of life (Csikszenthmihalyi, 2004, p. 92).

So, how do people become and remain materialistic? Kasser *et al.* (2004) suggest two main reasons; the first of these is that individuals surround themselves with objects to compensate for failing to meet psychological needs. If individuals have insecurities about their self worth, for example, they may compensate for this by developing a strong MVO. According to Kasser *et al.* (2004) a strong MVO, can result from situations where wealth, possessions and status increase an individual's chances of meeting basic needs. This is evident in children whose needs are poorly met by their parents. In short, feelings of insecurity can lead to a strong MVO (James, 2007). The second reason suggested by Kasser *et al.* (2004) is exposure to materialistic models and values. They argue that exposure to materialistic lifestyles endorsed by peers and relatives and frequently displayed in the media leads individuals to 'adopt ambient cultural and familial values and behavioural regulations' (Kasser *et al.*, 2004, p. 16). Kasser *et al.* (2004, p. 16) state that 'evidence suggests that children do indeed take on the materialistic values of those in their social surroundings'. They also point to television as a major reinforcer of materialistic values, stating that 'television is replete with advertisements painstakingly crafted to promote consumption' (Kasser *et al.*, 2004, p. 16). Advertisements also often come in between programmes that champion highly materialistic lifestyles that are often set at a level that the viewer can realistically aspire to (James, 2007). Although these two reasons for a strong MVO are

dealt with separately it is highly possible that they interact, as Kasser *et al.* (2004, p. 17) state:

> People experiencing higher levels of insecurity may be more susceptible to the influence of environmental messages concerning the benefits of acquisitiveness, which may in turn make them feel increasingly insecure, and on and on in a vicious cycle.

These facts are not lost on advertisers, they are well aware that if individuals feel insecure they will seek something, anything, that will relieve this insecurity. The most straight forward marketing technique therefore involves making individuals feel inadequate, deprived and anxious. As Hamilton and Denniss (2005, p. 37) point out, 'it is axiomatic that they [advertisers] make us feel bad in a way that can be cured by possession of the product they advertise.'

Creating and then preying on insecurity is the major tool used by psychologists employed in the marketing industry. Advertisers also try to make us laugh, think or long to belong. Companies want us to have brand loyalty and they want to be creditable; they want to be seen as the most trustworthy or the coolest and so on. The days when advertisers simply listed the specifications of the object they were trying to sell in an objective way to allow individuals to make an informed, rational decision are long gone.

The world of marketing is far too vast and complex to try to summarise here all the other strategies used to make individuals materialistic. The result of individuals becoming highly materialistic is that they reinforce this materialism because of their belief that material possessions will bring them happiness (or more accurately, relieve them of their insecurities). As will be expanded on in the next section, individuals experience endless cycles of self-deception, become subject to luxury fever, try to construct a sense of self through their possessions and suffer, to varying degrees, oniomania.

2.4.2 Endless cycle of self-deception

Central to the condition dubbed affluenza is an endless cycle of self-deception. This cycle arises from a continued belief in the assumption that more money and materials

equals more happiness. Despite the promises of the marketing industry, happiness rarely results from improved material well-being. Individuals buy products on the premise that the product will meet a basic human need. Having bought the product they are often left unfulfilled as the product fails to meet the need it promised to. Those with a high MVO are inclined to subsequently want another, often similar, product that again promises to meet the basic need. They are deceiving themselves that this time the need will be met. The result is that they go through a cycle in which they desire each new product that promises them fulfilment, become disillusioned with it and move on to desire the next well marketed product. Hamilton and Dennis (2005, p.6) argue that 'this cycle of hope and disappointment lies at the heart of consumer capitalism'.

2.4.3 Buying an identity

As was discussed earlier (2.3.1.1) commodities have a sign value. Hamilton and Denniss (2005, p. 13) argue that 'today, almost all buying is to some degree an attempt to create or renew a concept of self.' The greater the degree to which this is true for an individual the more materialistic they are. The problem is that those who create their identity and imaginatively place themselves in society through what they buy/ do/ wear etc. are controlled by external factors, most notably, fashion. 'The problem is not that people own things, the problem is that things own people' (Hamilton and Denniss, 2005, p. 17).

2.4.4 Luxury Fever

Materialists whose identity is defined by their social status are often susceptible to luxury fever. Luxury fever stems from what Thorsten Veblen (1899) termed 'conspicuous consumption'. Conspicuous consumption describes the extravagant displays of consumption, by the rich, to mark their elevated position in society. The result of this is a desire amongst the masses to emulate the lifestyles of the rich and famous by spending money to experience the same luxurious goods and services. As the perceived (if not actual) demarcation between the rich, the middle class and the poor has collapsed, the desire for luxury goods has grown. Luxury goods and services have been depicted as normal and attainable in the mass media. The result is a population of insecure individuals desperately chasing status symbols that sustain their

desired position in the social hierarchy. De Botton (2004) describes these people as sufferers of status anxiety. James (2007) would describe them as being infected with the affluenza virus.

2.4.5 Oniomania

Having a high MVO can have serious implications. Hamilton and Denniss (2005, p. 15) point to a pathological condition identified by psychologists, called 'oniomania' or 'compulsive shopping' 'defined as an obsessive-compulsive disorder characterised by a preoccupation with shopping experiences as irresistible and resulting in frequent and excessive buying.' As with any addictive behaviour, there are those who are more addicted than others. The numbers of people setting out on shopping binges has increased in recent years; 'oniomania' is the more extreme form of a widespread social condition. Unfortunately compulsive shopping is to a large extent socially sanctioned. For example, shopping is still seen by many as *therapy* as the photo in figure 2.5 shows.

Figure 2.5: 'Shopping is Cheaper than a Psychiatrist' Photo of shopping bag taken by M. Phillips, 2006.

Compulsive shopping can, however, lead individuals into huge financial insecurity, family problems and can lead to, or advance, other disorders such as eating disorders, drug dependence, anorexia and gambling. According to Hamilton and Denniss (2005, p. 16): 'Research shows that most compulsive buyers have histories of depression,

anxiety disorders and substance abuse. Yet 'shopping till you drop' is seen as the sign of a happy-go-lucky disposition rather than a meaningless life'.

2.5 Conclusion

This chapter has argued two major things. Firstly I argue that it is consumption and particularly overconsumption that is at the root of most environmental problems. Secondly, having reviewed the growing research into how some individuals in the modern western world have been conditioned to be highly materialistic, despite the negative impacts this has on their psychological well being, I argue that the palaces of consumerism are built on sand. I make this statement because it is highly disputable that the ideological foundation upon which consumerism is built (the belief that material wealth equals happiness), is a firm one.

Environmentalists are beginning to make the link between consumerism and environmental problems and are looking at how a critique of consumerism can have huge benefits for the environment. Bill McKibben (2007) provides a useful introduction to this important connection. He states 'if more is better, then environmentalism is a lost cause. There aren't enough Powerpoint slides of calving icebergs to turn things around' (McKibben, 2007, p. 36). This quote alone outlines precisely why micro education should only be part of a wider macro movement. Powerpoint slides of depleting ice fields are clear examples of micro environmental education. The McKibben (2007) article is an example of macro environmental education that challenges the assumption that material wealth equals happiness. He argues for a new environmentalism, one where environmentalists build a world in which our basic psychological needs are actually satisfied. He proposes it as a 'world where we rely on each other for something real again. The kind of world, not incidentally, that needs less coal and gas and oil to make it run' (McKibben, 2007, p. 39). If we can make each other and ourselves happy through more fulfilling relationships and by engaging in hobbies that demand less fossil fuel based energy use, create less waste and pollution and need fewer natural resources, we will lessen our reliance on products that often only *promise* to make us happy.

The position this leaves environmental education in is a positive one. If overconsumption is the root of most environmental problems and this overconsumption is the result of a widespread belief in the assumption that material wealth equals happiness. A reputable challenge of this belief provides a possible future path for environmental education. The logical outcome of this macro environmental education (an education that allows an individual to understand the cultural influences on their consumer behaviour) is that an individual no longer seeks to meet their basic psychological needs exclusively through the consumption of material goods and services. For example critiquing the promises that advertising makes about the benefits of purchasing each particular good or service equips an individual with the capability to assess whether the promised benefit will result. If their conclusion is that it will not result, they are more likely to seek to meet their non-material, psychological, needs in more authentic, less materially dependent and waste producing ways. In reality delivering this form of environmental education and achieving its desired outcomes is a far from simple task as the rest of this thesis will investigate.

I argue throughout this thesis that this, culture-shifting direction, is the direction in which environmental education should go, with the dual benefit of improved psychological well-being for individuals and reduced stress on the environment as a result of a reduction in consumption of the Earth's resources. Discussion of the possibilities for environmental education to move in this direction and an exploration of the exact shape of macro environmental education will be presented in more detail in chapters 7, 8 and 9. Before exploring this further it is important to analyse the origins and shape of contemporary environmental education. The analysis in the following two chapters of this thesis will highlight important concerns over the current design and delivery of environmental education, and help provide a context for the discussion of the data emerging from the empirical research.

Chapter 3 - The Human-Environment relationship and the Environmental movement

Chapter 3 investigates the human-environment relationship and the origins of the environmental movement. It is argued that the environmental movement tends to embody rather than breakdown the dualistic relationship between humans and the environment. This results from the way that that relationship developed and the implications of this for the success of environmentalism, and by extension environmental education are explored.

In the previous chapter I argued that overconsumption lies at the root of most environmental problems. This overconsumption I argued is the result of the phenomenon of consumerism. Chapter 2 reviewed discourse that questions the foundations of consumerism and argues that these foundations are shaky. This leaves environmental education in a surprisingly positive position. This is a positive position because it appears that overconsumption (a major cause of environmental problems) is a result of a consumer culture built on the dubious core belief that material wealth equals happiness. This belief, I have argued, can and needs to be challenged if the behaviour of individuals is to align itself more closely with the goals of sustainable development. The opportunity and task for environmental education is to undermine the foundations of consumerism.

Before discussing how environmental education and by extension education for sustainable development can be shifted in, what I have termed, a macro direction, we need to understand the way in which the human species relates to its environment. This chapter will firstly outline the history of this relationship; secondly uncover the origins of the environmental movement that emerged as a consequence of changes in this relationship; and thirdly discuss the direction and nature of the environmental movement from which environmental education and education for sustainable development has surfaced.

3.1 The human-environment relationship

The discussion in this chapter is framed either side of a vague boundary representing the point after which it can be assumed that humans dominated nature more than they were dominated by it. For the more economically developed societies, the most convenient place to position this boundary is the industrial revolution of the 1800s. The human-environment relationship in the period leading up to the boundary was most likely very different to the relationship we experience today. It is therefore very important to consider how these societies related to their environments to survive and what modern day societies can learn from them. Ponting (1991, p. 18) states that 'for all but the last few thousand years of their two million years existence humans have obtained their subsistence by a combination of gathering food stuffs and hunting animals.' From their origins in the low latitudes human's gradually spread throughout the world, aided by advances such as tool making and the domestication of fire.

Around 10,000 BP the hunter-gatherer way of life quickly eroded as agriculture took hold, a cause and consequence of rapid population growth. Agriculture changed the ways humans related to nature as land was turned over to grow crops and animals were slowly domesticated. Simmons (1989) and Ponting (1991) describe the transition to agriculture and the impacts it had on the human-environment relationship. The relationship was affected by the domestication of plants and animals, the development of settled communities, deforestation, trade, irrigation and Pastoralism. All of these activities changed the shape of human inhabited land. As Ponting (1991, p. 52) points out, 'the adoption of agriculture was the most fundamental change in human history. Not only did it produce settled societies for the first time, it also radically changed society itself.' The removal of many humans from the task of hunting or collecting food changed the way they related to the environment, as they were gradually abstracted from it. Individualistic societies steadily emerged replacing the more egalitarian (Brody, 2002) relationships observable in hunter-gatherer societies.

3.2 Dualism, nature loving and the environmental movement

Environmental education emerged from the environmental movement. McNeill, (2000, p. 325) sombrely concludes his environmental history of the twentieth century, by pointing out that 'for environmental history the powerful, prevailing ideas mattered

more than the explicitly environmental ones.' It is important therefore to explore some of the reasons behind why this was the case. The remainder of this chapter draws on the analyses of Spowers (2002) and Peterson del Mar (2006). It is argued that the environmental movement failed to install environmental concerns into history's most powerful culture shaping ideas due to the emergence and continued reinforcement of a dualistic relationship between humans and the environment.

Peterson del Mar (2006) argues that the environmental movement has, with a few exceptions within radical ecology, embodied rather than sought to breakdown the dualistic relationship between humans and the natural environment. He argues that attempts to breakdown this dualistic relationship have been hampered by forces that help it grow and persist. It is worth exploring the question of whether environmentalism and consumerism are happy together? This question is discussed briefly below as it provides useful insights into the current, largely micro, nature of the environmental movement.

3.3 Environmentalism and Consumerism: Happy together?

Peterson del Mar (2007, p. 195) introduces the final chapter of his book by stating that 'Prosperous nations have been reluctant to protect the environment at the risk of undermining the pursuit of prosperity.' He goes on to point out the differences between micro and macro approaches arguing that 'Environmental improvements that can be had through technological innovations, such as catalytic converters are one thing. Driving less is quite another' and summarises by saying 'Rich nations and their citizens have been unwilling to curtail their consumption of resources' (Peterson del Mar, 2006, p. 200). What Peterson del Mar is implying is that humans in the Western world have become, at best, shallow environmentalists and nature lovers in the sense that they most often only seek meaning from nature in a consumptive way and are therefore selective about their environmentalism. He points out that:

> Sometimes this search for meaning has led to preserving selected landscapes or species. But pet ownership, backpacking, gardening, exotic vacations, visits to the Nature Company and zoos more often dovetail with the imperatives of industrial capitalism, the increased consumption of nature. Our acts of nature loving have expressed our unease with material comfort while seldom challenging or changing it (Peterson del Mar, 2006, p. 205).

This represents a continued dualism in which the human relationship to the environment could be described as wanting to have our cake and eat it. It seems that humans want to consume the environment in an emotional way, by finding meaning in it through recreational visits, pet ownership, gardening and so on and therefore are drawn to protect it, but they also want to consume it in a more physical sense to maintain their material comfort. This contradiction, Peterson del Mar (2006), asserts is a result of the persistent dualistic position within which the natural world remains a commodity to be either preserved as an arena for achieving oneness with nature and a place to search for meaning, conserved to maintain future stocks of precious raw materials for future generations or exploited to improve material comforts. The result of this is that 'in our post-modern, atomistic western world, environmentalism, like truth and beauty, is in the eye of the beholder' (Peterson del Mar, 2006, p. 195). To put this even more bluntly we can say that in the western world today we are environmentalists as far as it suits us.

I would argue that this shallow environmentalism results in and reinforces the micro nature of the modern environmental movement. In terms of environmental education I will explore this in detail throughout the rest of this thesis, but it is worth exploring the wider context briefly here. As discussed in chapter 2 (Section 2.3.1.1) the acquisition of a commodity and the uptake of a service by an individual is a form of communication. In a consumerist society the goods and services individuals consume help to create their identities. This is why I argue that it appears, at present, that environmentalism is sitting comfortably within consumerism. An 'Environmentalist' seems to be just another *something* for the consumer to be; it forms a part of their identity. The term 'green' is often attached to people who embrace perceived environmentally beneficial behaviours. As awareness amongst the general public of environmental problems increases, so too does the attractiveness of being green and the desire, therefore, to be conspicuously green. Being green implies that you care about the future of the planet, that you enjoy the great outdoors and so on. It seems that the greener you are the better, unless of course you are too green at which point you liable to be labelled a killjoy or a hippy. By too green I mean that you are someone who has started to question conspicuous consumption, the material wealth equals happiness myth and have begun to opt out of mainstream consumer culture.

When micro or shallow environmentalism holds sway being green is defined by the individual somewhere along these lines: I recycle therefore I am green, I buy low energy light-bulbs therefore I am greener, I buy recycled products therefore I am greener still! I am an eco-tourist therefore I am green, I buy local and organically produced food as far as possible therefore I am greener, I use reusable instead of plastic bags therefore I am greener still! The fatalistic position that shallow and micro environmentalism seems to take is one in which they concede that people are going to consume and that it is the job of environmentalism to make that consumption as green as possible. The emphasis is rarely on challenging consumption itself. Environmentalists are capitalizing on the desire to be green, a desire that they are creating, therefore embodying consumer culture rather than challenging it. Interestingly, given the premium prices of 'green' products, being conspicuously green also communicates the message: I buy green because I can afford to. Being green is therefore often portrayed as a middle class endeavour pursued by those who can afford the ethical lifestyle that reaffirms their social status. From a macro perspective being green involves not just buying differently, it involves fundamentally buying less; it should in fact be portrayed as a frugal lifestyle, with the savings made from not consuming status symbols (expensive houses, jewellery, cars and so on) being spent on the green products that fulfil basic material needs.

Environmentalism sits comfortably within consumerism when being 'green' does not impinge too greatly on the rest of a consumer's lifestyle. The 'green' part of an individual's identity is becoming an increasingly important consideration in an individual's identity creation. However, it must be remembered that a considerable difference exists between what Naess (1995, 2001) would term 'shallow' and 'deep' green people.

3.4 Can we go a bit deeper?

Peterson del Mar's (2006) book paints a disappointing picture of the current human-environment relationship: it is a relationship that seems to reinforce the dualistic human-environment relationship that emerged during the Enlightenment. He concludes by saying 'our collective future depends on our ability to make ourselves at

home here, to make our peace with and adjust ourselves to the earth's constraints even as we celebrate its beauties' (Peterson del Mar, 2006, p. 205). He does not, however, clearly suggest what environmentalism needs to do. I have argued throughout this thesis so far that micro approaches need to give space to macro approaches to environmentalism if the major problem of the overconsumption of the Earth's resources is to be addressed. Deep ecology, social ecology and eco-feminism all support the macro approach in stressing the sociological roots of environmental problems. The macro approach differs in that it does not identify a rising of environmental concern within individuals necessarily as a starting point. The starting point for a macro approach is a macro understanding of the social interrelationships that shape individuals over-consumptive behaviour and the negative impact it can have on people's lives.

In September 2006, Neil Boorman a late twenty something journalist from London decided to make a radical change to his lifestyle. He decided he wanted to free himself of his branded possessions. Boorman (2007) explains his decision to free himself of what he calls 'emotional crutches' because he believed that he suffered from a disorder known as obsessive branding disorder. He defines this disorder as follows: 'a combination of compulsive shopping and a reliance on status symbol brands for the maintenance of one's self esteem' (Boorman, 2007). He goes on to explain his disorder:

> I didn't buy clothes, gadgets or even food for the basic functions that they performed. I bought them for the way they made me feel. From Adidas trainers to BlackBerry phones, I depended on the confidence these brands gave me to face the world each day (Boorman, 2007).

The key realisation that led him to his radical behaviour change (which began with a ceremonial burning of all his branded possessions) was this: 'I began to realise the more money I spent, the more miserable I became.' This analysis, this recognition that endlessly seeking to fulfil non-material goals in material ways is ultimately futile, is what led Boorman to a less environmentally damaging lifestyle. I also find him an inspiring example. He talks of how he struggled initially to separate himself from branded goods, but how he began to realise how accepting his real self rather than camouflaging himself in brands was the 'key to the long-term disconnection from the

culture of consumerism' (Boorman, 2007). He talks of how he has come to know local shopkeepers by name and of how he has rid himself of the status anxiety that once plagued his social life. The psychological benefits to Boorman are made obvious throughout the article. Interestingly the prime motivating factor for a change in behaviour to less consumptive lifestyle was a personal one, he was unhappy, he recognised the contribution his conspicuous consumption was making to that unhappiness and did something about it. As the year passed a secondary motivating factor appeared in the form of the rise of the climate change issue in the mainstream media and its central message that individuals need to lower their consumption to lessen their carbon footprints. Boorman saw how his new lifestyle complemented this need whereas his old consumerist lifestyle would have battled against it.

Environmental education and environmentalism in general can learn a great deal from Boorman's story, told in full in the book 'Bonfire of the Brands: How I Learned to Live Without Labels' (Boorman, 2007b). From a macro understanding of the drivers of his behaviour, Boorman became aware of the limited truth of the assumption that material wealth equals happiness. As he rejected consumerism he became happier and found a secondary motivator in the form of recognition about how his new lifestyle is beneficial to the environment. This real life example shows how a macro approach to environmentalism can improve the human-environment relationship, the key being that rational behaviour in other parts of an individual's life complement rather than contradict this relationship.

This chapter has explored how the increasing obsession with material acquisition, comfort and wealth has fostered a dualistic human-environment relationship far removed from the near homeostatic relationship of early human societies. It has been argued that environmentalism, despite the best efforts of various radical ecologists, has more often embodied this dualism than weakened it. If environmentalism remains shallow, or micro, it will continue to support this dualism and environmental catastrophe will eventually, if belatedly, emerge. Only if environmentalism goes in a macro direction and tackles materialistic obsessions, the root cause of the human-environment dualism, can this detrimental dualism be weakened. Chapter 4 will look in more detail at environmental education in Twenty-first Century UK, identifying the

various forms in which environmental education is delivered and will describe these formats from a micro and macro perspective.

Chapter 4 - Environmental Education in the 21st Century

Thus far this thesis has argued that environmental education needs to go in a more macro direction; and that if it does it can play a major role in the furthering of sustainable development. Chapter 3 analysed the changing nature of the human-environment relationship up to the present day. The key conclusion was that this relationship has become increasingly dualistic and that the environmental movement has, unfortunately, largely only embodied this relationship. In the same way that chapter 3 described and analysed the human-environment relationship and the environmental movement as a whole, this sister chapter will describe the origins of environmental education and its current state in the UK.

Environmental education is a young and rapidly evolving field. Its evolution has been characterised by an ongoing debate about what it is, what its aims and objectives are and how best it should be delivered. Highlighting, as it does, the potential benefits of a macro approach to environmental education, this thesis is a further contribution to this debate. Environmental education currently takes place in formal educational settings (schools and universities) and informal educational settings that combine to form what Falk (2005, p. 275) describes as an 'environmental educational infrastructure.' The bulk of this chapter will discuss the current state of this infrastructure from a micro and macro perspective by looking, in turn, at formal and informal environmental education. However, to put this discussion into context and to link back to the preceding chapter it is important, firstly, to discuss the genesis and evolution of environmental education.

4.1 A brief history of Environmental Education

4.1.1 The birth of Environmental Education

Planet Earth is a fragile and beautiful place. It is true however; that beauty is in the eye of the beholder. While one man may revel in the drama of a late summer thunderstorm another may quiver in fear of its ferocity. Similarly a discarded industrial landscape can evoke a strong nostalgic connection with the past for one person while another may find that environment ugly and in need of repair. Likewise, a teacher may view a valley in the Lake District as a superb environment through

which a student can understand the complexity of river basin geomorphology, whereas a colleague may view a fieldtrip to the same valley as a wonderful opportunity for students to build a close relationship and empathy for the natural environment. The phrase 'The Environment' means different things to different people.

Environmental Education emerges from an educator's desire to protect, utilise, conserve, champion or enjoy 'The Environment,' in the way that they define it. The goal of the educator may be to help a student understand a natural scientific process. They may, therefore, use the environment as a means to that end. An educator at a National park information centre may be concerned with its protection; the aim of their environmental education would therefore be to advise visitors on how to behave whilst in the park. Another educator may want to change the way individuals behave to limit their impact on the environment in a global sense. The phrase 'Environmental Education' therefore also means different things to different people. As will be evidenced in chapter 6, definitions are, most often, the result of the goals of the definer.

Wheeler (1975, p. 4) crowns Scottish educationist Patrick Geddes (1854-1933) as the 'founding father of environmental education.' Geddes wanted to improve the environments in which people lived, worked and learned. He believed that there was a connection between education and the environment – improvement of a student's surroundings would, he argued, improve their education. He also argued that by being in touch with the realities of one's environment, one's learning would be better and one's empathy with their environment would increase. Concerned, as he was at the time, with the City of Edinburgh, he saw improvement of urban environments as a necessary and inevitable outcome of this connectivity. Wheeler (1975, p. 4) sums his beliefs up as follows: 'Ultimately, Geddes believed, human life could only flourish if we came to terms with our cities and towns by making them both beautiful and functional places to live in.' This belief could be easily translated to rural areas, or extrapolated further still, to include the notion of a global environment. Geddes proposed that education about, in/through and for the environment were centrally important.

Wheeler (1975) reports how, post World War I, Geddes' most important intentions were unfortunately overlooked. The Le Play Society wanted teachers to learn through the environment; it wanted them, as Wheeler (1975, p. 4) puts it, 'to indulge in rural surveys appealing to historical sentiment.' Geddes' intention of radically improving the environment was not the focus. It was Geddes' idea to learn in the environment, but not to use it merely as a vehicle; to him environmental education was also, crucially, about the environment and about trying to change the environment in a positive way.

Post Geddes environmental education took the form of environmental studies; it was largely only learning through the environment or naturalist learning about it. A strong desire to use environmental education to bring about environmental change only slowly emerged, but flourished in the late 1960s. At this point environmental education evolved rapidly; this period 'marked the watershed between the apolitical, naturalist practices of environmental studies and the committed activism of environmental education' (Wheeler, 1975, p. 5). This sudden upsurge in activity was the result of the exploding environmental movement (Peterson del mar (2006). Environmentalists recognised that there was an urgent need to change the ways in which humans related to the environment. Concerned educationists responded; environmental education was to be re-born.

Littledyke *et al.* (2000, p. v) draw upon the 'famous and entrancing image of 'Spaceship Earth' obtained by the first lunar expedition' to highlight how this image illustrates so emphatically that we live in a unique, finite and shared world. As the 1960s became the 1970s awareness was growing among individuals and environmentalists that many environmental problems were global in extent and that the impacts of a local action could be felt globally as well as locally. This growth in the global concern for the environment led to the United Nations Conference on the Human Environment held in Stockholm in 1972. This landmark conference was called to discuss international ecological problems and the problems of human settlement. Wheeler (1975) points out that during this conference the affluent nations were accused by the developing nations of wanting to limit the economic and industrial competitiveness of the poorer nations, using environmental pollution concerns as a

justification. This scepticism was partially overcome (though as will be discussed in 4.1.2 these tensions would later have profound effects on the shaping of environmental education) and agreements on broad guidelines for governments to follow were eventually reached. For environmental education the key recommendation emerging from Stockholm was Recommendation 96:

> It is recommended that the Secretary- General, the organisations of the UN system, especially the United Nations Educational, Scientific and Cultural Organization, and the other international agencies concerned, should, after consultation and agreement, take the necessary steps to establish an international programme in environmental education, interdisciplinary in approach, in-school and out-of-school, encompassing all levels of education and directed towards the general public, in particular the ordinary citizen living in rural and urban areas, youth and adult alike, with a view to educating him as to the simple steps he might take, within his means, to manage and control his environment. (United Nations Conference on the Human Environment, 1972, p. 35)

The advice for individuals to take 'simple steps... within his means' and to 'control his environment' seems to be grounded, respectively, in micro education and dualism. Nevertheless, this recommendation triggered further action at national, international and regional level over the following years as educators, politicians and environmentalists wrestled with the task of promoting and delivering environmental education.

The United Nations Environment Programme (UNEP) was set up following the Stockholm conference and together with UNESCO created the International Environmental Education Programme (IEEP) in January 1975. It was designed to:

a) facilitate the co-ordination, joint planning and pre-planning of activities essential to the development of an international programme in environmental education;
b) promote the international exchange of ideas and information pertaining to environmental education;
c) co-ordinate research to understand better the various phenomena involved in teaching and learning;
d) formulate and assess new methods, materials and programmes (both in-school and out-of-school, youth and adult) in environmental education;
e) train and retrain personnel adequately to staff environmental education programmes; and
f) provide advisory services to Member States relating to environmental education.

(Ponniah, 1996, p. 26)

The IEEP held an International Environmental Education Workshop in Belgrade in October 1975 at which delegates unanimously adopted the 'Belgrade Charter'. According to Ponniah (1996, p. 27) the charter 'called for "changes which will be directed towards an equitable distribution of the world's resources and will more fairly satisfy the needs of all peoples."' At this point the environment was not even mentioned and no call for a global reduction in resource use was made. Pace (1996, p. 6) argues that: 'Although notions of environmental education had been maturing for quite some time... the Belgrade Workshop was the first meeting of its type to clearly identify its aims, objectives and guiding principles.' Continental scale regional meetings followed before delegates from 66 member states and representatives from 20 international NGOs convened again in Tbilisi for the UNESCO/UNEP Intergovernmental Conference on Environmental Education in 1977. The target audience at Tbilisi were policy makers, the aim was to stress the importance of the goals of the IEEP and establish environmental education as an international and intergovernmental priority (Pace, 1996). According to Ponniah (1996, p. 27) a more 'human-focused definition of environmental education was accepted as the foundation for the global efforts which were to come.' The emphasis was now on quality of life, as well as environmental quality, as the scope of environmental education widened. A 'post- Tbilisi mania' (Pace, 1996, p. 14) followed as nations and regions implemented a whole set of quite varied environmental education initiatives (see Pace, 1996, p. 12).

Sterling (1992) argues that the challenges set by Tbilisi were not ever really met. The recommendations made at Tbilisi called for radical changes in lifestyle, Pace (1996, p. 14) argues that this probably accounts for the fall off in activity after the initial mania. A period of acclimatisation was needed. Following Tbilisi a new Environmental Ethic developed, which was bolstered by the publication of the World Conservation Strategy (WCS) by WWF, UNEP and IUCN in co-operation with UNESCO and FAO in 1980. The WCS focused on ecology and the need to understand how conservation of ecosystems was imperative to long-term human survival. Again Sterling (1992, p. 8) argues that 'despite the undoubted impact of the WCS on conservation thinking, its educational influence in terms of classroom practice in Britain was minimal.' This he attributes partly to the fact that when the government finally made its response, six

years later, the publication of the 500 page Conservation and Development Programme for the UK coincided with a general election. The scope of environmental education was getting wider, increasing numbers of issues were coming under its banner. However, uptake and the desired individual behaviour changes were not happening as hoped.

In 1987, the United Nations World Commission on Environment and Development (WCED) published 'Our Common Future'. This report came to be known as the Brundtland Report in honour of the WCED chair Ms Gro Harlem Brundtland. Its major contribution was the concept of Sustainable Development. Brundtland became Prime Minister of Norway and her efforts to enact the report's recommendations were competitively mirrored by other national leaders as sustainable development and environmental issues rose up the political agenda. According to Sterling (1992, p. 10) the Brundtland Report gave increased urgency to a more holistic view of environmental education.

> The debate over the role of education with respect to environment and development issues [intensified]... and began to have an impact on the concerns and direction of environmental education.

Also in 1987, Moscow hosted a 'Tbilisi plus ten' conference convened by the IEEP. Pace (1996) notes that contributions to the Moscow conference highlighted the less than smooth path that environmental education had taken into the formal education system. The conference looked at four things:

1. How training for environmental education could be improved
2. How the concept of sustainable socio-economic development should be embedded in environmental education
3. The growing role and importance of the media
4. The contribution national and international NGOs were making to environmental education.

The major task identified for environmental education following the Moscow conference was to improve environmental literacy. A person who is environmentally literate can be described as being a person who is aware of the causes and effects of environmental problems and accepts the need for solutions to these problems (Orr, 2004). A surge of activity followed the Moscow conference at local, national and

regional levels as organisations and governments sought to embed environmental education into their programmes. The IUCN followed up the WCS with another strategy 'Caring for the Earth' in 1991, which set out 9 principles for sustainable living, contributing to the promotion of an environmental ethic through environmental education. The key angle of this strategy was that it intended its audience to be wider than just governments and policy makers. It wanted to include all individuals not just people in 'high places' – it represented a movement away from top down approaches, something echoed by the next major international environmental event.

The United Nations Conference on Environment and Development (UNCED) took place in Rio de Janeiro between June the 3rd and 14th 1992. The Rio Earth Summit called for integration of environment and development into all levels of education over the next 3 years to set up 'a world-wide programme to develop environmental and developmental literacy by the year 2000 as the learning requirement for an environmentally competent earth citizenry' (Pace, 1996, p. 18). Sandbrook (1992) argued that at the UNCED, the focus was mainly on the economy and how it is affected by the environment; rather than on the environment itself. Tensions once again were high between developed countries (who formed the majority of the IEEP) and developing countries. The developing countries were keen to take the conference in the direction of a discussion on development (Pace, 1996). Pace (1996, p. 19) argues that discussions about environmental education were overshadowed by the debate on development. Dr Walter Leal Filho and Monica Hale, wary that this would be the case, convened a short workshop that ran parallel to the Earth Summit, so that representatives from 33 different countries could meet to discuss Environmental Education and its promotion on an international scale.

The history of Environmental Education presented above is somewhat 'potted'. Between 1970 and 1992 Environmental Education evolved, branched out, transformed and was given varying levels of priority by national and international governments. Several authors (Sterling, 1992; Pace, 1996; Palmer, 1998; Scott and Gough, 2003; Smyth, 2006) have provided more detailed analysis of this history, which I cannot match given the priorities of this chapter. Palmer (1998, p. 27) provides a useful summary of the development of different emphases of environmental education in the

form of a map. The map (figure 4.1) plots the arrival of environmental education at Education for Sustainable Development (ESD).

Figure 4.1: Map of the development of different aspects or emphases of environmental education (Palmer, 1998, p. 27)

The emergence of ESD has impacted on Environmental Education quite profoundly, but questions remain over whether environmental education forms part of ESD, exists alongside it separately, or is subjugated by it detrimentally. Palmer's (1998) map

(figure 4.1) suggests that environmental education has simply become ESD; the reality is perhaps not so simple. Section 4.1.2 will explore this.

4.1.2 Education for Sustainable Development

In 1987 the World Commission on Environment and Development (WCED) defined Sustainable Development as:

> Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (WCED, 1987, p. 43)

Since then, the term has come to be defined in hundreds of different ways (Dobson, 1996). Confusion over how to define sustainable development leads to confusion about the role of education and learning for sustainable development.

Scott and Gough (2003, p. 5) state that in order to understand the role of learning in sustainable development we need to understand a point of central importance. This point is that 'there is a distinction to be made between what society, nature and the environment *physically are* on one hand, and *how we think about them* on the other.' They argue that the scientific complexity involved in trying to understand exactly what they are, physically, is great and that the numbers of different ways in which individuals think about each of them are many. The way that we think about the relationship between society and the environment is therefore determined by our understandings of what these are physically and the values that we place upon their components. The foundations upon which environmental education and/or education for sustainable development are built are therefore dependent upon how the relationship between society and the environment is perceived by the builder. Scott and Gough (2003, p. 5) argue that this perception depends on responses to the following two inter-related questions:

- How far is the environment determined by human behaviour?
- How far is human behaviour determined by the environment?

Scott and Gough (2003, p. 8) follow the work of Norgaard (1984) to argue that the only coherent position to assume is one in which the view of co-evolution is taken. They state that: 'co-evolution of human behaviour and the environment would seem to

require that *both* are able to *initiate* change as well as be changed by the other.' They point out that by understanding that the apparent capacity of human societies to modify and be modified by the environment, means that the human-environment relationship is not one within which it is possible to identify the domination of one by the other. Due to the complexities involved in the evolution of both, it is also impossible to accurately predict the impact that they will have upon each other; it is only possible to say that they co-evolve. Interestingly this recognition is similar to that made by Geddes who clearly argued for the mutual benefits of an improved environment for society and of an improved society for the environment (see Wheeler, 1975) and is in opposition to the dualism discussed in Chapter 3. However not all environmentalists see it this way. According to Scott and Gough (2003) deep ecologists, for example, seem to argue that human behaviour is determined by social factors exclusively and that the environment is produced through biogeophysical processes (processes in the non-human natural world which are not negotiable by humans) exclusively. This understanding suggests a reality 'of socially determined human behaviour disrupting or sustaining biogeophysically determined environmental processes' (Scott and Gough, 2003, p. 6). It is worth exploring deep ecology a little further.

Deep Ecology and its intellectual critique of anthropocentrism emerged from the writings of ecologists such as Lynn White Jr and Paul Ehrlich, as well as activists such as David Brower and the poet Gary Snyder in the 1960s. These deep ecologists found their philosophical influences in the earlier writings of Henry David Thoreau, John Muir, Aldo Leopold, Rachel Carson, William Vogt, Fairfield Osborn, Aldous Huxley and others (Sessions, 2001, p. 157). However, Norwegian philosopher Arne Naess, who first began lecturing on Philosophy and Ecology at the University of Oslo in 1968 was the first to introduce the term Deep Ecology and his name has been synonymous with the movement ever since. At a Third World Futures conference in Bucharest in 1972 Naess made his first key contribution (Sessions, 1995). He argued that there was a division within the environmental movement between shallow and deep ecology. Shallow ecology is also very close to what I term micro environmental education and macro environmental education aims for a lot of the same outcomes as deep ecology.

Naess, in an interview with Stephen Bodian (1995, p. 27), argued that deep ecologists display an ecocentrism based on their own personal ecosophy. Ecosophy requires deep ecological thinking and involves a shift from science to wisdom. By this he means that ecologists should be concerned with more than just the science of an ecosystem, they, he argues, need to ask 'what kind of society would be the best for maintaining particular ecosystems?' So rather than asking in a shallow way, how can we cope with the environmental problems created by our social and economic system we need to use our ecosophy to ask 'why do we think that economic growth and high levels of consumption are so important?' (Naess in Bodian, 1995, p. 27). To gain an understanding of the inclinations and attitudes of deep ecologists it is useful to quote Naess' eight-point platform. This eight-point platform represents the key basic beliefs, or the ecosophy, of deep ecology (for an earlier longer list see Naess (1995, pp. 259-261)):

> 1. The well-being and flourishing of human and non-human life on Earth have value in themselves (synonyms: intrinsic value, inherent worth). These values are independent of the usefulness of the non-human world for human purposes.
> 2. Richness and diversity of life forms contribute to the realization of these values and are also values in themselves.
> 3. Humans have no right to reduce this richness and diversity except to satisfy basic needs.
> 4. The flourishing of human life and cultures is compatible with a substantially smaller human population. The flourishing of non-human life requires a smaller human population.
> 5. Present human interference with the non-human world is excessive, and the situation is rapidly worsening.
> 6. Policies must therefore be changed. These policies affect basic economic, technological, and ideological structures. The resulting state of affairs will be deeply different from the present.
> 7. The ideological change will be mainly that of appreciating life quality (dwelling in situations of inherent value) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between bigness and greatness.
> 8. Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes.
> (Naess, 2001, p. 189)

Naess (1995, 2001) sees the aims of deep ecology as being to foster the ecocentricity of individuals beginning with a development of their ecosophy. Bodian (1995) asks Naess what he thinks deep ecology should be doing over the next twenty-five years, Naess responds by saying that communication is critical, he argues that individuals

need to know about the impending problems associated with climate change and tropical rainforest destruction to allow their ecosophy to develop, from which deeper questions will emerge about social structures, the satisfaction of basic needs and so on. The emphasis is on promoting a move away from anthropocentrism towards biocentrism, with a passion for sustaining the diversity of all life on earth as the primary motivating factor. Their response, therefore, is ultimately a micro one that seeks to change society by changing the behaviour of individuals as a direct consequence of a fully developed ecocentricity.

Different environmentalists define the environment, its problems and the causes of its problems in different ways. Their conceptions and understandings of the human-environment relationship shape their stance in regard to what should be done and how to do it. The arrival of the new concept of sustainable development re-framed the human-environment relationship, which may then have re-shaped the understanding of it amongst environmentalists. As mentioned above, sustainable development was introduced to the international community at the UNCED in Rio de Janeiro in 1992. The work plan produced there, 'Agenda 21' (UNCED, 1992), was intended to set out a programme for sustainable development. Chapter 36 of Agenda 21 focused on education and awareness raising; it had three main areas: '(i) reorientating education to sustainable development; (ii) increasing public awareness; and, (iii) promoting training' (Scott and Gough, 2003, p. 12). Over the next ten years UNESCO and the newly launched UN Commission on Sustainable Development (UNCSD) continued to promote and refine the programme set out in Chapter 36. However, by 2002 at the UN Rio plus Ten World Summit on Sustainable Development, interest in education and learning was merely being maintained, rather than showing progression from its post-Rio level (Scott and Gough, 2003, p. 13). Around this time however sustainable development learning initiatives were gaining momentum. Scott and Gough (2003, pp. 14-18) list nine examples of sustainable development learning initiatives. They purposely show the huge variety of initiatives to illustrate the tensions and paradoxes that exist between them. They argue that tensions and paradoxes exist between *change* and *continuity; empowerment* and *prescription; 'me'* and *'we'; present generations* and *future generations; humans* and *nature; the local* and *the global;* and *the rich, the*

poor and *the very poor* (Scott and Gough, 2003, pp. 18-20). The policy implications of this are striking. It is, for example, possible that a short-term policy on sustainable development may have positive short-term impacts but negative long-term impacts.

Sustainable development is multi-faceted. Porritt (2006) argues and I agree with him, that it is a pathway to Sustainability and should not be thought of as an end in itself. Disagreements about areas of priority are bound to exist given the almost infinite number of stakeholders involved. Different regions, nations, communities and individuals are likely to have different conceptions of environment, society and economy. Their perceptions of their current level of sustainable development are also likely to be different. Given the large number of issues that come under its banner, the establishment of the concept of sustainable development has, potentially, broadened the horizons of environmental education. I argue throughout this thesis that education for the environment needs to include considerations of society, development and economy. Education for Sustainable Development, if holistically approached, potentially represents that broadening.

Gonzalez-Gaudino (2006, p. 291) asks if environmental education is 'a field in tension or in transition?' The question was, and possibly still is: Is Environmental Education transforming into Education for Sustainable Development (ESD) or is it in direct conflict with it? I would argue that if ESD remains disconnected and characterised by a 'proliferation of initiatives, committees and other bodies, each at least partly concerned with some aspect of the problem and often, equally, quite unconcerned with other aspects' (Scott and Gough, 2003, p. 22) then the environment will remain a sub-issue competing and conflicting with other sub-issues that come under the ESD remit. Only if ESD places equal importance on the environment, the economy and society, aiming to make improvements that benefit all three, all of the time, can it be considered as true environmental education.

ESD has the potential to make the linkages between its three components, to recognise that they all modify each other to co-evolve. ESD that is not holistic in this way, ESD that prioritises one facet over the others is likely (given the huge importance currently placed on economic growth) to be detrimental to the environment in the long run.

Micro environmental education that does not consider the social and economic influencers on the environment will find it very difficult to change the status quo and will most likely be fighting a losing battle. A striving for social betterment through consumerist economic growth that does not amply consider the environmental impacts of this growth could eventually lead to environmental catastrophe and socio-economic collapse.

Gonzalez-Gaudino (2006) fears that the environment is suffering because of the current fragmented nature of ESD, characterised as it is by a huge variety of learning interventions each of which are dictated by the agenda of the deliverer. I would argue that true, multifaceted, ESD is macro environmental education. Human behaviour and the environment are in a relationship of co-evolution; they must therefore be treated holistically.

The remainder of this chapter will look at the environmental education infrastructure in 21st century UK. The purpose here is to explore the reasons why this infrastructure is characterised largely by micro practice and to discuss the main implications of this. Section 4.2 will look in detail at the impact that the Sustainable Development Action Plan of the Department for Education and Skills is having on Formal education. Section 4.3 will describe and analyse the role of free-choice learning, the informal and non-formal education sector.

4.2 Formal Environmental Education

In September 2004 the then UK Prime Minister Tony Blair stated that:

> The emission of greenhouse gases, associated with industrialisation and strong economic growth from a world population that has increased six-fold in 200 years, is causing global warming at a rate that began as significant, has become alarming and is simply unsustainable in the long term. (Blair, 2004, p.1)

Given the global impact that climate change is having and will continue to have it is a problem that as Prime Minister Blair pointed out later in his speech, is very immediate and requires urgent international scale action. The Prime Minister recognised that 'It is now that timely action can avert disaster' (Blair, 2004, p.1). He optimistically went on to state 'It is [also] now that with foresight and will such action can be taken

without disturbing the essence of our way of life, by adjusting behaviour, not altering it entirely' (Blair, 2004, p. 1). Recent government rhetoric on environmental issues has continued in the same vein leaving us to wonder where the UK government perceive the boundary, between simply adjusting our behaviour and altering it entirely, to lie. This presupposition is possibly one of the main reasons why macro approaches tend not to be considered; people automatically assume that any large changes to culture on a macro scale will be changes for the worse. The role of a macro environmental educator is therefore to show how changes can actually lead to an improvement in quality of life despite the fact, or perhaps because of the fact that far fewer resources are used.

It is virtually impossible to distinguish how much of a change in our behaviour is necessary to reduce our impact on the environment to an extent that will allow true sustainable development to follow. The evidence suggests that the policy makers within the UK government, optimistically, perhaps blindly, perhaps even purposely (Foster, cited by Scott, 2003), view and argue that the solution to unsustainable development requires only adjustments to behaviour not wholesale alteration. This assertion is taken a step further by Bludhorn (2002, cited in Scott, 2002) who contends that policy makers know that unsustainability is here to stay, but are playing along, implementing meaningless policy at least cost, simulating a situation in which they can be seen to have a concern for sustainability with the tacit purpose of maintaining social order.

We can comfort ourselves with the fact that the government is at least showing some concern for the environment and is optimistic that sustainable development is achievable, even if the importance they place upon this remains contestable. The relevant question here then is: what role does the government perceive that both formal and informal education will have in realising a sustainable UK society? This section will summarise and review the criticisms of the government's response to the calls for progress on environmental education and education for sustainable development.

In February 2003, the government appointed Sustainable Development Education Panel (SDEP) produced a strategy titled 'Learning to Last: The Government's Sustainable Development Education Strategy for England' (SDEP, 2003, p. 1). This strategy offered great hope; it proposed that sustainable development should become embedded within the school ethos and that it should be spread throughout the national curriculum so that sustainable development would be considered by all subject areas. It did not argue that education for sustainable development should be a separate subject taught in its own right, it recognised that the issues are cross curricular and therefore should be addressed as integrated parts of all subjects, much in the way that numeracy and literacy currently are. The strategy recognised that some direction from above was needed (SDEP, 2003, Paragraph VII) but it placed the responsibility for stimulating real progress on education for sustainable development at a local level (SDEP, 2003, Paragraph XI). The strategy acknowledged the need for integration between formal education and community and individual action. It stressed the need for partnerships and recognised that 'Learning for sustainable development should not be a marginal after thought but an integral part of [community local action] plans, threading through them and all activities within them' (SDEP, 2003, paragraph 2.1:b, p. 8).

Overall the SDEP's strategy was a positive document; its calls for education for sustainable development to be integrated into the growing partnerships between formal education, communities, business and informal education were sensible policy directions. It also called for sustainable education to have more prominence within the statutory curriculum across all subjects. Worryingly however, it viewed the government's responsibilities and role as 'limited' and as a facilitator rather than a director (SDEP, 2003 paragraph 2.1: e, p. 8). It also recognised that training and support will be needed for those on the front line but later stated that 'This strategy does not call for additional financial resources' (SDEP, 2003, paragraph 2.1: f, p. 8). So although the policy direction seems sound, the lack of government leadership and availability of the financial resources required to allow education for sustainable development to progress across the formal, non-formal and informal education sectors resulted in the criticisms of the government's commitment to education for sustainable development discussed below.

resulted in the criticisms of the government's commitment to education for sustainable development discussed below.

On the 5th of April 2005, the House of Commons Environmental Audit Committee (a cross party committee appointed by the House of commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and Sustainable Development) published a report titled "Environmental Education: Follow-up to Learning the Sustainability Lesson". The main aims of this follow up investigation were to investigate (a) the current resonance of the term Education for Sustainable Development in England; (b) the impact of the Sustainable Development Action Plan; (c) what needs to be done to strengthen the role of learning in the governments latest UK Sustainable development strategy; and (d) to review the government's commitment to informal learning and environmental education in general.

The conclusions of the report are disappointing and clearly show the lack of willing, lack of leadership and low level of priority that the government's Department for Education and Skills (DfES) shows to the promotion of ESD. This is clearly highlighted by the following conclusion reached by the Environmental Audit Committee's investigation:

> The consensus amongst those who have contributed to this inquiry, a consensus with which we would agree, is that the government is failing to get the ESD message across to the public. (Environmental Audit Committee, 2005, p. 3)

The Environmental Audit Committee (EAC) first highlighted the lack of priority attached to ESD by the DfES in its July 2003 report titled "Learning the Sustainability Lesson".

> The DfES has failed to demonstrate any clear vision or strategic thinking relating to ESD. We have been struck by how much has been achieved, despite this policy vacuum, by a range of committed organisations and individual 'champions' acting on their own initiative, across the spectrum of lifelong learning. This wealth of activity has flourished despite, rather than because of, DfES. (E.A.C. 2003, p. 3)

DfES has responsibility for ESD in formal education. And as the EAC point out in their 2005 report:

> It is surely through the education system that we have the best possible opportunity to educate today's children, and future generations about the need for Sustainable Development and, more importantly, how to achieve it. (EAC, 2005, P. 17)

The role of the DfES is crucial in that, unlike almost every other forum for ESD, it has one major advantage: it benefits from a captive audience. Following the work of the government appointed Sustainable Development Education Panel; the DfES developed a Sustainable Development Action Plan (SDAP). This was published in September 2003 a few months after the EACs original inquiry report. This action plan was very welcome; it seemed to represent a significant step forward by the DfES.

The SDAP contained four objectives (DfES, 2003, p. 6):

> OBJECTIVE 1: Education for Sustainable Development.
> OBJECTIVE 2: The environmental impact of the DfES and its partner bodies.
> OBJECTIVE 3: The environmental impact of the education estate.
> OBJECTIVE 4: Local and global partnership activity.

The SDAP received praise for meeting three of the four objectives. In terms of Sustainable Development, improvements are tangible in relation to school infrastructure, transport, energy use and the general health of pupils. DfES and its operations have also improved in terms of reducing their environmental impact. In addition, DfES have created a website called Global Gateway which intends to allow people involved in education to engage with others across the world allowing knowledge transfer.

What is noticeable however, despite these successes, is that the SDAP has so far failed to address the most important objective, objective 1. In the forward to the SDAP, the then secretary of state for Education, The Rt. Hon. Charles Clarke MP stated that Sustainable Development needs to be embraced 'across the education system so that best practice becomes common practice. Not as a bureaucratic add-on but as an integral part of the skills development of this country' (DfES, 2003, p. 3). Unfortunately a bureaucratic add-on is exactly what ESD remains in many schools. It is very much at the fringes of core education covered sporadically and superficially

integral part of the skills development of this country' (DfES, 2003, p. 3). Unfortunately a bureaucratic add-on is exactly what ESD remains in many schools. It is very much at the fringes of core education covered sporadically and superficially within subjects such as Science, Geography, Citizenship, Religious Education and Design and technology.

One of the core reasons for the shortcomings of the SDAP is that formal educators are simply unaware or attach little importance to the SDAP. The press and media coverage afforded to the SDAP when it was published was very limited. As a result many of the educators who are key to its implementation either attach a low priority to it, or in some cases, are completely unaware that it even exists. Unfortunately one of the reasons for this is that it was disseminated via the Internet, in an attempt to reduce the paperwork for teachers to deal with and to set an environmental example.

> The Sustainable Development Action Plan received a markedly less high profile launch than that afforded to PE and Sports in Schools, for example, when the latter was launched in December 2004. That initiative was considered important enough to merit the Prime Minister's involvement and had £519 million of funding attached to it. Whilst the SDAP was launched by the Education Secretary, it did not have any funding overtly attached to it. (E.A.C. 2005, p. 22)

There is also a complete lack of structure in place to record who has received the SDAP, who is implementing it and its progress in relation to the 4 objectives. In England ESD is not inspected, there are no standards that a school must achieve to 'pass' for Sustainable Development. As a result schools have little motivation to prioritise ESD.

The evidence put forward by the EAC and its conclusion that the DfES and DEFRA attach a very low priority to ESD leads us to question why? It is clear that both DfES and DEFRA believe, (or at least imply when you consider their ESD policies) that the 'adjustment' in behaviour needed to pursue a path of Sustainable Development is only a minor one, perhaps one that can be achieved through means external to education.

It seems that the lack of priority that DfES attaches to ESD could be the result of one or perhaps both of the following:

2. A lack of confidence in ESD as a tool for progressing Sustainable Development.

One hopes that the former is not true; it is unlikely that we can go on living our resources intensive modern western lifestyles and still achieve sustainable development by constantly improving technology to reduce the impact of these lifestyles. My view is that technology will only be able to reduce the impact of our lifestyles on the environment to a small degree while we live in a society and culture that is so materialistic. If the DfES and the government as a whole do believe this then the first task for ESD is to convince them that significant behaviour change is needed.

The success of ESD as a tool for progressing sustainable development is a very difficult thing to evaluate. It is true that no clear educational technique has been developed that has been successful in significantly changing the behaviour of many individuals in an environmentally positive way. Rather disappointingly, the government founded Sustainable Development Education Panel was disbanded in March 2003, however research into ESD continues and is rising to the challenge of progressing Sustainable Development.

The policies that are needed to bring about sustainable development through changes in the behaviour of all social actors are not going to be possible without some sort of ESD explaining to individuals why behaviour change is necessary and more importantly to explain why a less materialistic existence is not necessarily a lower quality of life existence. A movement away from westernised materialistic values and the pursuit of happiness through the acquisition of 'stuff' is the challenge faced by ESD. To meet this challenge clear leadership from the government is necessary, so that ESD can be effectively practiced in the formal, non-formal and informal sectors of education and so that research into the best techniques for ESD can continue and expand.

Published in March 2005 the next government strategy on sustainable development titled 'Securing the future' was described by Forum for the Future (2005, p.2) as 'the single largest commitment we have seen to government action on sustainable

Published in March 2005 the next government strategy on sustainable development titled 'Securing the future' was described by Forum for the Future (2005, p.2) as 'the single largest commitment we have seen to government action on sustainable development – and time and resources need to be made available for the deliverers, regulators, funders and planners of education in order to deliver [it].' There is evidence of progress. However, although the strategy includes yet more rhetoric on the very clear need for ESD, little action has actually been taken. Of most pressing concern to the EAC (2005) is the continued absence of a sufficient sustainable development education indicator. This simple indicator, which would merely aim to measure how many people are receiving a formal ESD, not a measure of its efficacy in bringing about Sustainable Development, is it would seem a simple enough indicator to implement. As the Sustainable Development Education Panel pointed out in the 2003 sustainable education strategy: 'Evaluation of what is happening and the success of approaches, projects and programmes is essential at all levels. Without evaluation there will be no learning' (SDEP, 2003, paragraph 2.1: g, p, 9). Its continued absence, as the EAC points out, seems to be another example of the low priority attached to ESD by DfES and DEFRA.

Since the last EAC report (EAC, 2005) the government has responded to the criticisms made in a twenty four (of which seven were essentially blank) page document, they argue that progress has been made on sustainable development in schools. It undoubtedly has in terms of improving the impact of infrastructure within schools, new buildings meet tough environmental standards and transport to and from school has been improved (EAC, 2005). However as the SDEP strategy states government departments need to show leadership on '**education** for sustainable development as opposed to sustainable development per se' (SDEP, 2003, p. 18). This latest government response indicates that funding and resources are going into the sustainable development of schools, but can children be expected to learn from the builders who are building these 'BREEM' approved buildings? Is this education for sustainable development? Are the DfES and the government as a whole merely paying lip service to ESD? Extending Bludhorn's (2002) line of question, Scott (2003b, p. 5) poses that the DfES may just have it right, he states that the DfES' 'well known reluctance to enthuse about either environmental or sustainability issues might just be

We are left wondering whether the UK government is aware of the urgent requirement to combat the unsustainable culture that we find ourselves living in and the crucial role that education for sustainable development has to play in this. The conclusion that can be made from this short summary of recent government practical and rhetorical responses to the calls for progress on the integration of education for sustainable development into all forms of learning is that ESD remains on the fringes of the education system, driven largely by concerned individuals and organisations that lack the necessary government support. The next section of this review will look at the literature arguing for more wholesale change in Western formal education systems, changes that the UK government seems, at the present time, reluctant to stimulate.

4.2.2 Sustainable Education?

Learning is central to sustainable development, for it is only through learning, learning how to learn and developing the capacity to think critically about our behaviour as individuals, societies, institutions, businesses and organisations that sustainable development can progress (Scott, 2002). Without this capacity we will remain on a path of only perceived infinite growth with finite resources, leading eventually to environmental and social catastrophe. The insignificance attached to education for sustainable development in formal education has been explored in detail by Orr (2004) and Sterling (2001). Their arguments are both insightful and troubling.

David Orr in *Earth in Mind* (2004) introduces the tenth anniversary of this important book with a short introductory essay. The first thing to note is that, in the ten years since this book was first published, progress has been made on environmental education but, as Orr paraphrases H. G. Wells, we are still struggling in the race between education and catastrophe. The argument that was put forward by Orr when he first published this book in 1994, is founded on a call for a paradigm shift in the formal education system, away from an education system that serves the western consumerist economy towards a system that is congruent to sustainability. This shift has been described by Sterling (2001, p. 11) as 'change from *transmissive* towards *transformative* learning' under a new system of 'sustainable education' (Sterling,

has been described by Sterling (2001, p. 11) as 'change from *transmissive* towards *transformative* learning' under a new system of 'sustainable education' (Sterling, 2001, p. 14). However it is a very difficult shift to achieve and the forces preventing it are embedded and resistant to change.

Orr (2004) is concerned with the education system in North America. He argues that North American culture has created a largely urban population that has lost touch with nature, wilderness, ecology and a sense of the crucial interrelationship between humans and the environment and that this is at the root of the current unsustainable development we are experiencing. The arguments can easily be extrapolated to the rest of the western world. Sterling (2001) provides a similar argument for the UK.

The first part of Orr's book deals with the 'problem of education'. He is concerned that 'The conventional wisdom holds that all education is good, and the more of it one has, the better' (2004, p. 5). This unease is echoed by Sterling (2001, p. 12) who draws on Schumacher's (1973) assertion that although education is our 'greatest resource' it would also become a 'destructive force' if it did not place the ecological safeguarding of the planet at its core. Orr (2004, p. 5) put it like this: 'The truth is that without significant precautions, education can equip people merely to be more effective vandals of the earth.' This is based on the observation that the modernist education system breeds adults who are clever but not necessarily wise.

> In thinking about the kind of knowledge and the kinds of research that we will need to build a sustainable society, a distinction needs to be made between intelligence and cleverness. True intelligence is long range and aims toward wholeness. Cleverness is mostly short range and tends to break reality into bits and pieces. Cleverness is personified by the functionally rational technician armed with know-how and methods but without a clue about the higher ends technique should serve. The goal of education should be to connect intelligence with an emphasis on whole systems and the long range with cleverness, which involves being smart about details. (Orr, 2004, p. 11)

He identifies some of the dangers of education, firstly the 'overriding danger is that it will encourage young people to find careers before they find a calling' (Orr, 2004, p. 22). A career without a calling lacks purpose; in the individual's mind it is merely a means to justify an end played out under the title of a lifestyle. Modern Western culture specifies that this lifestyle be rated by how much the one pursuing it spends on

for a day of work which lacks true value is work for work's sake, if an individual is to lead a full life they should feel that their efforts in the workplace are contributing to a future which they value.

Secondly is the danger that formal education will give the impression to young minds that the world is as subdivided as the curriculum served up in schools. The third danger is that students lose the sense of wonder about the world, due to boring curriculum, too much indoor learning, too much emphasis on memorization for exam assessment and too much television among many other factors. Orr (2004) quotes Rachel Carson who wrote that 'it is not half as important to *know* as to *feel*' (1984, p. 45). As Orr notes later, education is only an accomplice in a larger process of cultural decline driven by factors such as family instability, computer games, shopping malls and so on.

Formal education in the Westernised world has, according to Sterling (2001, p. 12), 'been restructured and repackaged to conform to the philosophy and perceived needs of the market.' This for Sterling is of great concern because education that is underpinned by a mechanistic world view, and therefore mechanistic view of learning, fails to address sustainability issues and hinders the rise of ecological thinking that both Orr (2004) and Sterling (2001) view as critical to the chances of sustainable development.

Orr (2004) argues that science has shown us that we are travelling towards environmental catastrophe. The problem is that we are searching for solutions within science rather than recognising that the root of the problems are in fact socio-political. 'We have focused on the symptoms and not the causes of biotic impoverishment' (Orr, 2004, p. 70). Sterling (2001, p. 15) terms this as the difference between 'first order learning' based on the acquisition of information which occurs within accepted boundaries, within which basic values are left unexamined; and 'second order... learning [which] involves critically reflective learning, when we examine the assumptions that influence first order learning'. Sterling (2001, p. 15) identifies a third order of learning too; this 'transformative level of learning' happens when we become aware of alternative worldviews and are able to see things differently. These three

order of learning too; this 'transformative level of learning' happens when we become aware of alternative worldviews and are able to see things differently. These three orders of learning resonate with Senge *et al.'s* (2005) discussion of the 'U-movement', which will be discussed in chapters 7, 8 and 9. If we remain in first order learning, this is due, according to Orr (2004), to our inability to question economic growth, the distribution of wealth, capital mobility, population growth, and the scale and purposes of technology. Orr (2004, p. 72) recognises, like Sterling, that 'Ecological education is not just about biology, it is about the deeper causes of biotic impoverishment, which have to do in one way or another with political behaviour, institutions, and philosophies.' This requires deep change in education, away from micro style first order learning, towards what Sterling terms 'Sustainable Education' (2001, p. 14).

Looking for the solutions from within accepted boundaries, accepting a worldview that is based on capitalist expansion and therefore educating our citizens to, as Sterling (2001, p.21) puts it, 'compete and consume' rather than 'care and conserve' is clearly reinforcing unsustainable values and practices.

We need now to look a bit deeper into why some forms of education for sustainable development are rooted in first-order, micro, learning and what can be done to transform this.

Orr (2004) calls for a rethink in education. Firstly, he suggests that universities should perhaps be ranked based on what they are contributing to the future rather than what they have achieved in the past. They should be commended for how well they equip their graduates for the challenges of the future, instilling in them love and competence to harmonize with nature rather than breed the indifference towards it that he argues the current university culture does (Orr, 2004, p. 90). Assessment of educational success is not restricted to universities; schools are also constantly assessed to ensure they are meeting the requirements of government. Sterling (2001, pp. 39-40) argues that many secondary school educators have become disenchanted with the changes that have been forced upon them from above; he argues that the overall ethos of education has shifted from educational and social values to economic values, within which efficiency, quality control and production have become the main aims. This has

teachers into managers, all of which contribute to the high levels of stress experienced by all members of the school community. The danger of an obsession with testing and its associated 'standardization' of students is, as Sterling (2001, p. 42) puts it, that:

> It flies in the face of what good teachers have always known: that young people and in fact everybody learn and work best with recognition, trust, support and encouragement, time and space-rather than fear and high stress.

Sterling (2001, p. 40) criticises this mechanistic, managerial form of education by drawing on an analogy of schools as factories. In these factories homogenised young people and qualifications are produced by the teachers (reigned in by tight curriculum and fear of not fulfilling expectations) who are almost mindless technicians overseen by managers (head teachers) who are striving to please their inspectors. It is little wonder that the Sustainable Development Action Plan has failed to make an impact when its delivery is not directly inspected by OFSTED and therefore not something that teachers are keen to add to their list of concerns and stress inducers.

Secondly, Orr (2004) argues that the division of education into disciplines for intellectual convenience leads to graduates that have specialist knowledge but very little appreciation of their place, or the place of their subject in the whole. He proposes that at all levels of education the curriculum should involve in some part 'the study of natural systems roughly in the manner in which we experience them' (Orr, 2004, p. 95). This education in/through the environment would hopefully foster a human-nature connectedness before students are empowered with the tools to change this connection. Orr (2004) also proposes that students and faculties should involve themselves in the effort to solve real problems, rather than studying them in the abstraction of lectures and textbooks. Solving real problems would empower tutors as well as students, encourage cross-curricular cooperation and shift learning outside the classroom enhancing the mind-nature relationship of all those involved. Orr does not argue that disciplinary knowledge should be dispensed with; he simply suggests that with imagination disciplines can be brought together to form a better understanding of the whole. This I feel would lessen the propensity to cloud the minds of learners with narrow trivial knowledge and be beneficial to the whole academic community.

Orr is calling for 'ecological intelligence' (2004, p. 106) in which the economy is designed to fit nature rather than the other way around, as is currently the case. This is a huge paradigm shift and there are many barriers preventing it. Ever since the Cartesian Split when Rene Descartes proposed that animals and nature were merely machines to be used by humans, individuals have been brought up with the mindset that nature is to be tamed, controlled and put to use to advance the human race. This has led to the biophobia (Orr, 2004, p. 131) or fear and detachment from nature that many individuals now experience. This biophobia and our division from nature is the result of the gradual creep of what we call modernisation, Cartesian alchemy, the need to separate ourselves from nature by reducing it to items that can be counted, economic growth and a sophisticated cultivation of dissatisfaction driven by advertising and converted into mass consumption (Orr, 2004, p. 133). Biophilia, a term introduced by Wilson (1984), lies at the other end of the continuum from biophobia and can be defined as 'the urge to affiliate with other forms of life' (Wilson, 1984, p. 85; cited by Orr, 2004, p. 132). Orr (2004) is urging those in charge of curriculum in schools and universities to place the enhancement of biophilia at the core of education. Fostering biophilia goes far deeper than being just the responsibility of the formal education sector, but the barriers preventing us from achieving that harmonious relationship with nature are formidable. Chiefly there is the barrier of denial. As Orr (2004, p. 145) states:

> We are still thinking of the crisis as a set of problems that are, by definition, solvable with technology and money. In fact we face a series of dilemmas that can be avoided only through wisdom and a higher more comprehensive level of rationality than we have yet shown.

The second barrier is one of a lack of imagination. We are seemingly unable to imagine a 'biophilia - centered world and believe ourselves capable of creating it' (Orr, 2004, p. 146). However a biophilia centered world must not be written off and Orr (2004, pp. 146-151) suggests six ways in which we could make a start. He proposes that we:

1. Recover our childhood, to allow Biophilia to grow through a greater early connection with nature.
2. Recover our sense of (local) place.
3. Reshape education so that Biophilia is at the centre of it, so it becomes innate.
4. Forge a new covenant with animals.

6. Achieve true patriotism.

Orr and Sterling both offer responses to the current failings of formal education in respect to how it addresses sustainability. Orr like Sterling (2001) argues for a change to a more holistic systems approach to education. Orr's propositions are quite specific and leave him open to both praise and criticism. For example, if the changes proposed by Orr were to be implemented, one would need to be wary of the knowledge-action gap. Sterling is more vague. He argues for a paradigm shift; a move away from a system that fosters or allows only a micro approach to environmental education (as I would term it) to a system of 'Sustainable Education' (2001, p. 14):

> The term 'sustainable education' implies a whole paradigm change, one which asserts both humanistic and ecological values. By contrast any 'education *for something*', however worthy, such as for 'the environment', or 'citizenship' tends to become both accommodated and marginalized by the mainstream. So while 'education for sustainable development' has in recent years won a small niche, the overall educational paradigm otherwise remains unchanged. Within this paradigm, most mainstream education *sustains unsustainability* – through uncritically reproducing norms, by fragmenting understanding, by sieving winners and losers, by recognizing only a narrow part of the spectrum of human ability and need, by an inability to explore alternatives, by rewarding dependency and conformity, and by servicing the consumerist machine. In response we need to *reclaim* an authentic education which recognizes the best of past thinking and practice, but also to *re-vision* education and learning to help assure the future. (Sterling, 2001, pp. 14-15)

Section 4.2 of this chapter has discussed how sustainability is dealt with within the formal education sector. The Government clearly needs to show more commitment to embedding sustainability into formal education in a significant way, the Environmental Audit Committee (2003, 2005) has heavily criticised the response of the government to sustainability in education. Both Orr (2004) and Sterling (2001) have uncovered the reasons why sustainability has not been embedded in formal education, why the current educational paradigm is so contradictory to sustainability meaning that any efforts to include it in the current education system will only bring minimal success. They both explore what needs to be done to shift to what Sterling (2001) terms a Sustainable Education paradigm.

4.3 Informal, Non-formal, Free choice and Accidental environmental education

4.3 Informal, Non-formal, Free choice and Accidental environmental education

4.3.1 The Environmental Education Infrastructure

Formal educational settings are only one arena in which environmental education takes place in the UK. The final section of this chapter will look at some other settings Traditionally the term formal has been used in conjunction with the terms non-formal and informal. Essentially non-formal and informal education (and learning) is that which occurs outside of formal education settings. Falk (2005, p. 271) however, finds the terms non-formal, formal and informal problematic when they are applied to learning; he argues that physical setting does not necessarily determine the type of learning that takes place. He states that: 'What makes learning opportunities different is partially the physical setting and institutional philosophy, but equally important, and perhaps even more so, are the underlying motivation and interest of the learner; hence the argument for use of the term *free-choice* learning.' Falk describes free-choice learning as follows:

> Free choice learning is a term that recognizes the unique characteristics of such learning – free choice, non-sequential, self-paced, and voluntary – leading characteristics that can occur in a number of settings. It also recognizes the socially-constructed nature of learning – the interchange that goes on between the individual and his or her sociocultural and physical environments – since implicit in the construct of free-choice learning is the ability of the learner not only to choose what to learn, but also where and with whom. (Falk, 2005, p. 271)

Falk (2005) goes on to describe the need for a stronger infrastructure for free-choice learning. Essentially he argues that fragmented and disconnected environmental education occurring sporadically and in numerous and varying locations leads to isolated episodes of learning which are insufficient on their own to support an environmentally aware citizenry. He argues that a more integrated environmental education infrastructure would be hugely beneficial. To emphasise this he states: 'much as a vibrant economy requires a strong transportation infrastructure, a vibrant lifelong environmental learning society requires a strong environmental educational infrastructure' (Falk, 2005, p. 275). This chapter's final section (4.3) is concerned with the issues surrounding the current form of the environmental education infrastructure (EEI) beyond formal education.

The proportion of time an individual spends learning in formal education settings is, in comparison to the time spent over a lifetime in other settings, very small. The rest of the time we learn from what is around us and from what is available to us. We do this either as free-choice learners actively pursuing education, or as accidental learners, stumbling upon learning environments by chance. We read books, poetry, magazines, websites, newspapers, journals, billboards, leaflets, brochures, catalogues, diaries and posters. We watch films, documentaries, sport, comedies, drama, adverts, music videos, plays, news broadcasts, party political broadcasts and the proceedings of government. We listen to talks, poetry, radio news programmes and documentaries, music, background noise, public address systems and other people's conversations. We play sport, music, and computer games, do crosswords and other puzzles and dance. We appreciate and practice art. We have conversations with family, friends, colleagues, peers and strangers. We visit museums, libraries, local, regional and national parks, zoos, government buildings, sports centres, stately homes, castles and palaces. These are all ways and places in which we learn and there are many others. It is likely that every time we engage in one of those activities or visit one of those places we learn something and our understanding of the world changes by a fraction. Our behaviour and our decisions about how to behave are driven by these understandings and shape our lives. As the old saying goes 'you learn something new everyday.'

It is possible that an individual could learn about the environment from any one of the sources mentioned in the paragraph above. This learning could be free-choice learning – in which the learner has decided to visit an environmental centre for example – or accidental learning – in which the learner has stumbled upon environmental education, for example, by listening to a friend talk about climate change in a café. The end result is the same they've learned something, in whatever quality or quantity, about the environment; and it has in some way, however large or small, affected their understanding of the world. As the discussion of environmental issues becomes more prevalent within the mainstream media, environmental education, outside of formal education settings, has a greater chance of arriving unexpectedly or by chance in an individual's life. Falk (2005) describes environmental learning outside of formal education as 'free choice', defined as learning that the learner seeks out. I would argue

that given the growing prominence of environmental issues the amount of accidental environmental education is growing, and with it it's importance within the EEI. The question of exactly what constitutes this EEI is a difficult, but important, one to answer. Before continuing the critique of the current, traditionally defined, EEI, I will discuss the difficulties of defining it and propose possibilities for its re-definition.

4.3.2 Education for and against the environment

Definition of the EEI is a far from simple task, dependent, as it is, on the definition of environmental education - a hugely problematic activity in itself. The central intention of this thesis is to open discussion on the possibility that a division exists within environmental education between micro and macro approaches. This possibility will be further explored in this section to argue that a macro perspective of the EEI would incorporate a narrower micro perspective of it. The narrowness of micro environmental education, I argue, is its weakness.

As a researcher of environmental education I am primarily interested in how the EEI is affecting the way individuals behave. Littledyke (2000, p. 40) is not alone when he says that education *for* the environment is 'the ultimate aim of environmental education.' It is important to investigate therefore how the EEI, outside of formal education settings, is contributing to this aim.

It is rational to argue that every type of environmental education will in some way have an effect on the environment. Whose and which environment and whether the effects will be felt immediately or whether they will be positive or negative, is potentially problematic given the difficulties of defining the environment as was discussed in section 4.1.1. If the ultimate aim of environmental education is education *for* the environment, the assumption is that we are talking about environmental education, and more broadly communications, that seek to eventually have a positive effect on the environment; however one defines it and the reasons for positively affecting it. But if it is possible to have education *for* the environment, then it is only logical that education *against* it exists as well. For example, millions each day learn how to drive a car, how to light a fire, or where to buy luxurious material products. As was pointed out above we learn from many different sources. We also learn many

different things sometimes intentionally, sometimes by accident. What each individual learns may not be *about* the environment or *in* the environment, but it is very possible that it will *affect* the environment because in some way it will affect the individual's attitudes, values and ultimately their behaviour. Individuals learn from a multitude of sources about many things; all this learning can be thought of as education that is ultimately *for* or *against* the environment.

An individual's relationships with factors such as advertising, status, family, colleagues and entertainment shape the way they behave. Put simply an individual's behaviour results from a desire to meet a need (for example social status) and what they have learned (from advertising for example) about how to meet that need. In reality however far more complexity is evident. The individual may have learned many different (sometimes conflicting) ways, and from many different sources about, how to meet a need. This can cause anxiety and confusion over the best way to meet that need and the possibility of unsatisfactory results (Schwartz, 2005; Naish, 2008). It also may not be possible for an individual to meet two or three different needs at the same time, the individual then has to decide, or prioritise, which need to meet and therefore how to behave. The resulting behaviour will ultimately have an impact on the environment. The magnitude of the impact, and whether it is positive or negative, is dependent on the behaviour producing it. Figure 4.2 is a simplistic representation of this situation; it intends to shows how the behaviour of any one social actor is influenced by the results of the complex interrelationships between other social actors and the relationship of the social actor in question with their needs and their understandings of how to satisfy those needs. The various influencers on the behaviour of a social actor differ in strength; some are stronger than others, meaning that when a conflict arises the most influential factor takes precedence in our decision-making. For example an individual may be deciding what to do on a Saturday afternoon. One option is to watch a football match, another is to visit friends, while another is to go walking; he/she cannot do them all. If the decision was to watch the football match to fulfil his/her needs for entertainment and belonging, it means that the fulfilment of these needs was the most important consideration at the point of decision-making. They perceived that watching football was the best possible way to

meet those needs and the sacrifices (e.g. the journey, the financial cost, time and the opportunity costs) they needed to make were worth it.

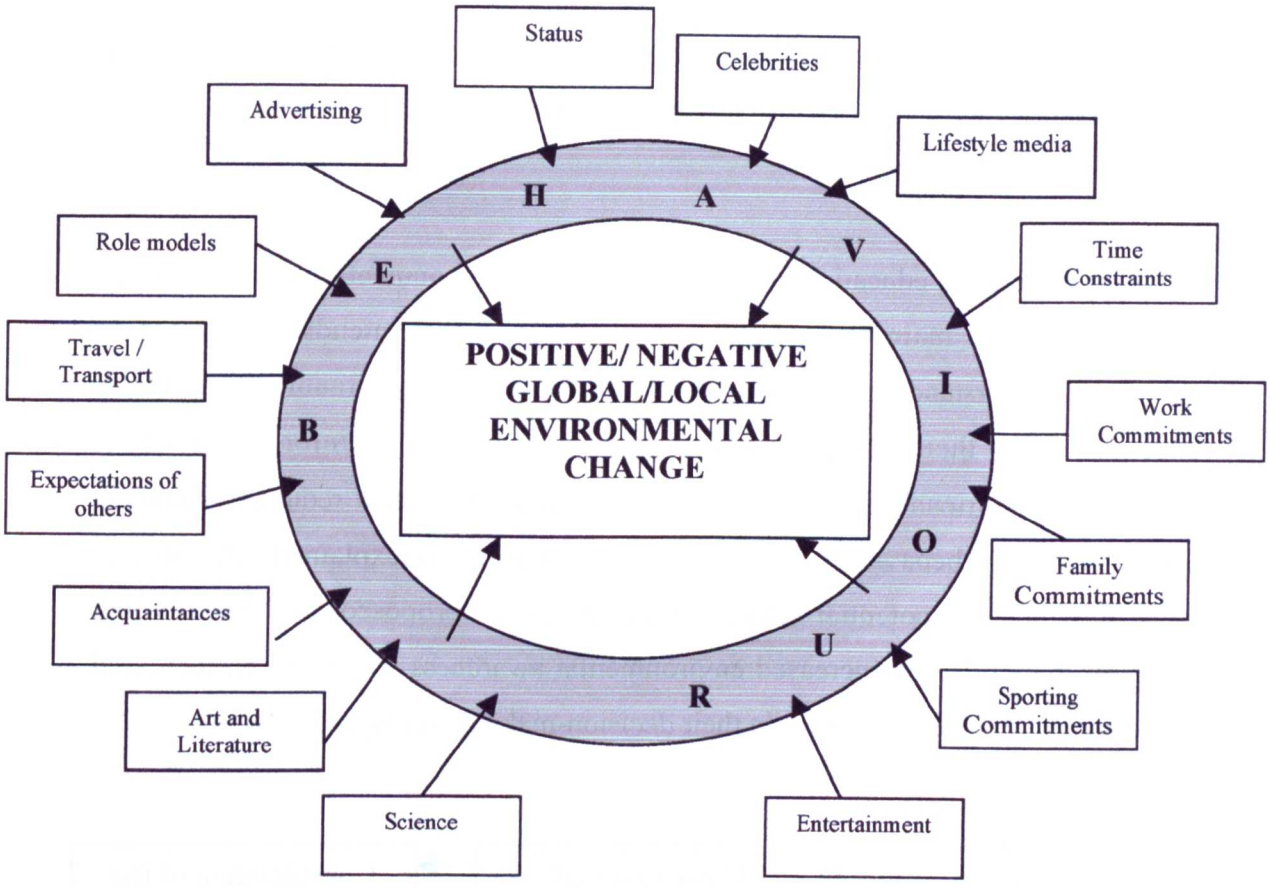

Figure 4.2: Influencers on the behaviour of a social actor. The boxes around the outside are a representative sample of factors that influence the behaviour of a social actor. These factors interrelate with each other and the social actor to shape behaviour. Positive/Negative global/local environmental change is the consequence of behaviour.

Although walking and visiting friends were important to that individual he/she was willing to sacrifice those experiences for the experience of watching football. The for and against arguments that went into the decision making process would have been influenced by numerous factors such as advertising, personal mood, the knowledge of the individual about what to do and so on. The impact of the behaviour of this one social actor would then in turn influence the behaviour of other social actors. The football club would have received money from the individual (and possibly some information about them); this may have an influence on future marketing campaigns. The family members who were not visited would have filled their time with something else, with its own consequential impacts on their value systems, for

example, or further social actors and so on. The drivers of behaviour and the impacts of it are complex and form a chaotic, unpredictable system. The point I am making here is that environmental education is just one extra influencer on behaviour that sits in this complex web. The environmental awareness of a social actor, contributes to their understanding of how their behaviour and the behaviour of other social actors impacts on the environment.

Micro environmental education, as education for the environment, received from the EEI works in two main ways. Firstly, it is education that intends to increase an individual's understanding, knowledge and awareness of the environmental problems associated with their lifestyle. Secondly it is a source of information about environmentally friendly products or behaviour adjustments that reduce the damage caused by certain behaviours. Environmental problems are explained, their causes highlighted and the potential future consequences are proposed. The hope is that within an individual, an increased environmental awareness will bring an increased consideration of the environment in their decision-making (see figure 4.3).

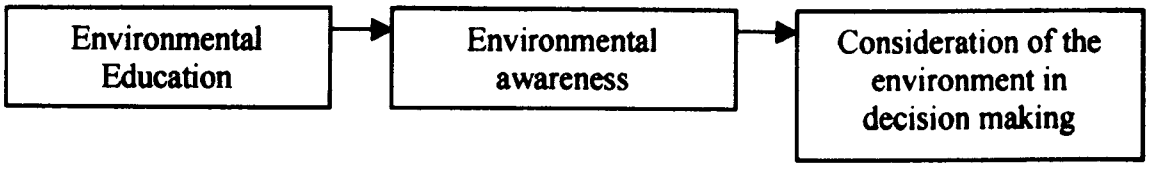

Figure 4.3: A linear model of micro environmental education. This model illustrates the assumption within micro environmental education that argues that environmental education leads to environmental awareness and eventually greater consideration of the environment in decision-making.

Micro environmental education, and its desired outcome environmental literacy, is therefore just one more influencer on behaviour (see figure 4.4). If an individual wants to do something as a result of the influence of another factor (for example they may want to buy a sports car for status reasons and/or as a result of a television programme that champions it) but their environmental literacy dissuades them, they have to make a choice. Put simplistically, the choice is either buy the car for personal well-being, entertainment and status reasons, or don't buy the car for environmental reasons. If the perceived benefits attached to its purchase are greater and more powerful than the

concern they have for the environment (and the other dissuaders such as financial cost) then the car is bought.

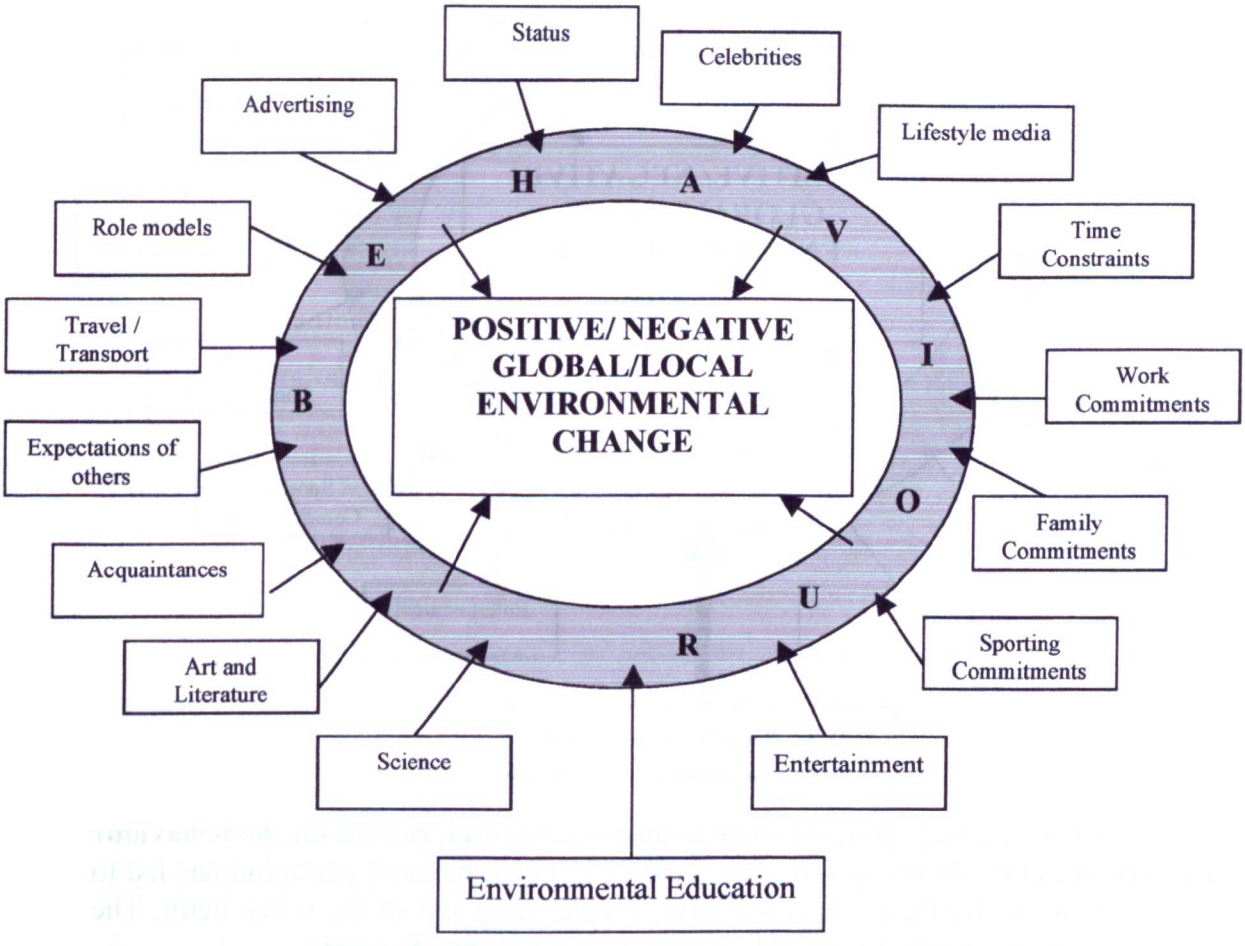

Figure 4.4: Influencers on the behaviour of a social actor with added inclusion of environmental education. This diagram shows how environmental education is just another influencer on the behaviour of a social actor and its influence is subject to its competitiveness in relation to other influencers.

The micro environmental education response would be to increase or improve the environmental education received by the individual so that the environmental considerations have a stronger influence on behaviour and become more influential as dissuaders of behaviour that has a negative environmental impact. This equates to a thickening of the arrow shown in figure 4.5.

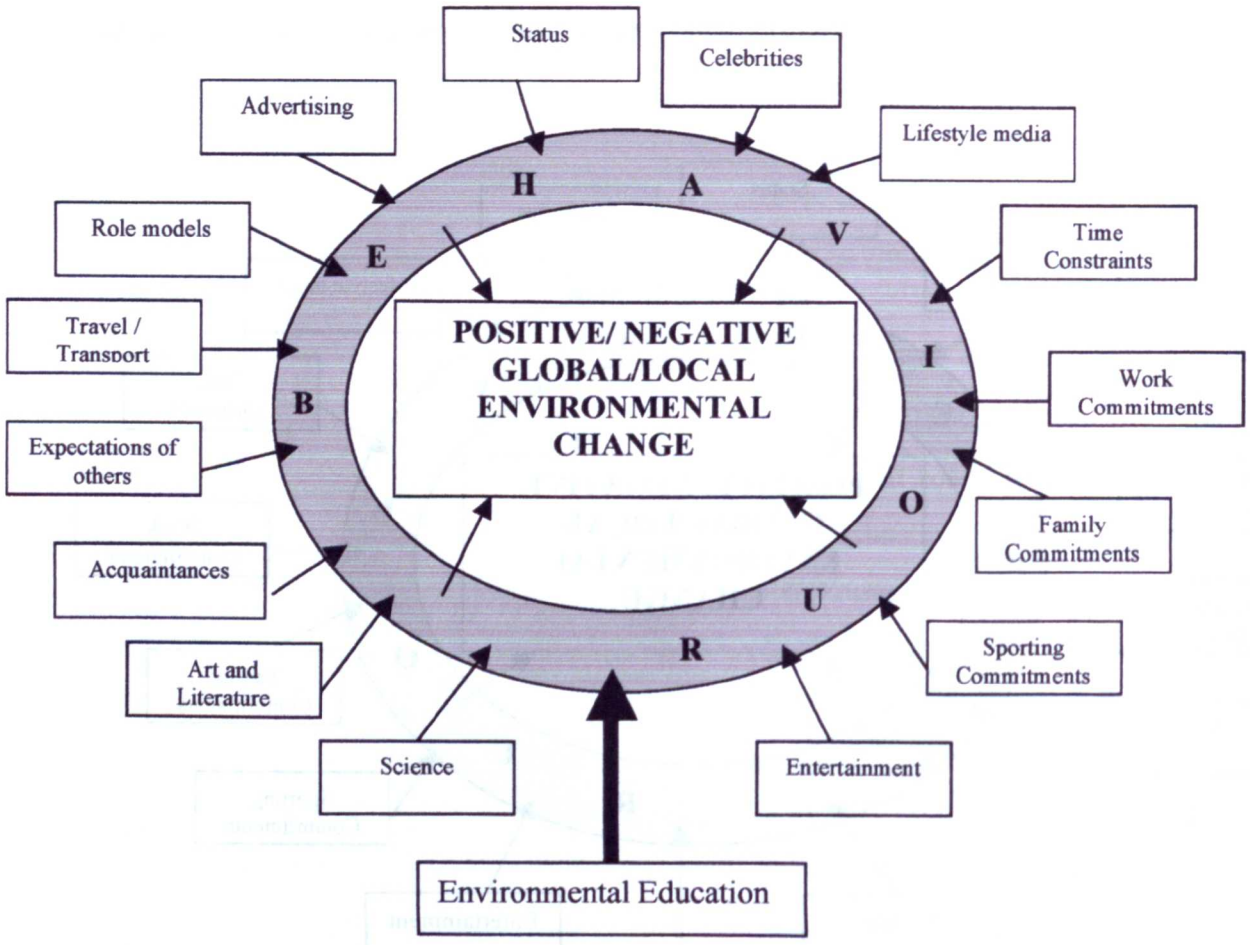

Figure 4.5: Increased influence of environmental considerations on the behaviour of a social actor. In this diagram an increase in environmental education has led to the environment having a larger influence on the behaviour of the social actor. The thicker arrow linking environmental education to behaviour shows this.

The success of a micro, within culture, approach is dependent on how influential environmental considerations are in the decision making process. For the very committed environmentalist, environmental considerations are likely to be heavily influential. For example an environmentalist may choose not to visit a relative in a different continent because they feel that the environmental cost of the long-haul flight required far outweighs the benefit gained from spending time with a family member. A not so committed environmentalist may make the reverse decision, the positive effect of the visit for themselves and their family is considered more important than the negative impact the journey will have on the environment. This rather extreme example illustrates how the environment often loses out when behaviours that conflict with a person's rational environmental considerations are considered more important. The argument here is that environmental concern can take us some of the way towards

lowering our impact on the natural environment, and a fostering of environmental concern through traditional environmental education; it is therefore important. However, social actors are subject to competing influences on their behaviour; the environmental justifications for not flying, not buying that new car, that new suit, that cheaper food item, that new energy dependent electronic good or that second home by the sea; have to be very sound in the mind of the social actor if they are going to resist the temptation to acquire such goods or take part in such activities.

As chapter 2 pointed out many environmental problems can be traced back to the over-consumption of natural resources. A reduction in consumption is therefore paramount to the easing of environmental problems. In chapter 2, I argued that 'consumerism is built on sand'. I based this argument on a critique of its central assumption that material wealth equals happiness. Micro environmental education seeks to encourage social actors to reduce their consumption on largely environmental grounds. Consumption, however, is a macro process, the result of the complex social interrelationships between social actors (Dolan, 2002). Figures 4.2 – 4.5 illustrate that environmental considerations are just one part of the decision making process and can face stiff competition from other often consumption orientated influencers. The phenomenon of consumerism is at odds with many sustainability principles. The term *micro environmental education* describes approaches that do not sufficiently question consumerism and at worst embody it.

Macro approaches to environmental education are slowly beginning to emerge; indeed it can be argued that macro environmental education has been happening for a long time (in psychology for example), the sources, however, would not necessarily label themselves as environmental educators. However, environmental education is still largely locked into a micro approach focused on raising environmental concern as the starting point for behaviour change, rather than beginning with or considering a critique of the fundamental drivers of environmentally damaging behaviours.

A macro approach to environmental education could widen the scope of the environmental education infrastructure; it could be considerably larger than the current mainly micro infrastructure, which would be encompassed within it.

4.3.3 An expanding environmental education infrastructure

The overall aim of this chapter is to discuss the origins and current nature of the EEI. It is also important to discuss issues surrounding its current nature in regard to the impact it is having on the public. Section 4.3.2 discussed the limitations of a micro approach to environmental education. The next two sections (4.3.3 and 4.3.4) will discuss the growth of the EEI and highlight potential problems with the current micro direction of free-choice and accidental environmental education.

As discussed above (4.3.1) the channels through which environmental education can come are numerous. To name just a few; an individual can receive environmental education from books, the television, friends and newspapers. There are also numerous different types of books, television programmes, friends and newspaper articles. Needless to say there are lots of books, lots of television programmes, (hopefully) lots of friends and lots of newspaper articles. The qualities of each one of these are different and this can affect their effectiveness as channels of education for the environment. Section 4.3.2 discussed the possibility of there being education for and against the environment. Section 4.3.4 will explore some of the issues associated with an expanding EEI, exploring the impacts its current nature could be having on meeting the aim of education *for* the environment. I do not wish to conduct an exhaustive evaluation of the relative merits of each and every environmental education channel, I will simply discuss some of the issues involved to question whether recent increases in the sheer quantity of environmental awareness is necessarily a good thing.

As a self styled environmentalist I have always been aware of environmental issues. I have been a free-choice learner, actively seeking out environmental discussion in newspapers, on television, in books, journals and on the internet and so on; interested as I am, in both the content and the value of each piece as environmental education. Over the last two or three years people have been saying to me things like 'environmental awareness is really going up' or 'climate change is in the news a lot more these days.' I have also noticed the increased amount of accidental environmental education I am receiving. It is almost impossible to keep up with the

huge quantity of environmental reports, stories, talks, programmes, concerts, fundraisers and so on, they seem to be everywhere and almost unavoidable. Environmental education is on the increase as more people become interested in environmental issues. Accidental environmental learners are becoming free choice learners creating greater demand for, and supply of, environmental education. This leads on to new accidental, and potentially free choice, learners. Environmental education is a growth market, or to put it more crudely, environmental education and environmentalism sells. It is important to remember here that we are talking about environmental education in its widest sense, through all the channels (many of them, like a newspaper, with a price attached).

The source of this surge in interest is most probably the phenomenon of climate change. Ereaut and Segnit (2006) produced a report for the Institute for Public Policy Research (IPPR) entitled 'Warm Words'. The purpose of this report was to analyse how the climate change story was being told and to look for ways to tell it better. (Their analysis usefully divides climate change communications into repertoires. This will be discussed in more detail in 4.3.4.) In 2007 the same authors were asked to update their report due to the fast moving nature of climate change communications. They report that:

> Much has happened in the past year, including the publication both of the Stern Review on the economics of climate change in October 2006, and the pessimistic conclusions of the Intergovernmental Panel on Climate Change (IPCC) in January 2007. Beyond these key events, climate change and global warming have rarely been far from the front pages of mainstream and other media in the UK. (Ereaut and Segnit, 2007, p. 4)

Friedman (2004) describes how environmental journalism has historically experienced peaks and troughs. Peaks have occurred in line with major environmental events, in the form of international governmental meetings such as the Earth Summit in 1992 or freakish natural or human induced environmental catastrophes. Each major event is accompanied by a rash of environmental reporting and public interest as the event is dissected. Eventually the focus calms down as other newsworthy events take precedence. The environmental education infrastructure has swollen and retracted periodically in the same manner, although it has probably shown an overall expansion. Figure 4.6 is an approximate graphical representation of this.

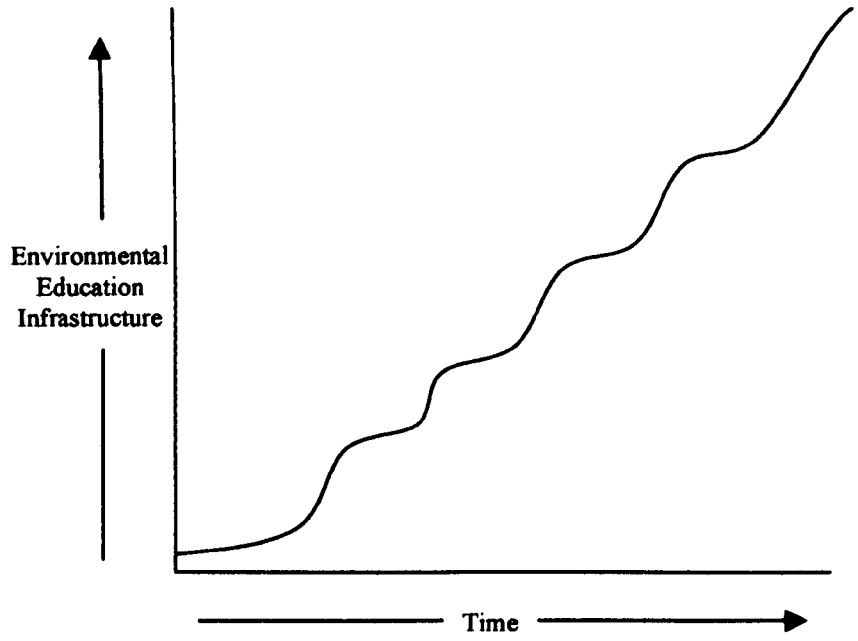

Figure 4.6: Approximate illustrative representation of growth in environmental education over time

The prominence of Climate Change in today's media, has led us to the current peak. The EEI continues to grow as the importance of combating climate change is recognised by more and more people.

Ereaut and Segnit (2006, p. 11) argue that the discourse on climate change has blossomed from an initial 'Whacky, marginal 'certainty' re: climate change' to a 'period of disputation and confusion' as climate change entered the mainstream discourse. Figure 4.7 shows this; the bulge in the diagram equates to the present day peak in environmental journalism and the rapidly expanding environmental education infrastructure. This bulge is characterised, according to Ereaut and Signit (2006), by a dispute over the existence of climate change, whether its primary causes are natural or anthropocentric and the debate over whether anything should be done. Their diagram argues that once this period is over the general public will agree that climate change is real and human induced and a mainstream consensus that action is needed will emerge. A year later Ereaut and Signit (2007, p. 6) argue that 'there is an emerging consensus on climate change – at least in the public arena. They state that: 'The existence of climate change, and human implication in it, seems to constitute a new

common sense, now almost taken for granted.' In their eyes the 'period of disputation and confusion' (Ereaut and Signit, 2006, p. 11) is coming to an end, but this does not necessarily mean that environmental journalism is on the wane, or that the EEI is shrinking as the diagram in figure 4.7 implies that it should.

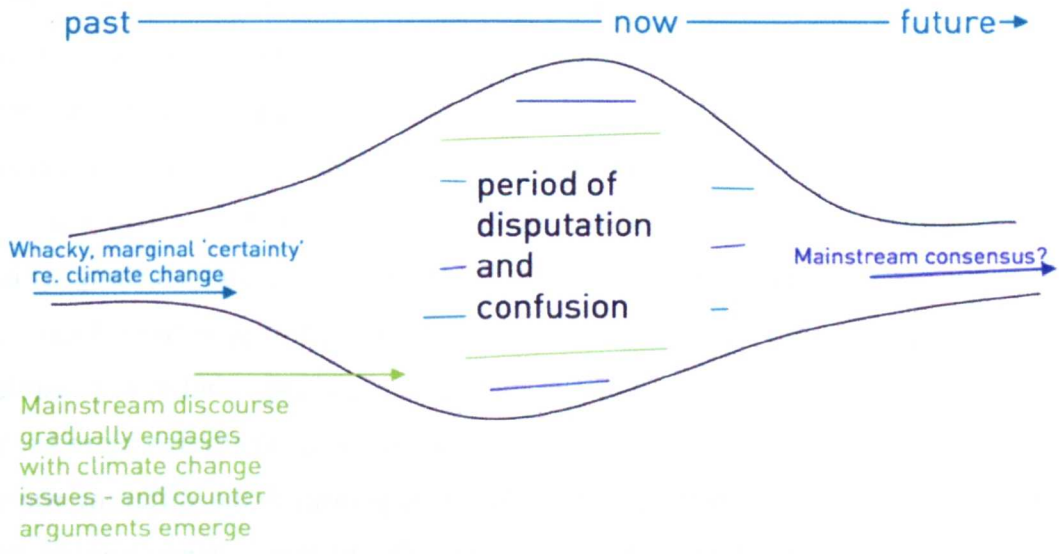

Figure 4.7: The 'shape' of the climate change discourse now (Ereaut and Signit, 2006, p. 11)

At the point where consensus is reached over the question: 'do we need to do something?' three other questions come into focus, each of which is likely to promote growth in the environmental education infrastructure: 'what do we have to do?' 'How much do we have to do?' and 'how should we do it?' Despite the assertion of Ereaut and Signit (2007) that a mainstream consensus has been reached, care needs to be taken in the interpretation of this conclusion. A recent Ipsos MORI (2007, p. 4) report is usefully sobering; it argues that 'while the debate may be over for some, for others it certainly is not.' The debate may appear to be over amongst most scientists, NGOs, politicians and businesses, as well as within the mainstream media. However, the Ipsos MORI report (2007) shows that within the general UK population 40% of people still question our ability to accurately predict climate systems, up to 56% believe that the scientific jury is still out on the causes of climate change and only 9% believe that climate change will impact significantly on themselves personally. If consensus has not been reached over the question of 'do we need to do something?'

we need to explore why. We also need to explore the interpretation of that 'something' by the environmental education infrastructure. Section 4.3.4 will begin to do this.

4.3.4 Issues in an expanding environmental education infrastructure

Ereaut and Signit (2006, p. 7) suggest that 'it is possible to identify several distinct linguistic repertoires on climate change in the UK today.' They define repertoires as follows: 'Repertoires are systems of language that are routinely used for describing and evaluating actions, events and people' (Ereaut and Signit, 2006, p. 7). Ereaut and Signit (2006) argue that three main repertoires exist. There are two optimistic repertoires, the 'it'll be alright' and the 'it'll be alright if we do something' (Ereaut and Signit, 2006, p. 12) repertoires and a third: the alarmist repertoire. Ereaut and Signit (2006, 2007) are talking chiefly about climate change, but it is possible to extrapolate the use, and implications of the use, of these repertoires more broadly within environmental education. The different repertoires, the different ways of communicating on environmental issues through the differing channels are likely to differ in their levels of success as education for the environment. The primary research presented in this thesis emerges from interviews and case studies conducted with representatives from a broad range of environmental education channels. This chapter outlines the current EEI to highlight its limitations, potential and to set the scene from which the data gathered in this thesis emerged. This final section will analyse the different repertoires identified by Ereaut and Signit (2006, 2007) to further highlight the diversity of the environmental education infrastructure and the strengths and weaknesses of the varying types of contemporary environmental communications.

4.3.4.1 The Alarmist repertoire

The use of alarming language in the reporting of climate change and other environmental problems has become common in newspaper, television, Internet and radio reporting as well as in some popular press books (these are all forms of micro environmental education). Climate change, for example, is often described as awesome, terrible, immense and beyond human control (Ereaut and Signit, 2006, p. 13). The use of this hyperbolic language, often in conjunction with still or moving images of dramatic climatic events and impacts is used to draw attention to the issue

of climate change in a sensational way. Climate change is framed as a real, serious and personally dangerous threat that must be dealt with, or else! The Hollywood film 'The Day after Tomorrow' is a good example of the use of alarmism and the now famous documentary film 'An Inconvenient Truth' is definitely not free of it. The recently released Leonardo DiCaprio fronted film 'The 11th Hour' was promoted using alarmism, although according to Goldsmith (2007) the film itself simultaneously makes use of the optimistic repertoire: it'll be alright if we do something.

Alarmist language is also commonly used by campaigners who seek to bring about behaviour change, Ereaut and Signit (2006) cite the 'Stop Climate Chaos' and the DEFRA produced 'Climate Challenge' online video. Ereaut and Signit (2006, p. 13) argue that the use of alarmist language is not always conducive to changing the behaviour of individuals. Although evidence is not presented, they argue that it may lead individuals to a position in which they recognise and agree that something needs to be done, but the awesome scale at which the problem of climate change is presented can have the effect of distancing people from the problem. This distance from the issue is compounded by the inherent unreality of movies and movie stars and the use of language such as 'despair', 'hopeless', 'overwhelmed', 'chaos' and 'helpless' (Ereaut and Signit, 2006, p. 14). Ereaut and Signit (2006, p. 14) also argue that the unreality of climate change is heightened when it is presented in this alarmist way and can take on a perverse quality from which a secret thrill is drawn, they dub this as 'climate porn.' According to Lowe (2006, p. 6):

> There is growing concern that the social construction of the issue of climate change and its amplification by normative communication channels may be acting to distance or even remove much of the lay public from a point at which they feel they can take action.

This amplification has the effect of rendering the challenge as too great for one individual to feel they can take on; they are paralysed by their own feelings of insignificance and reach a point of despair and inertia. Although an individual recognises the need to act, a knowledge-action gap develops. Lowe (2006, p. 7) states that 'whilst climate change (frequently referred to under the auspices of 'environmental problems') ranks fairly highly among individual concerns... public response to the problem remains weak.' Although Ereaut and Signit (2006, 2007) are

business people who were commissioned to research this area and therefore are not required to back up their statements with evidence, alarmist language is certainly evident in the EEI. Their, and Lowe's (2006), concerns about the impact alarmism could have on behaviour change, or lack of it, is an area in need of further research.

The use of the alarmist repertoire is also potentially problematic because of its potential to turn people off 'the environment'. Thomas (2007, p. 5) begins the editorial of the September issue of the Ecologist magazine as follows:

> The media backlash is just beginning. Slowly, almost imperceptibly, global warming is morphing into 'global boring' and the potential consequences of such cavalier wordplay are immeasurable.

Much in the way Freidman (2004) reports on how environmental journalism lurches through peaks and troughs, Thomas (2007, p. 5) worries that a media backlash will occur, not 'against the fact of global warming *per se* but, instead, against the way this phenomenon is presented as a fad.' Will global warming and doing anything about it suddenly become '*so 2007 darling*', as individuals become immune, sceptical or simply bored by the alarmism? If it does then the 'market' for environmental education could collapse as the numbers of accidental learners who go on to become free-choice learners dwindles and the free-choice learners, freely choose to learn something else. The power of climate change to shock is finite, and the power of shock tactics as agents of behaviour change remains unproven.

Naish (2008, p. 217) also raises concern over incessant environmental alarmism:

> There's...a real danger that too much high-minded enviro-preaching from well-meaning politicos and celebs may provoke a... damaging backlash, which I'll call STP – Sod The Planet – where people pay lip service to greenness but ultimately reject eco-awareness *en masse* because they're bored with it.

In their follow up report Ereaut and Signit (2007, p. 6) argue that within the official public arena a mainstream consensus has been reached, the existence of climate change and the human impact on it has been acknowledged. They argue that within the discourse 'climate change is often now referred to as a given, with little or no explanation.' The effect of this consensus Ereaut and Signit (2007, p. 6) argue is that the once dominant alarmism has now given way to 'sober alarm' described as

'seriousness without the hyperbole'. This is seen as a step forward as it 'leaves room for human agency' (Ereaut and Signit, 2007, p. 14). Outright alarmism however is not completely dead; journalism thrives on sensationalism. It could be argued that unless the story is sensational it will not make the news. For the mainstream media it may be a case of alarmist reporting on the environment or none at all. It is important for all environmental educators to recognise the implications of using alarmist language.

4.3.4.2 Optimistic Repertoire 1: It'll be alright

The second group of repertoires evident in the environmental education infrastructure is the first of two optimistic repertoires. These repertoires can be characterised by the phrase 'it'll be alright'. There are several different types of this repertoire, which will be briefly explored here. Firstly we have what Ereaut and Signit (2006, p. 14) term 'Settlerdom'. This repertoire is in direct opposition to the alarmist repertoire; essentially it is the asking and answering of the question 'what's all the fuss about?' it mocks or rejects the notion of man-made climate change dismissing it as unimportant and contrary to common sense. According to Ereaut and Signit (2006, p. 16) settlerdom is a predominately right-wing viewpoint:

> The settler discourse on climate change is seen most clearly in the broadly right-wing popular press, such as the *Daily Express* and the *Daily Mail*, but it is arguably also the stuff of pub conversations and everyday conversational dismissals of climate change.

Settlerdom is passionately defensive of traditional or current ways of life, settlers see behaviour change on environmental grounds as a threat to their current lifestyles or in opposition to them and therefore argue, not crucially on scientific grounds, but on the grounds of their vision of 'common sense' that behaviour change is unnecessary. Settlerdom is often reinforced by 'British comic nihilism' (Ereaut and Signit, 2006, p. 15). This repertoire is characterised by Ereaut and Signit (2007, p. 22) as a 'very British, very middle-class, whimsical refusal to mind very much about climate change.' Ereaut and Signit (2006) cite the following quote from the Daily Telegraph as an example:

> Global warming has a lot to answer for. According to the scare stories, by 2050 Kent's chalky hillsides will be full of luxuriant vines, the oast houses will be turned into wineries...(The Daily Telegraph, 2006, p. 8)

Adding weight to British comic nihilism is the apparently more serious proposition that 'warming is good' (Ereaut and Signit, 2006, p. 17). The position taken here is that climate change may actually be beneficial. Academics such as Professor Philip Stott and Dr Thomas Crowley are in opposition to the doom and gloom of alarmism arguing that a gradually warming climate could be a good thing. Professor Philip Stott is also vocal in his warnings that environmentalism may be a bad thing for the free-market. Stott, alongside others such as Bjorn Lomborg (author of *The Sceptical Environmentalist* (Lomborg, 2001)), argue that economic prosperity must be safeguarded at all costs.

The penultimate repertoire within the 'it'll be alright' group is 'Rhetorical Scepticism' (Ereaut and Signit, 2006, p. 15). Rhetorical scepticism is the claim that the science of climate change is over-hyped and poorly done. Ereaut and Signit (2006, p. 16) distinguish it from settlerdom by saying that 'it involves an aggressive campaigning scepticism as opposed to a laissez-faire solipsism.' Its rhetorical nature, however, is its weakness. Rather than being a scientific critique of the claims of climate change scientists, it merely attacks the virtues and motivations of the scientists.

The 'it'll be alright' group of optimistic repertoires is, according to Ereaut and Signit (2007), being increasingly marginalized in the mainstream media. However, as the Ipsos MORI report (2007) shows the position of 'the settler' is still prominent in UK public opinion. Rogers (2007, p. 28) adds that there is 'an unreported gulf between the pronouncements of campaigners and politicians and British public opinion.' Rogers (2007) argues that although in the mainstream media and amongst politicians a consensus is emerging on climate change, arguments that challenge this consensus, and keep the debate alive, provide fuel for individuals who are not yet convinced of the need to act on climate change or are simply reluctant to change their own behaviour.

The role of one final repertoire in this category ''Expert' Denial' (Ereaut and Signit, 2006, p. 17) is seemingly very important in this regard. In the summer of 2007 Channel 4 broadcast a documentary entitled 'The Great Global Warming Swindle'. This documentary questioned the scientific basis of climate change, arguing that the

science and methods used by the IPCC were not rigorous and that their results were inaccurate or even plain wrong. That documentary was subsequently condemned by leading scientists and campaigners as misleading and poorly researched. Yet as Rogers (2007, p. 29) points out 'Channel 4 reported that it drew more than 700 comments from viewers, with those supporting its sceptical line outnumbering critics by six to one.' Even if this repertoire is a shrinking one, it is potentially still extremely powerful, and influential over individuals prone to settlerdom.

Both repertoires (or approaches) discussed so far are examples of the sorts of environmental education individuals receive as both free-choice learners and accidental learners. Both types are usually micro in their approach as they imply that individuals need to (or not) change their behaviour because of environmental problems, yet rarely question the drivers of unsustainable behaviour. Environmental educators should be wary of the implications of using alarmist language and be wary of the impact of messages that dismiss the need to re-think the human-environment relationship. The final repertoire is a more positive way of communicating about sustainability; it often aims to empower its audience. It, however, is largely still micro in approach, although it does have potential to be macro.

4.3.4.3 Optimistic Repertoire 2: It'll be alright if we do something

Sections 4.3.4.1 and 4.3.4.2 highlighted some of the ways in which the various repertoires evident within the current environmental education infrastructure influence the formation of a consensus on the need for action to address environmental problems. However, reaching a consensus that something needs to be done is only half the battle, deciding on what and how much needs to be done, who should do it and how it should be done are entirely different things. These are the questions that come into focus for social actors who have accepted that action needs to be taken. The strengthening, within the media, of a mainstream consensus on climate change proclaimed by Ereaut and Signit (2007) has placed added importance on the final group of repertoires. The second optimistic repertoire, characterised by the assertion 'it'll be alright if we do something,' is central to the growth of the EEI. This repertoire exists in several formats each of which have implications on firstly, the development

of a public consensus on climate change, and secondly, the behaviour of individuals. This section will briefly explore these.

According to Ereaut and Signit (2006, p. 20) the most dominant repertoire within this group is the 'small actions' repertoire. This repertoire involves asking a lot of social actors to make some small changes in their behaviour. It is hoped that when these are collated, they will add up to significantly counter climate change. Ereaut and Signit (2006, p. 20) criticise this repertoire as being too mundane. They point out that 'while it normalises the discourse in the face of movie-code alarmism, it easily lapses into 'wallpaper' – the domestic, the routine, the boring, the too-easily understood and ignorable.' This repertoire was used by the late 1990s government campaign 'Are you doing your bit?' and is common in mainstream popular magazines and newspapers. Financial savings are often highlighted as another incentive to be more environmentally friendly both at personal and business levels. The small actions repertoire is a good example of a micro approach, the emphasis is often only on making minor adjustments to behaviour; it is typified by the phenomenon of consuming differently, rather than consuming less. The approach of encouraging small actions can be seen as fatalistic in that it takes consumerism as a given and tries to make the best of it in environmental terms. The goals of those involved in the delivery of this approach are often achievable because they are small and do not involve a questioning of consumerism by the targeted social actor. As I will argue further in chapter 6, the dominance of the small actions approach is possibly a result of a continued widespread belief that environmental problems can be successfully averted within a consumer culture. Potentially this belief could divide environmental education into micro and macro camps, similar to the division between shallow and deep ecologists.

The second repertoire that is found in this group is defined by Ereaut and Signit (2006, p. 18) as 'Techno optimism ('Technology will provide the answer')'. This repertoire is characteristically micro in its nature. Proponents of this sort of discourse include energy companies who promise that technological advancements will allow economic growth and consumerist lifestyles to continue on their current paths despite the environmental limitations of current methods of energy production. Expert scientists

and newspaper columnists within the broad environmental education infrastructure then reinforce the techno-optimism of energy companies. As Ereaut and Signit (2006, p. 18) point out the emphasis is on 'evolution, not revolution'. Techno-optimism is micro when it is painted as the solution and only macro when it is considered to be one part of the solution. One of the dangers of micro techno-optimism is that responsibility for 'doing something' is removed from the individual. If an individual believes that technology will provide the answer then they may perceive that there is little need to change their own behaviour.

It can be argued that two types of techno-optimists exist. I will build on the example of the communications campaign of an energy company to illustrate this. As consensus on the need for action on climate change builds energy companies who are eager to maintain their customer base have to do two things. Firstly, if they themselves recognise the need for action, they have to change the way they operate to supply energy in less environmentally damaging ways. Secondly, they need to communicate to a concerned customer base that they are doing this. As consensus on the need for action builds, the number of individuals seeking the 'greenest' option grows, energy companies therefore have to appear as green or greener than their competitors to maintain market share and this is when communications becomes very important. As mainstream consensus grows the validity of the crude observation that environmentalism sells intensifies. Therefore a company that is aware of the problems of climate change and is seen to be actively working on a solution is seen as progressive, cutting-edge and caring and will prosper, the same is becoming true for vehicle manufacturers. As consensus grows that something needs to be done, appearing green or being the green option continues to be a strategy to win or maintain favour amongst consumers. Techno-optimists can therefore be genuinely optimistic or they can merely appear that way.

The cultivation of a green image for selfish ends has been dubbed greenwash. It is an accusation bestowed upon various social actors, most notably businesses and politicians. The importance of aligning oneself with environmentalism is growing, companies and politicians who recognise this are often commended for taking genuine steps to lessen their environmental impact or for using their power and profile to

campaign on behalf of the environment. However, the core motivation behind an apparently environmental stance is not always clear. Sceptics argue that businesses and politicians only align themselves with the environment for their own ends, that they use an environmental stance as a vote or customer winner. When this is the case, greenwash is in motion. Greenwashing has existed for at least twenty years (Rowell, 2002, p. 19) and is now a global phenomenon:

> From New Zealand to New York, South Africa to South Asia, companies have redefined their products and their activities. Aerosols have become ozone-friendly. Petrol is now green. Washing powders are phosphate-free, while most contained no phosphate in the first place. Nuclear power is now the solution to climate change. And cars, the fastest-growing source of pollution, have suddenly become beneficial to the atmosphere (Rowell, 2002, p. 20).

Whellams and MacDonald (2007) point out a very good recent example of greenwashing by a car company:

> In an advertisement in National Geographic magazine in 2004, Ford Motor Company tried to convince readers of its commitment to the environment by announcing the launch of the Escape Hybrid SUV and the remodelling of its River Rouge factory. One print ad read, "Green vehicles. Cleaner factories. It's the right road for our company, and we're well underway." What Ford failed to tell readers is that it only planned on producing 20,000 of its Hybrid SUVs per year, while continuing to produce almost 80,000 F-series trucks per month. Moreover, just prior to the campaign's release, the Environmental Protection Agency announced that Ford had the worst fleet wide fuel economy of all major automakers.

Politicians are also not immune to accusations of greenwash. In the UK Conservative Party leader David Cameron MP, has strongly taken up the challenge of addressing pressing environmental problems such as climate change. When he speaks on environmental issues he enters the EEI as an educator. However as Cole (2007) points out, he has been subject to critics suggesting that he is indulging in 'greenspin' and 'greenwash' in an attempt to win the green vote. Monbiot (2006) shares the hopes of many environmentalists that Cameron is indeed genuine. Monbiot (2006) highlights that 'one hopeful sign is that Cameron is prepared to carry some political costs. He has taken quite a lot of flak from within his own party for insisting there is more to life than money (evidently some members don't believe there is).' Monbiot (2006) however also questions Cameron's commitment to road building and why a climate change denier is formulating the conservatives transport policies. The publication of

the 'Blueprint for a Green economy' in 2007 has gone a long way towards affirming the credibility of David Cameron's stance on the environment. In politics as in business the evidence for greenwash is not always black and white. If a social actor is green it is good for the environment and if they are seen to be green it can be good for them. Therefore when the temptation to indulge in some greenwash exists, scepticism from observers will naturally follow.

It is also important to remember that whether it is Greenwash or not, politicians are judged by how well they keep their promises. If David Cameron makes promises on the environment he will be under pressure to fulfil them. And secondly, Jonathan Porritt (2007) summed up his chairing of a David Cameron speech and discussion on the environment by saying that 'good Government needs good opposition'. The implication is clear: if the Tory party are strong on the environment and look set to win votes as a consequence, the Labour party must also be strong and up their efforts on the environment to keep up. The impact of Cameron's stance on the environment, whether it is greenwash or not, may well be positive in terms of government policy on the environment.

The last two decades have also seen a rise in the sales of 'green', 'ethical' or 'sustainable' alternatives to consumer goods and services. This is often called sustainable consumption, and is illustrated by the rise in the sales of organic, fair trade and local food, environmentally friendly washing detergents, clothes, furniture, building materials and so on. These alternatives are important in efforts to achieve sustainable development. Unfortunately, however, the emphasis is still on consumption. The message of those selling these alternative products is rarely consume less, it is more likely to be consume differently. The consumerist mindset of individuals is exploited; being seen as an ethical consumer is increasingly important in creating one's identity within the consumer culture, it is becoming a lifestyle choice and the conspicuous sustainable consumption conveys this choice to other social actors. Under a macro approach the individual would desire fewer material products but those that they do require would be drawn from the ethical market. The sign value of the commodities purchased would hold less significance.

The messages coming from the sellers of sustainable alternatives are an important part of the environmental education infrastructure. These messages can shape individuals perceptions of what it takes to be environmentally friendly. When the message is based on switching consumer habits rather than questioning consumption all together then the message is micro and suggests that sustainable development can be achieved within the consumer culture; sustainable consumption embodies the consumer culture. It has to be acknowledged that it is often in the interest of the producer of sustainable alternatives that their target market is susceptible to consumerist influences.

The EEI is very broad, those involved have varying agendas and this influences their message and how it is interpreted. If an individual thinks of something as Environmental Education, then it is Environmental Education. All environmental education ultimately impacts on the goal of environmental education. In analysing any environmental education initiative it is critically important to consider the agenda of the deliver. The primary research of this thesis unpicked the agendas of all those involved in the design and delivery of the education delivered by each participant.

4.4. Conclusion

This chapter has taken a broad look at aspects of environmental education in the UK in the first decade of the 21st century. This review has analysed the development and the current shape of the environmental education infrastructure from a micro and macro perspective. It is clear that this infrastructure is constantly evolving and at a rapid pace. I have argued that a macro approach needs to be adopted to lessen the tendency for environmental education to embody rather than seek to change the current consumer culture that is at the heart of most of the world's major environmental problems. The macro approach fits into the second optimistic repertoire (that it'll be alright if we do something) identified by Ereaut and Signit (2006, 2007). It is however much broader than current micro environmental education in this category. The something that needs to be done is far more fundamental than fiddling around on the margins of consumer culture: it is about moving away from consumer culture. Environmentally it is unrealistic to believe that we can carry on with consumerism forever but current government policy seems to continue to believe this. Rogers (2007, p. 30) quotes Sir Jonathon Porritt who argues that 'Politicians are

preoccupied with trying to keep the same level of consumption with a lower output of carbon.' This techno-optimism is central to the current micro nature of the environmental education infrastructure.

Chapter 5 will re-visit the research questions that were first introduced in chapter 1. The importance of each question will be discussed and the methodology used to seek answers to these questions will be described.

Chapter 5 – Methodology

***All names of individuals and organisations studied have been changed for reasons of anonymity. Text in square brackets represents these changes or additions, for clarity, by the author.**

Throughout this thesis it is argued that micro approaches to environmental education fail to significantly address the most prominent root cause of environmental problems: consumer culture. Micro approaches operate within this consumer culture often embodying it rather than seeking to change it entirely. This thesis critiques micro approaches and argues for wider use of macro approaches that question the fundamental assumptions underlying consumer culture. A macro approach attempts to break down those assumptions and shift societies away from a consumer culture and its negative side effects. Exploration of the reasons why, at present, micro approaches dominate environmental education is one of the two key aims of this research. The second key aim is to examine how macro approaches can be applied in environmental education. By investigating which factors are driving micro approaches to environmental education it will hopefully be possible to begin to identify what needs to be done to provide a platform for macro approaches to prosper. The thesis will conclude by exploring what could be done once that platform has been established.

Thus far this thesis has taken a broad look at the origins, development and current state of environmental education. In doing this it has been possible to trace how human-nature relationships have shaped attitudes towards the environment. This allowed analysis into how these attitudes have contributed to and influenced the establishment and current configuration of environmentalism and environmental education. Chapter 4 showed how environmental education today, in its many varying forms, largely persists as an information-deficit approach to trying to change the behaviour of social actors despite the widespread recognition of the problematic phenomenon the Knowledge-Action gap (discussed in chapter 1). The systemic reasons for this are numerous and have already been explored and identified throughout the thesis so far. More factors driving the type of environmental education delivered (micro or macro) can however be identified by focusing in on the practice of

individual environmental educators. The primary research carried out for this thesis aimed to do this in an attempt to build understandings of micro and macro approaches to environmental education and to explore both of the following research questions further:

1. What are the factors driving micro approaches to environmental education?
2. How can a macro approach be applied in environmental education?

In the field, exploration of these two research questions required two types of qualitative research. Firstly semi-structured qualitative interviews were held with fourteen environmental educators and secondly ethnographic case studies of two further educators were conducted. This chapter firstly aims to justify the use of the qualitative research methodology used and secondly to outline how this was done.

5.1 Qualitative or Quantitative research?

Before outlining the benefits of using semi-structured interviews and ethnographic case studies, it is important to justify the use of qualitative research in this study. Johnson and Christensen (2004, p. 29) argue that three major educational research paradigms exist: '*quantitative research, qualitative research,* and *mixed research.*' Quantitative research involves the collection of numerical data. This type of research is often carried out under the assumption of objectivity; it seeks to produce confirmatory evidence of an external reality proposed by a prior hypothesis or theory. Equally quantitative research methods can be employed to disprove a theory or hypothesis. Qualitative research involves the collection of non-numerical data in, for example, the form of words and pictures. Qualitative research often produces a subjective view of reality that is either socially or personally constructed, or both. The reality proposed by the author of analysis deriving from qualitatively gathered data is therefore usually contestable (and contested).

Mixed research involves the collection of both quantitative and qualitative data. Often quantitative data is collected where possible and combined with qualitative data collected when quantitative data can either not be collected at all or not in a large enough volume to produce objective results. Mixed research may prove useful when, for example, quantitative and objective evidence of the nature of a specific and limited

aspect of reality adds weight to qualitative and more subjective arguments about a wider reality.

To understand the factors driving macro and micro approaches to environmental education the most appropriate approach is a qualitative one. Johnson and Christensen (2004, p. 30) state that 'qualitative research is often exploratory; that is, it is often used when little is known about a certain topic.' The purpose of researching the drivers of environmental education was to gain a greater understanding of the major factors shaping approaches taken. The research undertaken for this thesis was therefore exploratory in that it sought to discover these factors. To make non-contestable statements about the influence that each one of the factors discovered has on the approach taken to environmental education a statistically significant quantity of educators would have had to be researched. The vast nature of the environmental education infrastructure (EEI) meant that it would have been impossible, due to the restrictions of this research project, to collect quantitative data from a sizable and representative enough sample of environmental educators. Given the diversity of the EEI and the numerous different channels through which environmental education comes, it would also have been difficult to accurately hypothesize which factors to investigate. Exploratory qualitative research often generates theories about reality (grounded theory), which can then be tested by quantitative research. In some situations it will however always be virtually impossible to conduct quantitative research.

Research into the factors driving approaches taken to environmental education, is currently still in its infancy. Chapters 6 and 7 of this thesis will present a subjective discussion of the factors shaping the environmental education produced by a small sample of environmental educators. This research is intentionally and necessarily exploratory and cannot hope to produce a definitive list of the factors shaping environmental education. It is also impossible to argue, in anything more than a subjective way, the relative importance of each uncovered factor. However, it is still possible that this research can identify a series of factors, any of which may potentially be far more widespread than just the few educators looked at. Whether or not the factors are, in fact, more widespread is a subject for future research.

This thesis aims to argue that environmental education could contribute to the progress of sustainable development with more success if it was to move away from micro approaches towards macro approaches to environmental education. The aim of the primary research was to explore the possibilities (and impossibilities) for this to happen. The following two sections of this chapter (5.2 and 5.3) will discuss in more detail the two main qualitative research methods used in this thesis: the semi structured interview and the case study. Sections 5.4 and 5.5 will outline both how the research was done and issues in its design and conduct.

5.2 The semi - structured interview

Semi-structured interviews were used both as the major form of research into the practice of all of the environmental educators studied and during the case studies. Drever (1995, p. 1) points out that 'Interviewing is one of the commonest methods used in small-scale educational research.' Interviewing can vary between a very structured style in which an interviewer would read out a question followed by several options from which the respondent has to select an answer, to an unstructured style in which, at the most extreme, the respondent determines the course of the discussion. Between these two extremes lies the semi-structured interview. Semi-structured interviews are an example of qualitative research and benefit substantially from their controlled but flexible nature.

Semi-structured interviews are commonly used throughout the social sciences to research a wide range of different issues. For example, Ball *et al.* (2006) investigated how socio-economic differences between women can explain differences in their physical activity; Young children's perceptions of health were explored by Almqvist *et al.* (2006) and Conley (2006) studied multiple offending drunk drivers. In the field of environmental education research, semi-structured interviews are also common. McNaughton (2004) used them in her study of educational drama as a vehicle for the teaching of education for sustainability. McNaughton (2004) used interviews as part of a wider case study approach to explore the opinions of teachers and children about the drama work they had been involved in. Following written individual evaluations by the children, the researcher investigated further through interviews. McNaughton

(2004, p. 148) states that 'the interviews were semi-structured' and explains that 'the purpose of the interview was to allow the children to elaborate on answers given in their written evaluations.' Moore (2005) investigated the barriers and pathways to creating sustainability education programs at the University of British Columbia. She wished to investigate the barriers preventing the implementation of sustainability education at that institution. Through interviews with students, faculty members and administrative staff she was able to identify several barriers and propose recommendations for their removal. Moore's (2005) study had narrower, but similar aims to those in this thesis. She stated and explained the research question as follows:

> What are the barriers and limitations to creating sustainability education? More specifically, what are the major institutional structures and dynamics that aid in (or obstruct) the development of sustainability at UBC in the area of undergraduate education in the arts and sciences? (Moore, 2005, p. 541)

Her successful use of semi-structured interviews to investigate this question indicates the appropriateness of this method for this sort of exploratory research. Taylor and Caldarelli (2004) used a specific type of semi-structured interview known as photo-elicitation in which an educator was shown a video of himself or herself leading an environmental education experience. The purpose of the interview was for the educators to explore and express their beliefs about their practice. Taylor and Caldarelli describe how the video was central to the interview process, shaping its structure and the questions posed to the participants. The participants were able to respond both to the questions and the video to express their beliefs about their practice. The three examples described here show clearly how useful semi-structured interviews have been in environmental education research in the investigation of factors shaping approaches to environmental education.

Semi-structured interviews are also commonly used in journalism, the wider media as well as in situations such as job interviews. The popular use of semi-structured interviews has benefits to three main groups of people. Firstly the likelihood that the interviewee has been exposed either directly or indirectly to this form of interview can help them feel comfortable whilst being interviewed. Secondly, the reader's familiarity with the research method enables them to imagine the context from which the data emerged. The third benefit is felt by the researcher. The researcher's

(especially an inexperienced or novice researcher) previous experiences of semi-structured interviews will help them to conduct their own. They will also benefit from the interviewee's comfort with the method, as this is likely to produce useful data.

5.2.1 The nature of semi-structured interviews

It is important here to briefly answer the question of what a semi-structured interview is. With the help of Morgan (1988), Bogdan and Biklen (1998, p. 93) define the interview as follows:

> An interview is a purposeful conversation, usually between two people but sometimes involving more (Morgan, 1988), that is directed by one in order to get information from the other.

In qualitative research, interviews can be used as a dominant method of data collection or in combination with other research methods. In this thesis qualitative interviews were used in two ways. Firstly, a sample of environmental educators was interviewed to explore the factors shaping their practice. Secondly, two educators were investigated in greater depth using a combination of interviews and silent observation. In both cases the interviews could be described as semi-structured. Semi-structured interviews are a form of what Hatch (2002, p. 94) terms 'formal interviews'. Interviews vary in the degree to which they are structured or unstructured. Bogdan and Biklen (1998, p. 94) explain how the degree of structure impacts on the qualitative nature of the research:

> Qualitative interviews offer the interviewer considerable latitude to pursue a range of topics and offer the subject a chance to shape the content of the interview. When the interviewer controls the content too rigidly, when the subject cannot tell his or her story personally in his or her own words, the interview falls out of the qualitative range.

Hatch (2002, p. 94) describes semi-structured interviews as follows:

> They are semi-structured because, although researchers come to the interview with guiding questions they are open to following the leads of informants and probing into areas that arise during interview interactions.

Seidman's (1991, p. 9) description of the role of the interviewer in semi-structured interviews further explains the nature of this method:

> In this approach interviewers use, primarily, open-ended questions. Their major task is to build upon and explore their participants' responses to those questions. The goal is to have the participant reconstruct his or her experience within the topic under study.

The usefulness of semi-structured interview is outlined by Drever (1995, p. 1). He firstly argues that they can reveal varying types of information, he states for example that within one interview the researcher can:

- Gather factual information about people's circumstances
- Collect statements of their preferences and opinions
- Explore in some depth their experiences, motivations and reasoning.

Drever (1995) goes on to argue that semi-structured interviews produce high quality data due the flexibility they afford. The skilled interviewer is able to probe further into areas that appear interesting and they are able to seek clarification when information is unclear to them. Semi-structured interviews also allow the interviewee to follow a trail of thought to reveal issues, ideas and motivations that the interviewer had not previously been aware of or regarded as important. Due to the formal setting of the interview, the interviewer is, however, able to stay in control and guide or chair the interview to ensure that the focus is not lost or forgotten.

Seidman (1991, p. 4) asks: 'Interviewing: The method or a method?' To which one can answer: interviews should be used only when they are appropriate. Citing Locke (1989), Seidman (1991, p. 5) states that 'the adequacy of a research method depends on the purpose of the research and the questions being asked.' As was discussed above, interviews can be used for several different purposes. Seidman (1991) argues that interviewing is most appropriate when the researcher is interested in the subjective understanding an individual, or group of individuals, has of an experience. When, for example, the researcher is interested in the behaviour of a subject silent observation may be a more appropriate research methodology.

Interviewing does have some disadvantages, it is often time-consuming, sometimes expensive and can experience problems such as difficulty in gaining access to interviewees and moral issues about the use (or misuse) of qualitative data must be overcome. In section 5.4 the design and conduct of the qualitative interviews done for

this research will be outlined, the issues surrounding both the design and conduct of these will also be explored. Section 5.3 will look at the use of case studies in environmental education research.

5.3 The Case Study in Environmental Education

> Case studies are frequently used in environmental education to illustrate applications of theories in practice as well as being used as potentially generalizable exemplars in research reports and advisory texts for teachers. They serve several functions including exhortation, valorization and exemplification. (Dillon and Reid, 2004, p. 23)

The second phase of primary research for this thesis took the form of two qualitative case studies. Case studies should be undertaken with great caution. This section will explore the use and value of qualitative case studies and discuss the issues surrounding the use of case studies in environmental education.

5.3.1 The Qualitative Case Study

Stake (1995, p. xiii), provides a good starting point for studying case study research in his book *The art of Case Study Research,* he points out that 'there are many, many ways to do case studies' he merely discusses the ones he prefers. Kyburz-Graber (2004, p. 54) notes that 'Case study research asks questions of 'what', 'why' and 'how', rather than questions of 'who', and it certainly does not ask questions of 'how many' – or only occasionally.' Before looking at case studies in environmental education it is useful to firstly point out some of the vital considerations needed in the design of a case study. Firstly, the case study needs to have some sort of limit. In any research, especially qualitative research, real world issues, persons or programmes under study are unlikely to exist in a vacuum. This is how case study research differs, despite asking the same sorts of questions, from experimental research. 'The paradigmatic difference is that case studies do not rely on a controlled and somehow artificial environment' (Kyburz-Graber, 2004, p. 54). We must therefore firstly distinguish the boundary of the study. The factors that are necessary to study in order to answer the research question need to be defined and peripheral factors need to remain, not ignored, but still peripheral. The research question will largely guide whether the study is an intrinsic or instrumental study. Intrinsic studies are those that are interested in the case in and of itself. By learning about the case itself we are

interested only in that case, we are not trying to learn something that can shed light on a wider more general problem or question. An instrumental case study is one that is used when we feel that by studying a certain case in detail we can learn more about a wider more general research question.

Care must be taken in the selection of cases, Stake (1995, p. 4) points out that 'our first obligation is to understand this one case. In intrinsic case study, the case is pre-selected. In instrumental case study, some cases would do a better job than others.' It may be that it is useful for generalisation purposes to consider a typical case when conducting an instrumental case study, but often unusual cases can be very useful in highlighting areas of very good practice and the reasons for them, for example. It must, however, be remembered that it is unlikely that new generalisations will become apparent following a case study or a collection of related case studies. Existing generalisations are often modified and a 'refinement of understanding' (Stake, 1995, p. 7) is a realistic achievable aim of instrumental case study. Stake (1995, p. 8) points out that 'the real business of case study is particularization, not generalisation.' Through case study we learn about the particular case in detail, emphasising its uniqueness, in order to gain any generalisation at all we must first have a deep understanding of the unique case.

A third type of case study research is identified by Stake, namely - collective case study. Dillon and Reid (2004, p. 26) explain how this 'is not the study of a collective but an instrumental study extended to several cases, e.g. an issue is studied in several situations.' They quote Stake (2000, p. 237) who argues that cases 'are chosen because it is believed that understanding them will lead to a better understanding, perhaps better theorizing, about a still larger collection of cases.' Collective case study thus has the potential to produce what Stake (1995, p. 42) terms 'naturalistic generalization', which can be loosely defined as interpretation based on experiential learning. Collective case study is therefore a useful means of increasing our understanding of an issue; it is however a very time consuming process.

During the course of any qualitative case study the researcher must interpret what is happening, this is the distinctive characteristic of a qualitative study. Through

objective interpretation the researcher is simultaneously observing what is happening and analysing events allowing what Parlett and Hamilton (1976, cited in Stake, 1995, p. 9) term *'progressive focusing'*. As a case study progresses, previously unconsidered factors may achieve relevance and factors of initial importance may lose their significance. The researcher must remain alert to these changes, as there may be a need to refine or modify the initial research question mid-study. As a researcher observes a case and its data he or she may reach certain conclusions leading them to make assertions about what is happening. This is a natural consequence of case study research, the researcher naturally wants to be able to conclude something at the end of the study and this often takes the form of some generalising assertion. Stake (1995, p. 12) is at pains to ensure that great caution should be taken when making assertions:

> It is not uncommon for case study researchers to make assertions on a relatively small database, invoking the privilege and responsibility of interpretation. To draw so much attention to interpretation may be a mistake, suggesting that case study work hastens to draw conclusions. Good case study is patient, reflective, willing to see another view of the case. An ethic of caution is not contradictory to an ethic of interpretation.

The type of research question asked often has a large influence on the progress of the case study. Qualitative research differs from quantitative research in one major way; quantitative research largely seeks to explain what is happening whereas qualitative research seeks understanding. Stake (1995, p. 39) points out that 'important human actions are seldom simply caused and usually not caused in ways that can be discovered.' In everyday life we take great enjoyment, or at least subject ourselves to large amounts of mental stimulation, in our search for the reasons why people behave in the ways they do. Why else would so many people become engrossed in 'reality' television shows? In qualitative research we are very unlikely to uncover non-contestable explanations for human behaviour. We are searching for a deeper understanding of what is happening in complex situations, while always acknowledging that the knowledge we gain is never going to be perfect.

The method of data collection and analysis needs to be decided upon by the researcher prior to the initiation of a case study. Drawing on Miles and Huberman (1994) Stevenson (2004, p. 44) describes Vignettes, or mini cases as:

> Snapshots of professional practice in which the professional is engaged in reflecting on a recent episode of practice... [this] involves collaboration between the professional and a researcher in which the former first describes her actions and then, facilitated by the researcher's questioning, thoughtfully explains the reasoning behind her actions.

Stevenson argues that this can also be carried out by practioners alone in the role of reflective practioners. This, however, takes great discipline and for a case study to maintain a rigorous level of validity the collection and analysis of data must be done as objectively and as free from prejudices as possible (Kyburz-Graber, 2004). Vignettes can be very thorough and useful to the reader especially if they can empathise with the professional under study but they can be very time-consuming. Stevenson, drawing on Miles and Huberman (1994) once again, introduces the possibility of pre-structured studies that give a greater opportunity for the researcher to code data findings into themes as they reveal themselves during the study. This approach, however, demands the researcher to have a firm understanding of the phenomena under observation and therefore requires a limiting of the potential for a wavering of the research questions. The researcher needs to be very comfortable with what they are observing so that interpretation is comparatively uncomplicated.

Interpretation is a key skill for the qualitative researcher. This interpretation is continuous throughout the case study period, from the design stage through to the implementation and finally the concluding analysis. The factors affecting the programme, person or issue under study are likely to develop in unexpected ways over the course of the study period. The researcher must take care to interpret the most important phenomena and not allow the study to digress toward peripheral happenings. Interpretation is inevitable during case study research; prior to carrying out the case study the researcher must decide whether they are going to intervene in any way. As Stevenson (2004, pp. 41-42) points out 'The case itself may be descriptive of what has already taken place or is currently taken place, or it may be interventionist in enacting changes to be studied and documented.' It is possible therefore to distinguish between non-interventionist and interventionist case study.

As will be explained in chapter 7 both case studies conducted for this research were non-interventionist. However, it is worth briefly considering an interventionist method

based on interpretation and reflection called action research. Action research involves research based on theory and action. It is a reflective practice in which practioners review and analyse the effects of an intervention and act accordingly in line with some theory. The new action is subsequently analysed and reflected upon to construct or contribute to theory. Carr and Kemmis (1986, p. 42) cited in Corcoran *et al.*, (2004, p. 15) define action research as 'a form of self-reflective inquiry undertaken by participants in social (including educational) situations in order to improve the rationality and justice of their own social or educational practices, their understanding of these practices and the situations in which the practices are carried out'. Within education the purpose of action research is to empower the educational community, so that they can improve their own practice through self-reflection.

5.3.2 The use of case study in Environmental Education

Turning now to environmental education specifically, recent research has identified several issues that need to be considered by researchers in this field. These will be briefly reviewed here.

Firstly, Dillon and Reid (2004) offer some criticisms of the use of the term case study. They are cautious about Stake's (1995, 2000) claims that case study can be conceptualised as a form of research. 'Indeed it has become (and maybe always was) an inadequate and confusing term.' (Dillon and Reid, 2004, p. 25). They point to Stake's own admission (2000, p. 238) that particularisation and interest in the unique case are not 'universally loved'. In the production of reports based on case study it is important that the researcher does not exaggerate the potential for generalisation, something that Dillon and Reid (2004, p. 28) imply is the major weakness of connecting the term research to the term case study:

> One might ask, given the unique nature of the case study, 'Why do people bother to read them?' we believe the answer is, often, because those who publish case studies overtly or covertly intend them to be used to indicate more generalizability than Stake suggests is possible.

They argue that given the very limited possibility for generalisation offered by a single case study, reports of this nature should be ignored by those who have anything other than an intrinsic interest in the case in question. By this logic it seems that

Dillon and Reid believe that case study research should only be categorised as case study research if it is a collective case study of two or more instrumental cases, therefore providing potential for generalisation and value to the research community.

In February 2004 a special edition of the journal *Environmental Education Research* looked at the use of case studies in the field of environmental and sustainability education. Central to this special edition was a paper by Corcoran *et al.* (2004), which was intended to raise concern that case studies were not fulfilling their 'potential for improving the field of sustainability in higher education' (Corcoran *et al.*, 2004, p. 7). They reviewed 54 journal articles on sustainability in higher education. Their first criticism was that despite the fact that case studies can be particularistic, descriptive or heuristic; most case studies in this field are merely descriptive and this accounts for the assertion they make that case study research has 'not lived up to its potential to transform practice' (Corcoran *et al.*, 2004, p. 7). This assertion is perhaps not surprising given the difficulties involved in researching within this field. Research is not the only challenging discipline within environmental education, indeed as Gough *et al.* (2000, p. 290) point out it is 'not... controversial to say that implementing environmental education is an extremely complex matter.' The fact that it is so complex means that the study of it must be complex in order to gain real value from any analysis. Corcoran *et al.* (2004, p. 11) try to highlight what needs to be investigated for successful case study:

> Case study research is a study of practice. It is a study of all the players, or practioners, involved directly, or indirectly, in the innovation. Further, it is a study of the practioners' actions and the theories they hold about their actions.

All of these factors were important in this study. In order for this thesis to contribute more than a mere description of environmental education initiatives and to potentially contribute to a transformation of practice greater understanding of the potential of case study research is needed to allow effective case study design.

Corcoran *et al.* (2004) focus on case studies that investigate innovations in sustainability in higher education. The case studies analysed were not necessarily investigations into sustainability or environmental education programmes in higher education, they were largely concerned with the sustainability of higher education

institutions in themselves, both infrastructually and academically. However the level of sustainability achieved by the institution is largely dependent on the incorporation of environmental and sustainable development education into the teaching programmes of all academic disciplines offered. Criticisms of these case studies and the implementation and reporting techniques used are therefore very relevant here.

Corcoran *et al.*, (2004) argue that, of the case studies analysed, few outlined a clearly identifiable purpose. This purpose may be intrinsic, in that it will seek to improve an individual's or an institution's practice, or instrumental, in that it will attempt to have some transformative value. The second area of concern was that the role of each actor within the case was not adequately described. It is important that the role of each actor is carefully explained and his or her position within the order of power should be clearly identified and understood. Thirdly, Corcoran *et al.* (2004) argue that the case study reports need to provide a challenge to both the reader and writer. It is through such challenges that institutions/ individuals are motivated and inspired to transform their practice. They argue that 'dissonance [is] needed to trigger the re-thinking of ideas in the light of alternative, possibly contesting, viewpoints or ways of thinking and feeling' (Corcoran *et al.*, 2004, p. 15).

In Dillon and Reid's (2004) critique of Corcoran *et al.* (2004) they firstly argue that the authors contradict themselves by arguing that a case study approach is the best way to understand a complex situation. They point to the fact that Corcoran *et al.* (2004) bring to attention the uniqueness of higher education institutions yet claim that it is possible to generalise to wider situations as a result of the use of case studies. Dillon and Reid go as far as to question whether the assertion of Corcoran *et al.* (2004, p. 7) that 'Case study research in sustainability in higher education has not lived up to its potential for improving practice in institutions moving toward sustainability' is a fair one. They argue that the Corcoran *et al.* (2004) paper (inadvertently), in addition to evidence from their own paper, highlights the inappropriateness of case study research to provide anything more than an intrinsic interest. Dillon and Reid (2004, p. 30) go on to state:

> We would refer to Brown and Dowling's (1998, p. 165) point that 'professional education practice and academic educational research ... are distinct fields of activity'- research does not have to be transformative. It is the

use of research 'evidence' that is or is not transformative, not the research itself.

This means that criticising a research method for its inability to be more than merely descriptive and in fact transformative is a little unfair. A relationship must exist between academic educational research and professional education practice if case study research is to have a transformative effect. The responsibility for the academic educational research is to provide evidence for the need to transform practice and propose possible paths for this. Professional education practice has the responsibility of interpreting the research evidence to put the transformation into practice.

Stevenson (2004) also responds to the assertion by Corcoran *et al.* (2004, p. 7) that case study research in the field of sustainability in higher education has not 'lived up to its potential to transform practice.' The instrumental and intrinsic case study methods discussed above usually take the form of descriptions and aim to provide understanding about what is going on in the case studied. In agreement with Dillon and Reid (2004), therefore, it is unfair to criticise a research method in which the emphasis is on informing rather than transforming practice. Stevenson (2004) does, however, suggest a potential way forward for case study research. He argues that Critical theory based research is more desirable if the research has the aim of transforming practice. Critical theory based research 'seeks not just to understand or explain social reality, but to transform it' (Stevenson, 2004, p. 45). It is usually applied to situations of social oppression but could be applied to studies of environmental education practice because it looks at how external constraints (social, economic, political, financial, ideological, paradigmatic etc) affect the effectiveness of education about and education for the environment.

5.3.3 Issues in case study design

Stevenson (2004) argues that the reader must be prioritised in the design of case study research; researchers must consider how the reader will interpret and act upon the research findings. Stevenson (2004) argues that there are three types of research methodologies and the use of the case study by the reader / practioners is therefore dependent on which of these three orientations it fits into. Firstly, there is the

positivist, top-down approach, which assumes a 'linear relationship between knowledge generated by research and its use in policy and practice' (Stevenson, 2004, p. 40). Secondly, Stevenson (2004, p. 40) identifies naturalistic research from which the reader is expected to:

> Construct their own understandings of any findings and conclusions presented and draw their own inferences about how they might inform their own individual or institutional practices in their own educational settings.

Thirdly, Stevenson identifies and champions critical theory based research methodologies as mentioned above. An example of this method is participatory action-research. 'In participatory action research cases, teachers or practioners are viewed as generators of knowledge and agents rather than objects of change, while knowledge is viewed as arising in and for action.' (Reason, 1994, cited in Stevenson, 2004, p. 40).

Kyburz-Graber (2004) argues that case study research is not rigorous enough; he argues that a more rigorous, scientific approach needs to be adopted with quality criteria based on objectivity, reliability and validity. In the design and implementation of case study Kyburz-Graber advocates sticking to the five principles put forward by Lamnek (1995) if one seeks to understand and rigorously report on complex environmental education programmes through case study. The first step is to clearly set out the theoretical basis of the research and the research questions. This has been covered in the first four chapters of this thesis. The second principle to adhere to is triangulation. 'Case study research uses multiple data sources and builds on multiple perspectives for interpretation, a process which is called triangulation' (Kyburz-Graber, 2004, p. 59). The purpose of triangulation is to give greater objectivity and reliability to the results. Thirdly, it is important to include accessible, reliable and comprehensive data. As Kyburz-Graber (2004, p. 60) notes:

> A further quality criterion of case study research is the way in which the case-study report is compiled and how the report and additional material like the database are made accessible to an interested audience.

A fourth quality criterion is concerned with providing a chain of evidence. 'A case study is designed to reveal distinct, traceable evidence step by step' (Kyburz-Graber,

p. 61). Coding data so that statements or observations can be easily linked to theory by the researcher and reader often helps this. Finally, the researcher needs to consider generalisation. The discussion above has already highlighted this contentious issue and Kyburz-Graber (2004, p. 62) agrees that: 'Generalisation is one of the most hotly debated problems in case study research, and many criticisms stem from the way in which it is handled.' He refers to Yin (1994) who distinguishes between statistical logic of generalisation and replication logic. Quantitative research makes use of statistical logic, by making assertions based upon the statistical significance of findings. 'Replication logic, on the other hand, means that findings may be generalized to the extent to which they can be replicated in other cases' (Kyburz-Graber, 2004, p. 62).

The design and conduct of the case studies made for this thesis will be explained, in detail, in conjunction with the exploration of the data they produced in chapter 7. Chapter 6 of this thesis discusses the data emerging from phase one of the primary research, the interviews. Section 5.4 will explore the issues surrounding both the design and conduct of these interviews.

5.4 Interview design and conduct

Chapter 6 will discuss, in detail, the findings emerging from the interview phase of the primary research. This section will outline the issues surrounding the design of the interviews alongside a detailed outline of the interview and how it was conducted.

5.4.1 Accessing and selecting a sample of environmental educators

Having decided on semi-structured interviews as the most appropriate methodology to explore the research questions of this thesis, the first challenge was to select an appropriate sample of environmental educators to study. As discussed in chapter 4 (section 4.3), environmental education is delivered through many different channels forming an environmental education infrastructure (EEI) that today, continues to expand. The purpose of this thesis is to explore the factors driving micro approaches to environmental education and the possibilities for macro approaches to emerge. The problem of attempting to generalize findings from a small sample to the wider population was discussed in relation to case study research in section 5.3. Caution

must likewise be present when attempting to generalize findings from a small set of environmental educators to the wider EEI. Given the diversity of channels through which environmental education comes it was thought appropriate, in this exploratory research, to study as many different types of educators as possible. This type of purposeful sampling is described by Seidman (1991, p. 42) as 'maximum variation sampling.' Sampling, however, may not be the correct term in this case as the research is not attempting to be representative, only explorative and illustrative. A more appropriate term would be selecting.

The definition of what environmental education is, is not always a simple one to make. Section 4.3 of chapter 4 argued all education is ultimately for or against the environment in terms of the impact it has on the behaviour of those receiving it. It is also possible that an individual who does not perceive their work as environmental education may, in the eyes of others, deliver environmental education. For the purposes of this research, I identified environmental educators as people who delivered messages, with an environmental or sustainability content, which had the potential to change the attitudes or behaviour of the audience receiving it. I was not concerned with whether the educator perceived their work as education for the environment, education about the environment, or indeed simply environmental education. As I pointed out in Chapter 4 (4.3.2) what each individual learns may not be *about* the environment or *in* the environment, but it is very possible that it will *affect* the environment because in some way it will affect the individual's attitudes, values and ultimately their behaviour. I also argued in chapter 4 that the EEI is made up of three main sectors: formal education, free-choice learning and accidental learning, I sought participants from all three.

In choosing interviewees the problem of accessing them had to be overcome. Seidman (1991) points out many issues that need to be considered when seeking and accessing interview subjects. He argues that where possible the interviewee should be a stranger to the interviewer and vice-versa. He argues that it is a tendency of beginner interviewers to look for the easiest path to their goal, potential participants. Seidman (1991, p. 31) states the reason they feel this way as follows: 'my experience is that the easier the access, the more complicated the interview.' For this reason I sought, in the

main, to interview environmental educators who were new to me. To select the environmental educators for this study I had to consider the wide EEI. As an environmental education student I am very familiar with the EEI and therefore knew where to look. Having decided which channels I wanted to study I set about identifying several suitable educators from each. Section 5.4.2 will outline how exactly each interviewee was approached. I approached around three times as many educators as I finally interviewed with the aim of studying a manageable number of sixteen, fourteen for interview only and two for interview and case study. My request for an interview was rejected by some and I decided against others following further investigation of their role. Some types of educator were easier to contact and access than others due to their availability and geographical location. I was however happy with the variety of educators, who collectively represented the formal, free-choice and accidental sectors of the EEI, who were finally chosen for research. The final section of this chapter will present pen profiles of each educator interviewed discussing their role in the EEI and a brief outline of their activities. For the remainder of this section I will outline and discuss issues surrounding the design and conduct of the interviews.

5.4.2 Initial Contact and Pre-Interview communications

Drever (1995) offers some practical advice on approaching interviewees. He points out that in some cases the interviewee may require some sort of tangible reward for their involvement in the project. This was not feasible for this study, given the financial limitations imposed upon post-graduate students. The best reward I could offer potential interviewees was the opportunity to discuss their practice anonymously with the potential that the research would in some way impact positively on their work. This could not be a firm promise and with the lack of any other obvious benefit to the interviewee I was reliant on their personal willingness to be involved.

The initial approach to every potential interviewee was made via email; as it was a *cold call* it was essential to get it right. At this stage the intention was to generate an interest rather than a commitment to becoming involved in the project. The initial approach was intentionally short giving a very brief outline of the research projects aims, the researcher and the type of person being sought for interview. An example of the initial approach made to environmental educators can be found in Appendix 1.1.

Having generated an interest it was important to then try to commit the educator to an interview. Progress through this stage varied from educator to educator, however during this stage the educator was made aware of several key characteristics of the interview and what their involvement would be. Drever (1995, p. 39) stresses the importance, at this stage, of making 'clear the practical demands on them [the interviewee] if they take part.' By giving the interviewee control over when and where the interview would take place, explaining to them that they and their organisation would remain anonymous in the research and promising that the interview would take no longer than one hour the chances of them committing to the interview improved. Drever (1995, p. 39) also gives the following advice to researchers who are at this stage:

> Be open about your intentions, avoid antagonising or misleading people, and give a general impression that you know what you are doing.

It was, therefore, important at this stage to inform the interviewee that the interview would be tape recorded and transcribed and that they would be asked to read and comment on the transcript to ensure accuracy. It was also made clear that they would be expected to read a short letter briefly detailing the project's context and main objectives. Finally, I clarified that they were free to withdraw from the project at any point; their commitment was therefore not entirely binding.

Once commitment had been made and a time and place for the interview decided upon, one final pre-interview communication was necessary. Prior to the interview the educators were sent (by email) the short letter described in the last paragraph. An example of this letter can be found in Appendix 1.2. In discussing, in the letter, the context and aims of the project it was important to consider how much the interviewee should be told. The importance of revealing the basic outline of the project was firstly to avoid problems such as taking the interviewee uncomfortably by surprise with the questions and secondly to ensure that they were happy with the subject matter and understood why they are involved (Drever, 1995). It was felt important at this point not to reveal too explicitly the opinion of the researcher about the issues under discussion. The reason for this was to avoid the possibility that the interviewee would feel pressured to comply with those opinions, to please the researcher, rather than

expressing their own personal beliefs. Pre-interview communications are important to the relationship between interviewer and interviewee. It is during this stage that understandings of control are established along with the level of formality. Section 5.4.3 will look more closely at this relationship.

5.4.3 The interviewer – interviewee relationship

Seidman (2006, p. 95) argues that: 'Interviewing is both a research methodology and a social relationship that must be nurtured, sustained, and then ended gracefully.' It was important to develop an appropriate relationship with all the educators studied to maximise the value of the data emerging from the research.

Although the interviews were not formally structured they were semi-structured, which, together with the approach taken in the build-up to the interview, helped to maintain the appreciation of who was in control of proceedings. An 'I-Thou' (Seidman, 2006, p. 95) relationship was aimed for in which the interviewee was thought of as a conscious human being rather than as an object so that the relationship came close to being a 'we' relationship without actually becoming that. The purpose of restraining from a 'we' relationship is that there is a danger that the interview would become a conversation. Seidman (2006, p. 96) describes the importance of the 'I-Thou' relationship by differentiating it as follows:

> In an "I-Thou" relationship... the interviewer keeps enough distance to allow the participant to fashion his or her responses as independently as possible.

As the interviewer I was aware of the importance of how I presented myself. It was felt important that the interviewee trusted the interviewer and felt comfortable in the interview situation at all times. I assumed the persona of a competent and serious academic researcher and strove to act as one throughout the interview process. I ensured that I communicated in a friendly but formal way, dressed appropriately, transmitted formal but open body language and kept as close as possible to the time schedule agreed for the interview.

During the interview several measures were taken to ensure that the interviewee responded well to the aims of the interview. Lodico *et al.* (2006, p. 125) stress the need for the interviewer to 'strive for neutrality' they advise the following:

> To maximise what participants tell you, it is important that you are a good listener and non-judgemental in your reactions. Be sensitive, and never act shocked or upset by what you hear. Being judgemental is likely to limit interaction and may cause the participant to question his or her level of trust in you. (Lodico *et al.*, 2006, p. 125)

It was important that I was non-judgemental throughout the interview so that the educators spoke truthfully and openly about their practice and the beliefs they had regarding both their own practice and environmentalism as a whole. Seidman (2006) describes the importance of building up a rapport with the interviewee, but does stress the importance of preventing the development of too much rapport. He makes the following warning:

> The problem is that, carried to an extreme, the desire to build rapport with the participant can transform the interviewing relationship into a full "We" relationship in which the question of whose experience is being related and whose meaning is being made is critically confounded. (Seidman, 2006, p. 96)

Rapport was built in various ways during the interviews. In some circumstances I described my own experiences of, for example, the knowledge-action gap to empathise with the interviewee in an attempt to encourage them to openly discuss their own experiences. In some circumstances it was felt necessary to abort attempts at neutrality to gain insights into the educators beliefs and understandings about, for example, a macro approach to environmental education. This often helped build rapport.

The relationship between the interviewer and interviewee will be discussed further in the remaining sections of this chapter. The next section will discuss the importance and the form of the interview preamble.

5.4.4 Interview preamble

Before asking any questions it was important to formally begin the interview. To do this an interview preamble was designed. Lodico *et al.* (2006) advise two basic procedures that should open a semi-structured interview. Firstly, it is appropriate to re introduce oneself and the project and secondly it is important to remind the interviewee of the confidentiality of their responses. Appendix 1.3 is an example of the informed consent form signed by each interviewee during the interview preamble.

The informed consent of each educator who participated was important to ensure that the research process was ethically sound. Seidman (2006, p. 61) outlines the ethical principles of research and the importance of gaining informed consent as follows:

> As expressed in the Nuremberg Code, the essential ethical principle of research with humans is that participants freely volunteer to participate in the research. In order to willingly consent in the truest sense, potential participants must know enough about the research to be able to gauge in a meaningful way whether they want to proceed. Meeting this standard is the underlying logic of the informed consent form.

Beneath the contact details of the research team, the participants were informed of the following and were asked to sign the informed consent form to give formal consent to their participation in this research project:

> Thank-you for agreeing to take part in the project. Before we start I would like to emphasize that:
> - your participation is entirely voluntary;
> - you are free to refuse to answer any question;
> - you are free to withdraw at any time;
> - the interview will be tape-recorded and transcribed;
> - you will be given the opportunity to read the transcript and/or listen to the tape recording to confirm you are happy with what was said
>
> The interview will be kept strictly confidential and will be available only to members of the research team. Excerpts from the interview may be made part of the final research report, but under no circumstances will your name or any identifying characteristics be included in the report.
> (Reproduced from appendix 1.3)

Prior to each interview the educators were sent a letter detailing the aims of the research project (see appendix 1.2). During the first stage of each interview this letter was briefly re-capped upon to ensure that the participant understood the aims of the project as well as some of the key concepts that would later be discussed. The informed consent form was read out to each participant. Each participant was given an electronic version of the form prior to the interview and a duplicate paper copy after signing it. The interview preamble introduced each interview and gave the educators the chance to clarify any issues with the projects aims and context before any questions were asked. Several educators made the most of this opportunity and interrupted the interviewer to ask questions or make observations. The interview preamble was therefore very much part of the interview and was treated as such

during data analysis. The next section will look at the interview schedule and outline the issues involved its design and delivery.

5.4.5 The Interview schedule

Box 5.1 contains an example of the interview schedule used in this project. The semi-structured nature of the interview meant that the interviews did not strictly follow the schedule drawn up. The basic structure of the interview was, however, consistent throughout. Seidman (2006) urges researchers to pilot their research method prior to the formal data collection process. The purpose of piloting is to ensure that the questions are appropriate and to give the researcher a chance to practice his or her technique prior to the formal data collection. Pilot interviews were conducted with a secondary school science teacher and an environmental education charity volunteer with satisfactory results allowing the confident progression to the interviewing of further educators.

Box 5.1 – Interview schedule

Interview schedule: [Participant name]

1. How would you define environmental education?
2. What is your role within environmental education?
3. Which issues do you focus on? Why?
4. How much freedom do you have to decide which issues to focus on?

ANSWER QUESTIONS 5 – 8 FOR EACH ISSUE

5. What is the aim of your work? Is it behaviour change or motivation to change behaviour? Does it depend on the issue? What are you hoping for?

GET CLARIFICATION

6. How do you approach it? And how successful do you think you are in meeting these aims?
7. How do you know?
8. How much do you think your work contributes to the underlying goal of environmental education? (Positive environmental action)
9. Which issues are the most tempting to address? Why? Do you have the opportunity to teach about them?

10. Apart from your own personal choice of which issues you want to teach, are there any other factors and constraints that influence which issues you teach?

GET CLARIFICATION

11. How aware are you of the Knowledge-action gap?
12. To what extent do you take it into consideration in your work?
13. (If there are some human constraints, e.g. syllabus) Do you think that those who apply constraints upon you have knowledge of the 'gap'?
14. What impact does this have on your work?
15. Why do you think this is? (Is there a hidden agenda, are those who are applying constraints / influencing the content of environmental education, happy for the knowledge-action gap to exist yet an awareness of it not to? – Government DfES?)
16. What is your own personal experience of the knowledge-action gap? Does your own behaviour reflect your environmental knowledge?
17. Why? Why not? Does it depend on different circumstances you find yourself in?
18. What impact do you think this has on the issues you address? (Do you try to practice what you preach / preach what you practice?)
19. Given that our behaviour (environmentally friendly or not) is driven by many different social and cultural factors and not just environmental values, how do you think that the behaviour of individuals can be shifted towards behaviour that has less of an impact on the environment?
20. What role do you think environmental education can have within that?
21. Do you think you can contribute to this in your current workplace? Why/ Why not?

Following the interview preamble the first stage of the interview aimed to do two things. Firstly, descriptions of the educator's role within the EEI were sought and secondly the term 'environmental education' was questioned. These questions were both what Drever (1995) describes as 'open' questions that allow the participant to choose which direction they wished to take the discussion. Control was maintained by probing further into areas of interest. Lodico *et al.* (2006, p. 125) describes a probe as

'a follow-up question that is asked to get clarification about a response'. It is also important to prompt when necessary, particularly when the interviewee has not fully understood the question or has not answered it in enough depth. As far as possible prompts and probes were planned prior to the interview, in preparation for the potential need to use them. Having discussed environmental education in detail and the role of each educator within it, the interview moved on to ask questions that sought to uncover the specifics of the issues covered by the educator in their practice. This was followed by attempts to uncover approaches taken and the factors driving those approaches. Chapter 6 will discuss in more detail the reasons for the questions asked and the responses received.

The second half of the interview began with an exploration of the knowledge-action gap both in the educator's personal and professional lives and in their observations of it in their practice. During this stage it was important to maintain a good rapport with the participants and remain neutral in response to what they were saying. Each participant was comfortable opening up about his or her experience of the knowledge-action gap and freely discussed his or her understandings of it. Towards the end of each interview the potential of a macro approach was explored. Explanation of what was meant by a macro approach was often needed, which gave rise to the potential for the interviewer to reveal his position on the issue quite explicitly. In some instances this may have led to the educator feeling obliged to agree to with the interviewer, although there is no explicit evidence of this. Each interview ended with a chance for the participant to add further points that they felt relevant and on several occasions the interviews continued. The tendency for the interview to turn into a conversation was strong at this point; care was therefore taken to maintain the 'I-Thou' relationship.

5.4.6 Interview transcription and amendments

Each interview was tape-recorded and later transcribed to assist in the data analysis phase of the project. Seidman (2006, p. 115) highlights both a positive and negative side to the process of transcription:

> Interviewers who transcribe their own tapes come to know their interviews better, but the work is so demanding that they can easily tire and lose enthusiasm for interviewing as a research process.

Despite the laborious process involved in transcribing, it was felt that it was crucially important to do it as it converted the data into a very manageable format from which to begin analysis. Transcription also allowed the educators to read over the interview, correct obvious spelling mistakes and ensure that they were happy with what was said. Participants were also given the opportunity to make amendments to the transcript if they felt that what they said had been poorly explained or had the potential to be misunderstood.

5.4.7 Coding the data in preparation for analysis

Prior to analysis it is important to code the data found in the interview transcripts. Coding is important in the handling of large volumes of data as it makes it easier for the author of the write-up. Seidman (2006) describes how analysing and coding data is a difficult task in which a lot of judgement about what is and what is not important is needed. During this process I aimed to highlight passages that described and explained the design and delivery of the educator's environmental education. I also sought passages that exemplified macro approaches and/or passages that highlighted the potential for them to emerge. It was also important to highlight other notable passages of relevance and to keep note of ideas for areas of future possible research. Each of these different types of passages were highlighted in different colours to make reference to them as simple as possible. Each interview transcript was also annotated with notes explaining the significance of certain passages and how they relate to literature and other interviews. Ideally a systematic way of coding could have been designed. Given the diversity of the educators studied it was, however, not practical to do this.

The last section of this chapter will profile each educator who participated in this study. In some cases it is appropriate to use the educators own descriptions of themselves and their role in the EEI. For the purposes of confidentiality the names of those involved and their organisations have been changed or omitted.

5.5 Participant Profiles

The educators studied delivered environmental education through several different channels. The purpose of this section is to discuss each educator in turn to outline his

or her role within the environmental education infrastructure. All names and possible identity revealing information have been changed for confidentiality. Table 6.1 in chapter 6 will summarise this section to aid the reader.

5.5.1 Cam Paine

Cam Paine was the leader of an amateur campaign for low carbon lifestyles. His education could be characterised as education for the environment. The two main aims of his work were to encourage individuals to change their own behaviour and to encourage individuals to pressurise the government into taking strong action on climate change. His focuses were on raising awareness, which he did through his own initiative, a campaign called One Ton Person and on direct campaigning, which he engaged in, in collaboration with other sustainability focused individuals and organisations. Cam Paine was ultimately micro in his views. He saw the issue of climate change as too pressing and urgent to expect individuals to change their behaviour in sufficient time and believed that the only option available was government intervention to force radical behaviour change. He did not really seem to have thought through the psychological and social implications of forcing individuals to sacrifice their materialistic lifestyles. He did however recognise and argue that we are living the wrong way and showed understanding about how changing our behaviour could benefit our own well-being and the environment. His micro approach seems to have stemmed from what he had learned about the environment and who he had learned from. It is possible that Cam is on the road to a more macro approach, but that journey is characterised by knowledge-action gap failings and is a slow and painful one, his belief that it is too late for a macro approach appeared to present the main barrier to a change in his practice.

5.5.2 Clare Parks

Clare Parks was an environmental education officer at a park on the outskirts of a major city. The park was owned by a major national charity and her role concentrated both on education about the park and on building the relationship between the public and the charity. As an educator she saw her role as trying to improve the connection that young people have with the natural environment, particularly their local environment. A lot of her work was guided by National Curriculum, which directed

her towards a micro approach. She was, however, aware of the impact of consumer culture on the environment, but related fatalistically to it, viewing her job as part of the process of making the best of its consequences.

5.5.3 Dev Sustain

Dev Sustain led a project on sustainable development in schools. He was employed by an independent sustainable development education centre in a rural town. Dev's passion about environmental issues was evident throughout the interview. His project was however predominately micro in nature. The project aimed to help schools to teach about sustainable development and to help them act on it. The focus was on recycling and waste mainly because of the restrictions placed on the project both by the audience and the project's funding. Evidence of a belief in an information deficit approach was found throughout interview and is made obvious by this quote in which he exemplified how he addresses his audience: 'this is the information that I received about how things are, I make my choices, you now have the information to be able to make your own.'

5.5.4 Ed Townsend

Ed Townsend was an environmental education officer for city centre borough council. He was involved in teaching sustainable development issues in schools and contributed to the environmental and sustainable development education and awareness raising carried out throughout the borough. Ed, constrained by the work programme of his borough and the approach taken to environmental education, was consequentially mostly micro. Despite the constraints shaping Ed's work he was aware of the issues surrounding consumerism and its relationship to environmental problems. It is unclear whether he would be comfortable tackling consumerism due to the way he lives his own life, factors beyond his control would however prevent him from placing the emphasis of his work in this area due to the need for him to stick to his prescribed work programme.

5.5.5 George Teacher

George Teacher taught Geography at a state owned secondary school. His school was situated in the rural-urban fringe of a large town and was populated, predominately,

by children of families in the low socio-economic classes. The school was in the process of closing to be re-built, as an academy, so had no year 7. The school had 400 pupils and around 50 staff. There was no sixth form (years 12 and 13). George taught environmental issues as part of the National Curriculum for Geography and was clear in his assertions that the delivery of the Geography syllabus was his primary concern. He did emphasise that there was scope for the expansion of environmental education both in his own teaching and the wider extra-curricular activities of the schools, but made clear that little effort was made to create this expansion. George was of the opinion that environmental education should form a greater part of the Geography curriculum, it was clear that unless this was the case he would not be inclined to teach more of it due to his, and his school's, more pressing priorities.

5.5.6 Georgina Young-Teach

Georgina Young-Teach taught Geography at primary level in a privately owned school. As head of Geography she had control over the Geography syllabus for children in the lower school. She discussed the freedom she had to decide which issues to teach to the younger age groups (years 5 and 6). However, the recommended schemes of work from which she designed her syllabus restricted what she taught to years 7 and 8. The children who attended her school were from wealthy families; many of them were boarders. The children were used to expensive holidays, consumer goods, cars, food and so on, which Georgina felt impacted on their value and belief systems. Her environmental education was guided strongly by QCA recommended schemes of work and was consequently mostly micro in its approach.

5.5.7 Laura Green-Schools

Laura Green-Schools was a waste education officer employed by a local council. She was mainly involved in school waste awareness clubs and was formerly employed by a national charity set up run these clubs. Her focus was on visiting schools to deliver education about waste and on helping schools to reduce the waste they send to landfill. The project was funded by the local council, its goals therefore shaped the activities of the project. Laura used a micro information-deficit approach, which was successful in meeting the aims of the project. There was little scope for Laura to take a

deeper, more macro approach to her environmental education, as this was not within her remit.

5.5.8 Nat Charity

Nat Charity was a schools education officer for national practical environmental action charity. She described her charities role within the EEI at the beginning of her interview as follows:

> We are a charity that has been running since 1993 in the UK and we describe ourselves as a practical environmental charity that works with schools, businesses and communities to help them find ways to make changes to their everyday lives to help the environment and we've got the waste, energy, transport and water, but nearly all of our programmes at the moment are either looking at waste or energy. It is funding dependent with the schools, for businesses we charge a fee for them to take part in our programmes and for communities there is restricted funding as well, government funding, or other such, trusts funds things like that to get our schools and communities work done.

Nat seemed frustrated by the micro nature of her work and was very aware of the need for a macro approach. Factors beyond her control as well as her own lack of belief in her own ability to take a macro approach prevented her from changing her practice.

5.5.9 Phil Maker

Phil Maker worked for a small independent conservation film making company. Her films are often part of wider campaigns targeted at solving specific environmental or wildlife conservation problems. In many cases micro approaches are appropriate to her work. By increasing awareness about a problem and providing instructions on how to solve problems her work can often successfully remove knowledge-action gaps and change the behaviour or policies of various individuals and politicians. She makes films about many different issues and is guided both by which issues she feels are important to address and by organisations who approach her to ask her to make a film for their campaign.

5.5.10 Rhian Cycler

Rhian Cycler is the head of a Not for Profit organisation that promotes waste reduction and recycling in one county. The organisation focuses on raising awareness

on both the need to reduce waste and on providing information about how to do this. The focus is quite strongly on recycling and the organisation is partly funded by the local government. Rhian and her colleague moved into this channel of firmly micro environmental education from their previous roles in waste management companies where they did a small amount of awareness raising. They began the organisation they now run when they recognised both the need for it and that funding was available to set it up.

5.5.11 Simon Chat

Simon Chat could be described as a citizen with passion for sustainable development. Given his passion and interest in environmental issues and sustainable development he is prone to engage in conversation with friends, family, colleagues, acquaintances and strangers about these issues. He therefore represented an extremely informal channel of environmental education and has few obvious constraints on how he talks about environmental issues. The formation of beliefs and values that an individual has about an issue such as climate change often results from the combined impact of several channels of learning. What we learn from friends, family, colleagues and so on is important to our understandings of the environment and the way in which we behave in relation to it. The manner in which a concerned citizen (in his role as a citizen) discusses environmental issues was therefore worth researching.

5.5.12 Sundae Reader

Sundae Reader was a journalist for a major national Sunday newspaper. She wrote a weekly column on environmental issues. She also contributed to other environmental stories within the newspaper. Her approach was largely to provide information about the environment and sustainable development and she aimed to encourage her readers to take action in their own lives. Her approach was largely micro in nature, which focused on encouraging changes in lifestyle for the sake of the environment. She was wary of alienating her audience by prescribing changes that seemed unrealistic to them. Overall she was of the opinion that the government should be the main agents of behaviour change.

5.5.13 Walter Native

Walter Native was an education officer at a rural alternative energy visitor centre. The centre focused on displaying working examples of energy efficient buildings powered by alternative energy. The centre received visitors from schools as well as tourist type visitors. Walter focused on education projects, usually in the shape of one-day tuition on environmental issues for visiting school groups. He delivered predominately micro environmental education based on raising awareness about environmental issues. He did however have an excellent appreciation of the need for macro approaches and revealed ways in which he had taken a more macro approach within a wider overall micro approach.

5.5.14 Woody Learner

Woody Learner was the head of a county council run environmental education centre. The centre was set in the grounds of an electricity sub-station surrounded by ponds, meadows and woodlands. The environmental education carried out by Woody and the centre made use of its natural resources, much of it was education about the environment with elements of education in and through the environment. Woody was also dependent on visits from school parties. It was therefore important that the education offered at the centre would be appealing to school parties, the National Curriculum therefore had a strong influence on what he taught.

5.5.15 Artie Pilot

Artie Pilot will be discussed in more detail in chapter 7 as a detailed case study, he was an artist employed by a national art society for a pilot, primary school, sustainability programme.

5.5.16 Conner Sultan

Conner Sultan was a management consultant with expressed sustainability ethos. His approach to environmental education will also be discussed in detail in chapter 7 as a case study.

5.6 Conclusion

Chapters 6 and 7 will present findings from the primary research of this thesis. Research into environmental education is important and ongoing. The research methods used should be considered carefully by the researcher prior to its actual conduct. As a relatively inexperienced researcher, I learned a great deal about the research methods chosen in this study whilst performing them in the field. During the fieldwork, my interview and case study observation skills improved through experience. I was, however, careful to ensure that I was consistent in my methodology throughout the fieldwork. Due to my own personal development I am aware of the possibility that some interviews, for example, could have been performed better than others. Despite this I was very happy with the quality of the data produced across the whole sample.

Chapter 6 – Exploring the factors shaping micro approaches and the potential for macro approaches to emerge – part 1

***All names of individuals and organisations studied have been changed for reasons of anonymity. Text in square brackets represents these changes or additions, for clarity, by the author.**

The first research question of this thesis asks:

> What are the factors driving micro approaches to environmental education?

This thesis investigated this primarily from the point of view of the educators in charge of the design and delivery of environmental education. This research suggests that the factors driving environmental education be it macro or micro, can roughly divided into two categories. Educators exert some control over the environmental education they provide. Their beliefs about how best to conduct their work and which issues they should address shape what I will term *internal* driving factors. The design and delivery of environmental education is, however, also shaped by factors beyond the control of environmental educators. I shall use the term *external* to categorise these drivers. The primary research reported on in this chapter builds on the arguments presented in chapters 3 and 4 to further explore the factors (as experienced by the educators) shaping their environmental education. This is the first aim of this chapter.

The second research question of this thesis asks:

> How can a macro approach be applied in environmental education?

Having argued throughout this thesis for the use of macro approaches to environmental education, the importance that should be attached to investigating this question is critical. Two sub-questions emerge:

1. Is there potential for macro approaches to evolve from within the current Environmental Education Infrastructure (EEI)?

2. What exactly is a macro approach to environmental education?

Chapter 7 will explore the latter; the second aim of this chapter will be to explore the former. In dealing with the former some crossover exists with research question 1. This chapter will, therefore, often simultaneously address both research questions. It will be suggested here, for example, that some of the factors driving micro approaches are in fact barriers to the development of macro approaches. In investigating the potential for macro approaches to emerge from the current EEI, it is also important to identify factors that could, if capitalized on, assist this.

6.1 Re-cap of Sample studied

Chapter 5 outlined the research methods and detailed the sample of environmental educators used in this study. Interviews were conducted with sixteen environmental educators of varying types and case studies were conducted with two of these. For reference purposes table 6.1 briefly lists the sample studied.

Name	Education channel / Role
Cam Paine	Leader of amateur campaign for low carbon lifestyles. Contributes to both accidental and free-choice learning
Clare Parks	Environmental education officer at a national charity owned park on the outskirts of a major city. Contributes to formal and free-choice learning
Dev Sustain	Leads project on sustainable development in schools. Employed by Sustainable Development Education Centre. Contributes to formal and free-choice learning.
Ed Townsend	Environmental education officer for city centre borough council. Contributes to formal and free-choice learning
George Teacher	State secondary school geography teacher. Formal Educator
Georgina Young-Teach	Public school year 5-8 geography teacher. Formal Educator
Laura Green-Schools	Local council employed waste education officer mainly involved in school waste awareness clubs. Contributes to formal and free-choice learning
Nat Charity	Schools education officer for national practical environmental action charity Contributes to formal and free-choice learning
Phil Maker	Wildlife filmmaker. Contributes to free-choice and accidental learning
Rhian Cycler	Head of Not for Profit organisation that promotes waste

	reduction and recycling in one county. Contributes to free-choice and accidental learning
Simon Chat	Citizen with passion for sustainable development. Contributes to accidental learning
Sundae Reader	Ethical issues columnist for broadsheet Sunday newspaper magazine. Contributes to free-choice and accidental learning
Walter Native	Education officer at rural alternative energy centre. Contributes to formal and free-choice learning
Woody Learner	Head of county council run environmental education centre Contributes to formal and free-choice learning
Art Pilot*	Artist employed by national art society for pilot primary school sustainability programme Contributes to formal, free-choice and accidental learning
Conner Sultan*	Management consultant with expressed sustainability ethos Contributes to free-choice learning

*Case study subject

Table 6.1: Environmental Educators Studied

6.2 Internal factors influencing design and delivery of Environmental Education

Semi structured interviews were carried out with sixteen contributors to the environmental education infrastructure (EEI). Two of these interviews formed part of detailed case studies and will be dealt with in chapter 7. The remaining fourteen interviews will be discussed in this section with the aim of exploring research question 1 and the part of research question 2 outlined above. As described in chapter 5, the interviews conducted were semi structured. This allowed the conversation to flow freely and gave potential for the discussion of subjects and experiences not previously considered by the interviewer. The term semi structured does, however, imply that the interview should have some structure. The interviews discussed in this section all shared the same thematic structure; this section will draw on that structure to highlight the outcomes that help build understanding of the answers to the two research questions.

6.2.1 The impact of educators' beliefs

Following the interview preamble the educators were asked to define environmental education in their own words. The responses to this question varied; some educators found the question difficult to answer at first and prompters such as 'what does

environmental education mean to you?' were used. Other educators began to discuss their role in environmental education pre-empting the next question and had to be guided back to the original question. Table 6.2 illustrates the variety of answers to the original question and this variety is perhaps a reflection of the diversity that exists within the EEI.

Educator	**Definition of Environmental Education given by interviewee**
Cam Paine	Environmental Education is about giving people the space to think of how we could live another way, because we are not living the right way at the moment.
Clare Parks	I think it is teaching people about the environment, giving them a positive experience of the environment so that they will appreciate the environment.
Dev Sustain	Education about development that meets the needs of the future, without compromising the needs of future generations.
Ed Townsend	Helping young people to understand that they need to behave as if tomorrow matters, helping them to think through the implications of their actions and obviously in the long term to change those actions.
George Teacher	I would say environmental education is making pupils aware of what they can do to help the environment.
Georgina Young-Teach	It is the teaching of environmental issues.
Laura Green-Schools	Basically, raising awareness of Sustainable development, not just with children but with adults as well.
Nat Charity	It's education about the environment, but it's also education through the environment, through involvement with the environment, engaging with the environment. It is about awareness raising as well as behavioural change, or just personal review of your interaction with the environment as a human.
Phil Maker	Well from the perspective that we use, which is using film and media, for us the definition would be an activity or a project that increased knowledge...for us we cannot stop at that point, so education has always had a tangible result, something tangible is changed in the world.
Rhian Cycler	To inform people about recycling, waste reduction and just generally environmental issues.
Simon Chat	Education about how ecosystems work first of all... It would include... how to describe and measure the impact of people on the environment as well... and secondly about what we are doing to it and how it is changing and so on.
Sundae Reader	Well I don't know if you can really define it can you? It works in so many different levels.
Walter Native	I sort of see the bits, as there is environmental education, there is development education and then there are energy issues, which sometimes get ignored by both of those areas, so we have always looked at all of those and see no problem about knitting it all

	together.
Woody Learner	Environmental Education is... the definition we used to use is 'about and for the environment.' Here we would place emphasis on 'for the environment'. Because environmental education is not represented in the National Curriculum now so we would talk about Education for Sustainable Development now mainly.

Table 6.2: Defining Environmental Education

In most instances the definition was a reflection of what each educator actually designed and/or delivered in the field. Rhian Cycler for example defined environmental education as informing 'people about recycling, waste reduction and just generally environmental issues.' Some caution is necessary here, however, as it would be hasty to assume that the way somebody defines environmental education correlates exactly with what they believe should be done and what they actually do. In the former case it may be that the educator blurts out a textbook answer in an instinctive fashion, as was possibly the case with Dev Sustain, or like Sundae Reader they may simply struggle, under pressure, to provide a succinct definition at all. It is likely however, that the way an educator defines environmental education will provide some clues as to the *internal* drivers behind the education they deliver.

In discussing definitions of environmental education and the roles of each educator within it, *external* factors driving environmental education began to become apparent. As stated above, most of the educators defined environmental education based on their role within it. Environmental educators are, however, learners too. They learn about environmental education from their own experience of practising it and they also learn about it from the EEI. Their conceptions of what environmental education is, what its purpose is and how to do it all shape what they do. This was reflected in both the definitions given and the roles described by some of the educators. George Teacher, for example, sees environmental education simply as 'part of the curriculum.' His conceptions of environmental education and its purposes were therefore heavily influenced by what the National Curriculum for Geography says they are. He described his role as:

G. Teacher: Making pupils aware of what they can do to help the environment

Interviewer: Yes
G. Teacher: You know making them aware of the possible options they could do and also presenting the curriculum you know, which says we have to cover certain things.

External influencers on an educator's practice can narrow their definition of environmental education, its methods, purpose and scope. When these external influencers are powerful, definitions of environmental education may not be the best direct indicators of the factors driving the approach taken. However, when an educator has significant freedom to design and deliver environmental education in the way he/she chooses, their definition of environmental education is important to our understandings of what drives their approach. Educators with this freedom have their own beliefs about the purpose of environmental education, its roles and how it should be conducted. Taylor and Caldarelli (2004) investigated the teaching beliefs of non-formal environmental educators working in state and local parks. They built on research by others (Parjares, 1992; Richardson, 1996) who had previously reported that 'what teachers believe (e.g., about the role of the teacher and student, the nature of knowledge, curriculum, forms of instruction, and the meaning of learning) has a tremendous impact on their behaviour in the classroom' (Taylor and Caldarelli, 2004, p. 451). Taylor and Caldarelli (2004) recommended that further investigation was needed into the beliefs held by non-formal environmental educators and proceeded to report that their teaching beliefs 'are a product of a variety of formal and non-formal experiences.' Taylor and Caldarelli (2004) found that what Lave and Wenger (1991) term a 'community of practice' exists within the branch of non-formal environmental education they studied. This community of practice describes how environmental educators learn from each other about how to conduct environmental education. An educator practising similar methodologies to those practised by colleagues may experience comfort in what they are doing and feel safe in the knowledge that they are following the status quo. Taylor and Caldarelli (2004) also discuss how different educators hold different beliefs about how to educate. They emphasize how the way in which education is carried out affects the outcome of the education. Beliefs about what should be taught and how it should be taught are powerful internal factors driving environmental education. Throughout this chapter I will discuss these and explore how they influence the design and delivery of environmental education.

Returning to the theme of freedom it can be argued that, given sufficient freedom and opportunity, an educator who believes in micro approaches to environmental education will design and deliver a micro approach. When Cam Paine first felt moved to begin to campaign for action on climate change he designed and delivered a series of talks and some literature based on an information deficit approach. The aim of the campaign was to reduce 'personal emissions from five tonnes a year down to one tonne a year.' To do this he invented the concept of a One Ton Person and sought to promote being one of these people as a desirable objective for members of the public. He took the approach of trying to encourage people to become a 'one ton person' to combat climate change and informed them that they could do this most effectively by not flying. His motivation for starting the campaign was when he 'realised how damaging flying was and I personally gave up flying.' This statement highlights a reason why micro approaches can occur. The educator has learned about the contribution of aviation to climate change and has felt motivated to change his behaviour by giving up flying. The educator has then assumed that if other individuals knew what he knew about flying they too would take the rational decision not to fly.

I asked Cam Paine how successful he thought the campaign had been, he replied: '[Laughs] I don't know! [Laughs] one friend, one friend I know has given up flying.' The One Ton Person campaign can be characterised as micro as it fails to take a deeper look at the drivers of an individual's behaviour; it assumes that a linear pathway from knowledge to motivation and finally to action exists and suffers from the phenomenon of the knowledge-action gap. Cam Paine is also outwardly passionate about the issue and often uses alarmist language, the following quote typifies this: 'we are in a huge environmental crisis.' The dangers of using alarmist language were pointed out in chapter 4 (section 4.3.4.1).

The beliefs held by educators about how best to approach environmental education are important in its design and delivery. How important is a function of the freedom they have to pursue the path they believe is correct. The example of Cam Paine discussed above shows how having freedom to sculpt environmental education from one's own convictions can lead to a micro approach. However, as the research into the work of

Conner Sultan (see chapter 7) shows, given sufficient freedom and opportunity it is also possible that an educator who believes in macro approaches could produce a macro approach.

6.2.2 Coping with the knowledge action gap

Cam Paine was clearly frustrated that his campaign was largely unsuccessful; he has had first hand experience of the frustrations associated with the environmentally irrational responses of his audience to his initiative. Table 6.3 shows how each of the educators felt about the knowledge – action gap and how they related to it.

Educator	**Feelings about the knowledge-action gap**
Cam Paine	The whole thing about education ... is that it's about expecting voluntary changes, voluntary behaviour changes and that is not going to work, voluntary is not going to work.
Clare Parks	So a lot of them [the pupils], I hope, they will do what I've done and that is grow up having had a positive experience and actually in the future positively choose whatever environmentally friendly behaviour. But, I always wonder how much of an impact you are necessarily making.
Dev Sustain	Then we have other people that have knowledge and awareness, they find out about it and they do get this motivation but they sort of stay there, it would be great to get a great big hammer and hit them 'here' [referring to motivation in knowledge-action gap diagram]!
Ed Townsend	**Interviewer: How aware are you of the knowledge action gap?** E. Townsend: Certainly aware, it certainly has been impacting on our efforts, if you like, to try and make those changes.
George Teacher	*Did not noticeably show a frustration for the existence of a knowledge-action gap, his aim was mainly to increase awareness. He did not see his role as an attempt to change behaviour.* *
Georgina Young-Teach	I don't believe that every pupil will get the motivation and awareness to carry it forward, because not every pupil really, really cares enough.
Laura Green-Schools	There is quite a gap there, I think, at the moment and we are trying to fill it.
Nat Charity	I've got plenty of people I know, plenty of friends I know who have all these environmental concerns and oh yeah they are not doing this that and the other [something bad], but it is too much of a hassle for them. So for example, if there is not a recycling box outside their house then they will just throw their bottle in the bin, so even at that level of the action they just don't take any because its just not easy and convenient for them.
Phil Maker	*Observes the knowledge-action gap on her projects but sees the role of the projects as increasing knowledge and awareness to*

	*create action. The projects she talks about have been fairly successful and she has not become frustrated by the gap.**
Rhian Cycler	On a day-to-day basis... we don't think about how we are going to fill that knowledge action gap. I think we just use the tools we have, to try and fill it really.
Simon Chat	It is difficult to know how much I am influencing their [friends] behaviour to be honest, because you certainly have conversations and sometimes you get lots of agreement on these issues, but then it is hard to know when they go into their own lives if anything actually changes and I'm probably a bit sceptical. A 10% change I think is possible, a 10% change in behaviour.
Sundae Reader	Well I'm trying to give people knowledge so that they will act upon it, obviously I know that not everyone is going to do that, but if I sat there worrying that what I did was futile then I would never pick up a pen would I? I guess I try to put it to the back of my mind, I don't angst over it.
Walter Native	**Interviewer: Is the aim actual behaviour change, or motivation to change behaviour, where do you see as being as being as far as you can get?** W. Native: I think it is motivation to change behaviour, I kind of feel that we are trying to equip people with information about the problems, information about the possibilities [with emphasis] about doing things differently and they have got to make the choices themselves, so it is trying to provide the motivation, yes.
Woody Learner	I think there is probably a smaller gap between environmental knowledge and action because the actions are a bit more obvious and accessible to children and apparent for children and young people.

Table 6.3: Educators and the knowledge-action gap

* Entries in italics are those of the author

Cam Paine's entry in table 6.3 follows his initial experiences of the One Ton Person campaign. As the quote below indicates his original aim was to change behaviour, but interestingly he has since re-framed the aim of his work. His emphasis is now on increasing awareness and the encouragement of others to become campaigners. I asked him what the aim of his work is:

> It's funny because last year when I was doing the [One Ton Persons], I thought 'yes behaviour change' but then as I did the things more and more I realised that it is not the behaviour change of individuals that's so important it is more making people become campaigners, or political change that we need more and also reaching people who have more power and influence, which is why we are focusing on community leaders. What we want them to do is then go back and educate... you know, fine if they want to do behaviour change themselves, but I'd much rather they be more interested, fired up to go and educate and inspire people in their community and spread the message. And

> maybe set up groups to educate other people in the community, so it has a kind of knock-on effect that is what we would like.

The reasons for the failings of the One Ton Person campaign are likely to be numerous and would be almost impossible to pinpoint. Chapter 4 discussed some of the problems with micro approaches, the aim in this chapter is to explore why they occur. The strongly micro approach of Cam Paine's first foray into environmental education was characterised by his complete freedom to design and deliver the campaign in a way that he believed was appropriate. Freedom in this instance produced a micro and largely inefficient approach. Following his earlier experiences Cam Paine re-focused his aims and re-positioned himself as an awareness raiser and promoter of political campaigning. He now expects less of his audience. In short it is easier to petition politicians to do something, or more, about environmental problems than it is to critique and radically change ones own behaviour and become a One Ton Person for the sake of the environment. It is also easier, on the part of the environmental educator, to achieve a goal of increased awareness, than a goal of behaviour change. When the goal is just an increase in awareness about environmental issues, the knowledge-action gap does not come into focus. If behaviour change is not the stated aim and is seen only as an added bonus, the gap between knowledge and action is regarded as unfortunate but not as a failure. Table 6.3 shows that most of the educators interviewed recognised the existence of the knowledge-action gap; discussion of it during the interview ensured that they all understood what was meant by it. Several responses to the problem of the knowledge action gap emerged from the interviews; these will be discussed in more depth below.

6.2.2.1 Settle for awareness raising approaches and/or carry on regardless

The knowledge-action gap most readily arises when the prescribed change in behaviour proposed, or alluded to, by environmental education is perceived by the individual social actor as requiring large sacrifices on their part. Examples include calls to adopt vegetarian or even vegan diets; calls to boycott air travel; calls to give up car ownership and use; or calls to simply consume fewer material goods and services. The example of Cam Paine discussed above highlights how difficult a task it is to transfer knowledge, awareness and motivation to do something about climate change into meaningful behaviour change. In the case of Cam Paine frustration

resulting from a lack of behaviour change led to a re-framing of the aims of his work. The reasons why micro practices occur are varied and subject to both internal and external factors as this chapter explores. The following extracts illustrate the acceptance of several other educators to adopt a chiefly awareness raising role in regard to issues, such as climate change, that require big changes in behaviour by social actors:

Simon Chat was deliberating on the conversations he has with individuals who are either sceptical about climate change, or appear largely unconcerned by its threat. Incidentally, he also stated that in his experience they formed the majority of people. These people were discussed in the following extract:

> **Interviewer: Do you aim, or do you hope in any way to change or influence the way they think or the way they behave?**
> S. Chat: Definitely, I hope to raise their awareness of the issue in the first place, so that they develop an interest in it, so it becomes a concept in their mind that they are conscience of, you know? Basically so it registers on their radar.
> **Interviewer: OK, so it is awareness raising?**
> S. Chat: Yes, and anything more than that is a bonus.

Georgina Young-Teach discussed how, for the majority of the environmental topics she taught, awareness was the aim. However, she did mention that for some issues, for example recycling, it was possible to invoke behaviour change. She was however sceptical over the success even of that beyond the classroom and conceded that the following more accurately represented her situation:

> The ultimate aim with every student is to get to the awareness; I don't believe that with every pupil you will get the action.

Closely aligned to this response is the propensity to carry on with awareness raising regardless of the knowledge-action gap. Evidence for this was found in several of the interviews, I will discuss two examples here. Sundae Reader discusses a broad variety of environmental topics in her weekly column. I asked her how aware she was of the knowledge action gap as a concept and she replied:

> Not very, not hugely aware, because I suppose I like to think that after people read what I do they spring into action.

There seems to be a key internal driver here; she naively hopes that readers readily act on her advice. Throughout the interview she mentioned examples of people changing their behaviour and writing to her to tell her about it, but she also recognised that a knowledge-action gap exists and is a problem. I asked her how much she took it into consideration in what she does. Her reply is presented in table 6.3 and typified by the final sentence 'I don't angst over it.'

Having discussed the knowledge-action gap with Rhian Cycler and ensured she understood what was meant by it I asked her how much she took it into consideration in her work, she replied like this:

> We don't. Which sounds a bit flippant but we just don't. It is very interesting, but I'm not sure what you can do about it other than making your promotions as effective, as impact full as you can, because the awareness of that is great and I think you'll always get say 80% of people doing recycling and 20% of people who never will, why do you bother with the 20% of people? You encourage the 80% to do more. It's a bit like any business, you tap your existing customers for more work, or to diversify and use your services more. Don't go worrying about the 20% you've never met, or who are not likely to use you. Focusing on what you've got already is actually quite a good thing. You are trying to get the bottom line all the time, so for us it is like a business, you are looking at that percentage recycled at the end of the year. It is more important in a way, whether those 20% of people who tell you lies are doing it or not, I don't give a stuff really. I want that 80%, that we have actually got hold of to do more, so that's where the focus more or less is. We are not ignoring anybody, when we send out a leaflet; we hope that (A) you understand what it's about, what it is trying to make you do and why you should be doing it. Always upbeat, trying to make it positive.

In this instance, the policy of carrying on regardless seems to be acceptable, given that the estimated rate of uptake (80%) of recycling is high. The very micro approach of focusing on recycling as a response to the waste problem is successful due to the low demands it places on targeted individuals. Recycling is an example of a micro approach working. As was discussed in chapter 1 (section 1.2.2), when micro approaches appear to be working for one issue, a temptation exists to use them, unquestionably, to address other issues. Sections 6.2.2.2 and 6.3 both look at the potential implications of doing this.

The four responses outlined above are possible indications of a position that the EEI has taken in regard to the knowledge-action gap. Of those interviewed, those who did

not know it by name certainly recognised the phenomenon. The response of aiming to only increase awareness or to simply carry on regardless may be the result of a lack of ideas as to what else can be done. This may especially be true in regard to promoting the emphatic changes in behaviour, lifestyle and culture necessary to address major environmental problems. This suggests a need for more training for environmental educators.

Rhian Cycler was involved with raising awareness of the need to recycle domestic waste and provides information about waste management services available to social actors. Her campaign has had success in meetings its aims, as developments in technology and infrastructure combined with appropriate messaging have led to increases in the environmentally rational practice of recycling. In this instance, the presence of the knowledge-action gap has been limited and success has resulted. A linear progression from knowledge, to motivation, to action has seemingly occurred. A second type of response to the problem of the knowledge-action gap is to choose to address environmental issues that either do not suffer from it or, through appropriate intervention, can overcome it. The next section will explore examples of this response.

6.2.2.2 Environmental education on issues for which increased knowledge *can* lead to observable behaviour change

In some instances it is possible for increased knowledge about an issue to trigger both motivation to act and actual appropriate and sufficient changes in behaviour, or one-off actions. The 'Big Ask' campaign, discussed in chapter 1, exemplified how environmental education can be used to create the political action of signing a petition. This can be viewed as a very positive thing. In other cases environmental issues can be tackled and problems can often be solved given the right combination of education, political will and technology. The following example explores how environmental education can play an important role in the alleviation of an environmental problem. This example, however, also highlights that care should be taken when assessing the degree of influence environmental education had in creating a successful outcome. Environmental concern is often just one of many concerns that are considered in decision making.

Phil Maker specialises in the production of conservation films; her definition of environmental education (see table 6.2) is therefore tailored by what she does. She states that one of the aims of her work is to contribute to the decision-making that triggers behaviour change around a specific issue:

> We need to engage with decision makers and implementers of decisions, so in terms of politics, you know ministers for the environment.

We talked at length about a recent great ape conservation project she was involved in. The approach taken by this project was to raise awareness about the plight of the great apes in regions of central Africa to influence those whose behaviour was detrimental to the species survival, as well as those in positions of power who are capable of enforcing behaviour change. She described how the films were disseminated as follows:

> What I've done is to have a group of films shown in those countries on national television. They were presented to the ministers for the environment, so the decision makers got to see them. They were used as influence for their strategy for the protection of Great Apes, national strategy. So they were also shown on national TV, so ministers got them and everyone in the country who has a TV had access to them. Also one hundred were sent to NGOs who run projects on the environment. So we were really approaching every target group that we possibly can and it was highly successful in Congo and Cameroon and now we're rolling that project out across all the 21 other countries and as I say that is also a blueprint for other species.

At the time of the interview it was too early for her to state exactly how successful this project was, but she did state the following about another project:

> One of the films that we had shown in Costa Rica changed the laws; the President of Costa Rica altered the law on shark finning, directly as a result of one of our films.

She also seemed confident that initial success on the great apes project would be built upon throughout the region. The success of this sort of largely micro environmental education, where education about an issue has triggered changes in law and behaviour by those directly responsible is an example of a situation for which a micro approach appears to work. The change in behaviour appears necessary, rational, possible and often importantly potentially beneficial. Part of the reason for the support given to the conservation of great apes and their habitats is that the potential financial gains from an eco-tourism industry were pointed out to the policy makers. Phil Maker described

the great apes project as a blueprint and reported that due to its initial successes, they have been approached to tackle other issues in a similar way. Care, however, must be taken in assuming that this sort of approach will always work.

Although the Great Apes project has had some success, it did experience problems and these problems are common to awareness focused micro approaches. As chapter 1 showed, the danger of simply raising awareness about an issue and then hoping that this awareness will lead to motivation to change behaviour and actual behaviour change is that a knowledge-action gap may appear. Phil Maker described part of the problem in the conservation of the great apes as being the fact that those individuals on the ground who killed the apes for bush meat were responding by saying: 'this isn't good for me and how does this work for me?' The increased awareness that the project was providing on the ground was pointing out the reasons why the conservation of great apes was important. However, individuals who relied on the apes as a source of food were reluctant to change their behaviour. So, although following increased awareness, it may have seemed rational to them to change their behaviour from an environmental point of view, it was irrational from a sustenance point of view. Phil Maker pointed out that another barrier to behaviour change was that corruption in the gap between the decision makers and the individuals on the ground. These individuals knew that they were unlikely to feel the benefits arising from a potential boost in eco-tourism.

Behaviour is usually the result of many different interacting and influencing factors; it is a macro process. Micro solutions based on providing one or possibly two rational reasons to change behaviour are only usually successful when factors blocking that change have their influence diminished. In the case of the Great Apes project an increase in awareness about the plight of the great apes has helped to trigger a change in behaviour. The prospective financial benefits of an increase in tourism undoubtedly, however, also had an influence on the policy decisions made by those in power.

Phil Maker stated that she does have a certain amount of choice over the issues she covers; however, she is not free from external forces. It is worth mentioning here that

organisations approach Phil to make films as part of conservation or other environmental projects. She stated that the great apes project was a blueprint for the design of future projects; this throws up two issues. Firstly, it is possible that Phil Maker may reject offers to make films about issues that she does not feel meet the blueprint as it has been designed. Secondly, it is possible that Phil will accept projects based on the belief that the blueprint will work when in fact it will not. This could occur if Phil Maker has incorrectly analysed why the blueprint worked. By this I mean she has wrongly assumed that the awareness generated by the film was the major reason for action. If this were to happen, it is possible that the project leader may place too much emphasis on the power of a film to change behaviour in a situation where other concerns outweigh the particular environmental concern in decision making. The result being that valuable time and resources are wasted.

Micro approaches to environmental education work when the environmentally rational change in behaviour is not perceived as too heavy a sacrifice for the targeted social actor. This is a key point, as it explains why some environmental education initiatives successfully produce behaviour change and others do not. Understanding of this point can impact on the issues chosen by environmental educators and the way in which these issues are addressed. This understanding is important when educators have freedom to choose which issues to address and how to address them.

The freedom of environmental educators has been discussed throughout this chapter. Internal beliefs about the most appropriate issues to address are potentially shaped both by the educator's perception of what the priority is and the educator's aims. If the aim is to invoke behaviour change, issues that do not suffer from the knowledge-action gap may be more tempting to address, leading to micro education. As was pointed out earlier, educators are learners too; it is likely that they learn from each other and observe the wider EEI, and this guides their beliefs about what their role should be. Simon Chat, for example, discussed a government funded training day he had been to, which has guided his beliefs about what he could do as a slightly more formal environmental educator. I asked him what the course recommended that he propose to his community group. He replied:

> It would be energy saving light bulbs, green power, insulation, how their employees travel to and from work, what kind of goods they consume within their community organisation, whether they are fair trade goods or whatever... There was a list of I think it was 54 potential changes that a community organisation may be able to make and it teaches you how to go through this list in a very simple way. Identify what's feasible and what is a priority and you enable that process to happen, you're like a mediator to make it happen.

His enthusiasm for this very micro approach was in contrast to his wider understanding of the macro approach that is needed. This macro understanding was evident at various points throughout the interview but typified in the following passage:

> **How do you think that the behaviour of individuals can be shifted towards behaviour which has less of an impact on the environment?**
> S. Chat: The benefits have to be made clear to them; the individual benefits have to be made clear to them. I think most people are self-interested and they see the environmental movement as just nothing but sacrifice. They see it as crucifixion. Like the response that I get is so incredibly cynical, negative towards the environmental movement sometimes. They are just blind to the benefits to themselves because they are just so trapped in this consumer mindset.

The contrast between Chat's macro understandings and his enthusiasm for a micro approach, illustrates the fuzzy division between the internal and external factors shaping environmental education. In the case of Simon Chat external factors seem to have shaped a micro approach, which may invoke behaviour change, but would be limited in its ability to challenge individuals to question the consumerist roots of environmental problems.

The next section will look more closely at the effect that external factors can have on educator's beliefs about their roles and the actual design and delivery of environmental education.

6.3 External Factors influencing design and delivery of Environmental Education

The internal beliefs of environmental educators about which issues they should address and how they should address them impact with varying degrees of influence on the environmental education designed and delivered. Although the sample studied in this research was too small to generalise to the entire EEI with any confidence, I

would still propose that the influence of internal factors correlates strongly with the freedom an educator has in their practice. The more freedom an educator has to design and deliver environmental education, the bigger the influence that their internal beliefs about what is required will have on their practice. However, external factors also heavily influence the shape of environmental education. Section 6.3 will explore the external factors at work for the educators studied. The UK government heavily influences the first two external factors discussed: funding and the National Curriculum.

Section 6.2.2.2 showed how micro approaches to environmental education work when the environmentally rational changes in behaviour are not in opposition to cultural and/or economic conditions and are not perceived as too significant a change in lifestyle for the targeted social actor. This is a key point, as it explains why some environmental education initiatives successfully produce behaviour change and others do not. Understanding of this point can impact on the issues chosen by environmental educators and the way in which these issues are addressed. The rising level of concern about local and global environmental problems has not gone unnoticed by the UK government. The government realises that it must now respond to the pressure of environmental campaigners and a concerned public by visibly acting on environmental issues. The way it has chosen to do this has impacted on both what is delivered by the EEI and the mode of delivery, as the next two sub-sections will explore. For a lot of the environmental educators studied for this research, their freedom to choose which issues to address is limited. The government has, in effect, chosen the issues for them.

6.3.1 Funding

The two major ways in which the government has influenced the EEI are through its funding policies and through the National Curriculum. Although they are strongly interrelated, this section will deal primarily with the former.

The first issue to deal with when discussing funding is that, like time, the more of it an educator has the more they can do. Therefore, like a lack of time, a lack of funding is a constraint full stop, regardless of the type of funding on offer. On the level of the

individual educator funding can influence the volume of teaching resources available, the ability to travel, the amount of training one can seek and so on. At a wider level, the amount of funding available to the EEI overall can influence the actual amount of environmental education that happens. Dev Sustain discusses an example of the constraints posed by a lack of funding. He complains that his organisation wants to do the type of environmental education the government recommends but can not because of a lack of support; his frustrations are illustrated in the following extract:

> I had a phone call the other day from a primary school that wanted me to go over to talk to them in assembly about energy, they didn't say which particular aspect, but I suspect they wanted me to actually wanted me to actually come and be shooting off about energy generation. And, now we don't have any public subsidies, we are not funded to do that, so I was going to have to charge them £70 for a half-hour talk, because I had to pay the person that I was sending out to do it and they couldn't afford that obviously. So now £70 is a lot of money to come out of a primary school's budget and so its not going to be happy, it is not going to be done. I find that irritating because there is the will within schools to take up these things, but there isn't... you know it wouldn't cost the government huge amounts of money to give us a certain amount of money to support perhaps just one person on a full time basis, working here, it would cost what 25, 26 grand?

When funding is truly unrestricted and the educator has complete freedom to design and deliver environmental education in the way they see most fit, the resulting education is largely uncontrolled. However, very few paid environmental educators are likely to have no external controls on their practice; for some the major control is restricted funding. Of the educators interviewed for this study several were reliant on funding from the government to be able to operate at all. In this study it was found that the environmental education practice of Rhian Cycler, Laura Green-Schools, Nat Charity, Dev Sustain, Ed Townsend and Woody Learner were wholly or partly reliant on government funding. In a slightly more removed way it could be that the environmental education carried out by George Teacher was relied on government funding. The core activities of all of these educators were based on micro approaches. The constraints shaping their activities meant that those who wished to explore the deeper causes of environmental problems with their audience could only do it in a very limited way. Ed Townsend for example is employed to carry out aspects of the work programme of his employees, the borough council. I asked him about his freedom to decide which issues to focus on, he replied:

> We work within the constraints of our work programme. Designing out crime is a big thing at the moment, within that we talk about physical changes, how design affects behaviour, and the materials used and so on, We've got the Green Fair on Sunday in Regent's park, so I'm involved in that. The whole Fair aims to run as a low carbon operation and demonstrating alternative energy.

Nat Charity outlines how her charity receive restricted funding from the government:

> When it is restricted they allocate a certain amount of money for particular projects. You have to describe exactly what's happening with that project, what the targets are with that project.

The following extract illustrates the impact that restricted government funding is having on the work of Nat Charity. She started off the interview by outlining how her charity operates:

> We are a charity that has been running since 1993 in the UK and we describe ourselves as a practical environmental charity that works with schools, businesses and communities to help them find ways to make changes to their everyday lives to help the environment and we've got the waste, energy, transport and water, but nearly all of our programmes at the moment are either looking at waste or energy. It is funding dependent with the schools, for businesses we charge a fee for them to take part in our programmes and for communities there is restricted funding as well, government funding, or other such, trusts funds things like that to get our schools and communities work done.

The extract above mentions that businesses pay to receive their programmes, it is difficult to assess whether this is restricted funding or not. It is quite possible that the businesses recognise that the charity can help them with a specific issue and are willing to pay for that service. The environmental education delivered, therefore, is dictated by the business rather than the charity. Nat Charity's role within her charity was as a school's programme manager. She outlined that most of her activities focus on waste issues. Further into the interview I asked her to explain this focus, her answer indicated clearly what the driving factor was:

> Because my current funders, that is their target...waste. Its funded by the Association of [Major city] Government and the target of what we're working on with them, that funding, the funding that they have given for my position is working with secondary schools on reducing waste.

When an educator is employed, either full or part time, only because of the availability of restricted government funding, this equates to a situation where we have constrained environmental education or no environmental education at all.

6.3.1.1 Entrepreneurial Environmental Education?

As a full time researcher in environmental education and a part-time environmental educator I often, on revealing my occupation to acquaintances, receive the following sort of response: 'that's a good industry/sector to be in, it's a real growth area, you should be able to get a well paid job when you finish your studies' or words to that effect. I then proceed to reply: 'I don't do it for the money. Do you think I'd have spent all this time studying, with a tiny amount of income, if I was doing it as a means to an end?' The fact, however, that the environmental sector has a growing job market should not be ignored. It throws up the possibility that entrepreneurial environmentalists may enter the job market and cash in on the funding sources. In response to a growing demand, business entrepreneurs have already created a growing environmental technologies industry. I would not wish to label anyone within the EEI as being 'in it for the money'; the money is probably not good enough. However, it is worth pointing out the potential for this situation to arise. Rhian Cycler runs a not for profit company to promote waste reducing actions. She explains how the company operates:

> '[Company name]' is a limited not for profit company and it still is and we actually got funding to promote waste reduction and recycling within [name of the county], with the local authorities as, well we say 'partners' but they are partners because we promote their service not because they gave us any money. There is a very nominal amount of money from the local authorities. We set it up because we believed that is what we should do.

I would not label Rhian as an entrepreneurial environmentalist; she is both knowledgeable and passionate. However, passionate people need to make a living too. Because they need to make a living they are drawn to where the money is; the money at the time was in promoting recycling and waste reduction. Rhian goes on to explain how the opportunity arose to apply for funding from the Landfill Tax Credit scheme and how this encouraged them to set up the company:

> We saw the opportunity to pull funds in from landfill tax credits, which is a nice sort of circular thing really. The rubbish you throw in landfill you pay tax on and some of that tax you can siphon off to do education to actually stop

> people putting so much rubbish out. It is a nice way forward. So we put a bid in and actually got funded for three or four years which is good, so that is why we did it, it came from our belief in doing it. We had worked in the waste industry for a number of years and just felt 'what's the point in having three or four thousand pounds a year as a district council to spend on promotion when you actually need fifty or sixty thousand pounds.' There was a mechanism that stirred us on the basis that we could do this, and so we did.

In this case restricted funding gave rise to a new channel of micro environmental education. If the money had not been there the education would not have happened, at least not on the scale that Rhian's company practises it. This example illustrates how a supply of new environmental educators might be created.

The key issue is the environmental education that results. If funding is only available for micro environmental education projects, passionate and potentially macro educators could be drawn into micro environmental education, viewing it as a 'better than doing nothing' scenario. This resigned and frustrated view seemed to be held by Nat Charity, Rhian Cycler, Ed Townsend and Walter Native. Those with less passion or belief that a macro approach to environmentalism is needed, would perhaps be content with meeting the basic requirements of the funded micro approach and help normalise and spread that approach and the solutions it proposes.

A further implication of a potential increased supply of entrepreneurial environmental educators relates to the integrity and creditability of individual educators and the wider EEI. A major consideration for any individual or organisation within the environmental sector is the way in which their audience perceives them. If an environmental educator is perceived as being 'in it for the money' this will impact on how their message is received. Potentially a rising population of educators perceived in this way could tarnish the entire EEI. Section 6.3.4 will further explore the impact that the audience's perception of the environmental educator has on the education designed and delivered.

The UK government was affecting the environmental education carried out by several of the educators involved in this study. In a closely related way the UK government

also contributed another external factor shaping the environmental education studied: The National Curriculum.

6.3.2 The National Curriculum

The National Curriculum covers both the natural environment and sustainable development. Chapter 4 of this thesis explored the treatment of environmental education in the formal education sector. Many teachers in formal school education utilise 'schemes of work' prepared by organisations such as the Qualifications and Curriculum Authority (QCA) to guide their practice and ensure that they meet curriculum requirements. The key characteristic of the schemes of work presented to teachers is that the depth to which environmental issues are explored is fairly shallow. It is therefore common practice that pupils are, for example, taught that emissions of carbon dioxide from fossil fuel powered power stations contribute to climate change. The solutions to this problem are then commonly discussed in the rather shallow terms of alternative energy production methods, rather than through a deeper questioning of the demand for electricity. The message received by the pupils is that the solution lies solely in alternative energy and not in a reduced demand for energy. The situation is similar with waste management. The heavy emphasis given to recycling as a solution fails to address the issue of waste creation. The message in this instance is that so long as waste is recycled, it does not matter how much of it is created. In short the approach is predominately micro and focuses on within culture solutions, rather than culture shifting, macro solutions.

The National Curriculum impacts on the EEI in two major ways. Firstly, it is possible that some environmental education would not even happen if it was not for the National Curriculum. Secondly, as was partly discussed in chapter 4 (section 4.2), the way in which environmental education is included in the National Curriculum has significant impacts on the type of environmental education designed and delivered both in formal education and the wider EEI. This section will look firstly at the coverage given to environmental education in the National Curriculum and discuss the two main ways it impacts on the EEI.

According to the Sustainable schools section of 'Teachernet' (a government run online resource for education professionals), every subject taught in schools contributes to sustainable development. For example it is stated that:

> English contributes to sustainable development; it enables pupils to express themselves creatively and imaginatively and to communicate with others effectively. (Teachernet, 2008)

However, education for sustainable development is most prominent in a handful of subjects. Table 6.3 lists the key contributors according to Teachernet (2008).

Subject	Contribution
Science	Through science, pupils understand how major scientific ideas contribute to technological change – impacting on industry, business and medicine and improving quality of life. They learn to question and discuss science-based issues that may affect their own lives, the direction of society and the future of the world (Teachernet, 2006)
Design and Technology	Design and technology (D&T) promotes education for sustainable development through developing understanding of the principles of sustainable design and production systems, developing skills in creative problem-solving, and exploring values and ethics in relation to the application of design and technology. (Teachernet, 2006)
Geography	Geography plays a significant part in promoting sustainable development through: • developing pupils' knowledge and understanding of the concept of sustainable development and the skills to act upon this understanding (e.g. as part of a Local Agenda 21 initiative); • developing pupils' knowledge and understanding of key concepts of sustainable development, such as interdependence, quality of life and diversity; • developing pupils' skills of critical enquiry and ability to handle and interpret information; • exploring values and attitudes about complex issues, such as resource use and global development. Geography is a focus within the curriculum for understanding and resolving issues about the environment and sustainable development. It can inspire pupils to think about their own place in the world, their values, and their rights and responsibilities to other people and the environment. (Teachernet, 2006)
Citizenship	Citizenship promotes education for sustainable development through developing pupils' skills in, and commitment to, effective participation in the democratic and other decision-making processes. These affect the quality, structure and health of environments and society and exploring values that determine people's actions within society, economy and the environment. (Teachernet, 2006)

Table 6.4: Key contributions to Education for Sustainable Development by subject

Sustainable development is also taken into consideration in the planning of school infrastructure and fabric. The intention of this is to both minimise the environmental impact of the school and to provide a working example of sustainability. Chapter 4 discussed the role of environmental education and education for sustainable development within formal education. The intention here is to look at examples in the field to investigate the impacts that the National Curriculum is having on the design and delivery of environmental education across the EEI.

Most obviously the National Curriculum impacts on environmental education in formal school environments. Firstly, however, I will discuss evidence of the impact that the National Curriculum is having in the broader EEI. Although, as explored earlier, it is possible to argue that in some instances no environmental education maybe better than a bad environmental education, it is worth highlighting here the influence that the inclusion of sustainable development within the National Curriculum is having on the very existence of environmental education beyond formal education. Several of the environmental educators interviewed for this study discussed how the requirements of the National Curriculum guide their practice.

Environmental educators need an audience. In free-choice learning situations this audience must be attracted; the offerings of the environmental educator are therefore critical. In the cases of both Woody Learner and Clare Parks the natural resources available to them allow them to offer education about habitats and ecosystems. One requirement of the National Curriculum is that pupils learn about habitats and ecosystems; by offering this education the environmental educators become attractive to schoolteachers who are then motivated to engage their pupils in the education offered. Woody Learner explains how the centre he works at relates to the National Curriculum:

> Essentially we are directed by, but not confined by the National Curriculum, again many, many centres will say they design their programmes just based on the National Curriculum or just based on what schools want. Our starting point is again Sustainability, what are the important things we feel young people in schools need to learn about? What help do teachers need in teaching these issues? Can we add value to that by creating a programme here with the resources we have? And if so how can we make sure that it fits in well with the

> National Curriculum? If it doesn't fit in well with the National Curriculum, teachers won't be able to justify bringing the children out, or if they do it will simply be an end of the summer term fun trip out type thing, which occasionally happens. We are looking at actually embedding things in the curriculum, so our starting point is sustainability not the curriculum, but we make the curriculum work for us.

Although Woody stresses that sustainability is the start point, he does concede that his work is directed by the National Curriculum. His final comment 'we make the curriculum work for us' is quite telling, as it implies that by promising to meet certain aspects of the curriculum he can ensure that the teachers (and therefore their pupils) choose to come to the centre. He then has to strike a balance between meeting the expectations of the teachers in regard to the curriculum and meeting his aims and the aims of the centre.

The situation is similar for Clare Parks; she again must attract visitors to her park. She uses the resources available to her in the park and offers education programmes that cover aspects of the National Curriculum and will therefore be attractive to schoolteachers. Clare Parks also highlighted another factor that drives the environmental education she delivers. She states that:

> One of the biggest aims as regards to the [charity] is making people realise that the [charity] is not that distant thing that just looks after big houses, it is about building relationships between people and the [charity].

A core aim of her work, therefore, is to get people in through the park gates and to build relationships between the individuals and the charity. By offering something desirable to potential audiences this task is made easier. Embedding the National Curriculum into what she does is part of that process. Further impacts of audiences on the design and delivery of environmental education will be discussed in the next section.

The content of the National Curriculum was another major factor in the very existence of several other channels of environmental education explored in this study. Nat Charity works for a national scale practical action environmental charity. According to Nat the charity 'works with schools, businesses and communities to help them find ways to make changes to their everyday lives to help the environment.' Nat openly

discussed how the charity was funded and described how they charge a fee to businesses, but with the schools and the communities the work they did was dependent on restricted government funding. Nat described her role within the charity as follows:

> My current role as a schools programme manager is working with [major city] schools on waste reduction programmes with secondary schools.

I then asked her why the focus was on waste, she replied:

> Because my current funders; their target is waste. Its funded by the Association of [major city] Government and the target of what we're working on with them, that funding, the funding that they have given for my position is working with secondary schools on reducing waste.

She went onto outline the programme in some detail before adding:

> The citizenship curriculum is about activating change in the community and self-responsibility, there are lots of different steps, community, local and global perspective. So this works very well for them to meet those goals they have in school.

This is a clear explanation of why Nat Charity deals with issues surrounding waste in schools and why her job and this type of micro environmental education exist. Funding, as discussed in section 6.3.1, is critical to environmental education in whatever format, without funding environmental education would only be done on a voluntary basis; put simply the more funding available the more environmental education. The nature of the action taken by the charity suggests that the targets of the project are set to complement the targets of the schools they propose to go into, the schools targets are set by the National Curriculum and the drive towards becoming what Teachernet (2008) terms a 'Sustainable school.' Later in the interview when talking about the funders of the project, Nat highlighted why she thinks they appreciate what the charity does:

> I think what they like about our program is that we are about action we have measurable action, you know measurable ways of measuring what has happened with the actions that we've taken. They get a piece of data at the beginning, the waste audit, they get the second waste audit and there is a measurable change there, and they like that that clearly shows a reduction with the target. I think beyond that they have got their very clear targets that they have to report back on.

Dev Sustain is in a very similar situation to Nat Charity, a lot of the work he does is centered on helping schools to become sustainable schools. The driver for this again appears to be availability of restricted funding to support projects that help to deliver the sustainability elements of the National Curriculum. When I asked Dev which issues were focused on he replied:

> We cover it all... We don't focus on anything particular, we allow the school to decide where it wants to come in and we help them where we can.

This quote is evidence that the school curriculum sets the agenda and demonstrates the relationship that exists between the audience (the school) and the environmental educator.

Laura Green-Schools does a very similar job to that done by Nat Charity, she goes into schools and delivers waste awareness projects with the aim of reducing the waste generated by schools. Although she initially worked for a waste awareness charity, a borough council who have taken over the funding of the project currently employs her. Laura Green-Schools' job therefore meets a need within schools, the National Curriculum guides what she does and makes her job possible as the following exchange illustrates:

> **Interviewer: How much of an impact does sticking to the curriculum have, especially in secondary schools?**
> L. Green-Schools: It is very, very important that whatever we do links with the curriculum in schools. If it doesn't we don't really stand a chance of getting in there. A lot of schools have being saying recently 'we don't have time for your project, we can't do any extra curricular stuff at the moment.' We then say to them 'well actually no, that fits in with science, that fits in...' the schools actually realise that and say 'ah brilliant, we are doing this unit, you can come in and deliver that' really it is a help for them because and hour that they would otherwise be spending on the curriculum would be done by us instead. So teachers are generally very supportive but it has to be linked to the curriculum really or I don't we stand much chance of getting in, but, as the curriculum is developing there are more chances to link it in, which is nice.

Ed Townsend also works for a borough council. Although he has a slightly wider remit as an environmental education officer, he does work closely with schools and schoolteachers. A large part of his work is therefore guided by and reliant on the sustainable development content of the National Curriculum.

It is clear that the existence of education for sustainable development within the National Curriculum is fundamental to the very existence of certain channels of environmental education as outlined in this section so far. The definition of education for sustainable development within the National Curriculum determines the education designed and delivered by those accountable to it and those dependent upon it. The National Curriculum, therefore, is one of the major external factors shaping environmental education and how micro or macro the approach taken is.

6.3.2.1 National Curriculum and formal educators

Attention must now be turned to the impact that the National Curriculum is having on what is actually designed and delivered by those guided by it in the EEI. So far in this section the impact of the curriculum on the content of the education delivered by those in the study dependent on government funding, outside of schools, has been stressed. The following analysis will focus on formal education. Two teachers from contrasting schools were interviewed; both were Geography teachers. George Teacher taught in an urban comprehensive school; the following extract helps to describe it:

> G. Teacher: Secondary, in the process of closing for re-building an academy, so it has no year 7 and approximately 400 pupils and a staff of around 50, 40 actually.
> **Interviewer: OK and does it go up to year 11?**
> G. Teacher: Yes, up to key stage 4, no key stage 5
> **Interviewer: And its town centre?**
> G. Teacher: No, I would say it is more probably more towards... its in the middle of a council estate on the edge of the town centre, yes so on the outsides of a town centre, rural-urban fringe.
> **Interviewer: Ok and what's the social-economic make-up of the children?**
> G. Teacher: High amounts of children with free school dinners.
> **Interviewer: Right**
> G. Teacher: It's quite a deprived area
> **Interviewer: Low social classes?**
> G. Teacher: Yes low social classes.

Georgina Young-Teach taught at a semi-rural public school she describes her role as follows:

> I teach Geography at a prep school, I teach years 5-8 and co-ordinate from year 3-8, so I do the whole range.

Georgina suggested that the National Curriculum did not play a domineering role in her teaching, teachers in the private sector are less bound by the National Curriculum.

When I asked her how much freedom she had to decide which issues to focus on she answered as follows:

> **Interviewer: How much freedom do you get to decide on which issues to focus on?**
> G. Young-Teach: I have total freedom!
> **Interviewer: Do you?**
> G. Young-Teach: I control the schemes of work totally, so from year 3 through to year 6 they are not on a defined scheme. We follow LCP and we follow QCA, which are two different schemes.
> **Interviewer: What are they?**
> G. Young-Teach: QCA is the recommended scheme for work as it were for a subject and LCP is another set that comes up as well. We follow those as they give recommendations about what we should cover, but I still have the freedom to choose what we cover. Through years 7 to 8 is where we follow the 'common entrance', which is the independent schools exam board, so we have less freedom there as to what we cover. There are options within these schemes as to what you choose to follow.

The freedom to choose what to cover provides Georgina with the opportunity to develop environmental education in the way she sees fit. Several factors emerged from the interview that can be seen as drivers of, or constraints on the environmental education she delivered. Before exploring these factors it is necessary to scrutinize what she actually does. I asked her to outline her role within environmental education:

> I teach Geography at a prep school, I teach years 5-8 and co-ordinate from year 3-8, so I do the whole range. What we look at within environmental education is giving children awareness of what is going on within the environment and their impact on it, but looking at how people's attitudes towards the environment are changing as well. We look at different energy resources we use and ways that we can help the environment generally, down at a basic level how we can change the view from our window to make it environmentally friendly and things like that.

I then asked her to outline the issues that she covers:

> G. Young-Teach: We cover recycling a fair amount, we cover different types of energy sources, so looking forward to the future doing solar power, wind power, geothermal, you know those ones that have less of an impact on the environment, we cover that in year 6. Sustainable development, we look at changes we can make as well, through year 7.
> **Interviewer: Do you do any others?**
> G. Young-Teach: I'm just trying to think, lots of topics cover impact on the environment, for example we do hazards, when we look at volcanic eruptions for example, we look at the impact on the environmental and the people. So we look at the impacts on the environment and people across quite a lot of topics, so hazards and flooding, things like that.

When asked what the aims of her environmental education are, she replied as follows:

> Its aim is to get awareness. Making the children more aware of how they impact on the environment, but also how the whole world is having a huge impact, not only on people, but on animals and plants and land and things like that.

The discussion then focused on the issues covered and what is actually taught. There seemed to be a heavy focus on waste issues, Georgina outlined the emergence of recycling in her classroom. She also described practical activities that some age groups had been involved in, specifically mentioning the visit made by a year 5 group to a water company to learn about water conservation. Georgina takes a largely micro approach to environmental education. It is largely focused on raising awareness about environmental issues and initiatives combined with some promotion of behaviour changes in relation to issues such as waste and water. As mentioned above, Georgina feels free to design and deliver environmental education in the way she chooses, so it is important to highlight here why a largely micro approach emerges.

Firstly, as she mentions in the first extract above, she makes use of the schemes of work produced by the QCA. As mentioned in the introduction to this sub-section, the QCA schemes of work propose largely micro environmental education. Georgina explains that in years 7 and 8 her pupils are preparing for the 'common entrance' exams. The requirements of these exams therefore shape what she does. The following extract was Georgina's response when I asked her if there are any factors constraining the issues she addresses:

> As long as I can cover... I give the children a varied scheme, I have to cover human aspects of geography, I have to cover environmental and I have to cover the human, so it is being able to fit them in and showing that they have a balanced geography, so for each year I try to make sure they have all these things, as well as looking at locations and different countries studies and things like that. That probably is the real restriction, making sure you have got a balance of the subject, but so long as there is a balance, there is no real restriction about which environmental issues we cover.

The freedom Georgina has is important, as she has the power to decide which issues she focuses on and how she approaches them. In the following extract she expresses

how her own feelings towards a subject area impact on how she teaches it, or indeed whether she teaches it at all:

> I think as a teacher you have to believe what you're teaching, if you don't agree with what you are teaching, you don't teach it as well as you should and that goes with any topic in the geography syllabus.

It is, therefore, clearly important that educators in this sort of situation are passionate about environmental education. A lack of passion or interest in the subject may lead the teacher to cover merely the basic requirements of the subject, if at all. The next extract from Georgina exemplifies this:

> If there is a topic, I know for example that glaciation is a topic that is a bug bear with me, I don't enjoy it and so I don't teach it purposely because I know that I would not teach it well, so I pick another topic, I pick rivers now, because I know it is a topic that I can teach well, I've got an interest in it and because I'm interested in it I can convey that interest into the pupils. So I think that you've got to have an interest in it to teach it well.

Georgina teaches at primary school level, her neglect of glaciation as a subject does not necessarily mean that her pupils will not at some point in their geography education encounter the subject again. The issue here is the impact that the passion of a teacher can have on the delivery of environmental education. George Teacher, teaches Geography in a secondary school. When I asked him how much environmental education is in the geography curriculum he responded as follows:

> From personal point, opinion is not enough. When you teach it, you can see the kids know a lot about it already from TV and things, so it is not that they are not aware of things going on. From a curriculum perspective it is not in enough and I am surprised that it hasn't been brought up in a GCSE exam for example for the last 3 or 4 years, with the popularity of it, in the public eye so to speak.

He did stress that it is covered in other parts of the curriculum such as citizenship and science, but still felt that it could be covered more in Geography. George did appear to be bound closely to the curriculum, and he cited the pressing need to cover all aspects of the curriculum as the reason why he did not teach more about environmental issues. In discussing the aims of his work, it was clear that results at GCSE level represented the bottom line for him, that is what he was judged upon, and achieving the best possible marks is his main job purpose, as the following extract shows:

Interviewer: What's the aim of your work when you are talking about environmental education?
George Teacher: Unfortunately to get the best results you can, with most schools. GCSE obviously I get analysed in the summer on my results so when I do my teaching with regards to particularly key stage 4, I teach it so that it will cover any possible questions that will come up in an exam, so it is based on what the curriculum and the examination boards are possibly going to ask you.

This concern seems to tie George rigidly to meeting the needs of the curriculum; his tendency may be to focus on the issues he believes are most likely to come up in exams. The result of this is that George is likely to faithfully follow the micro approaches outlined in the schemes of work available to him. George, however, recognised that his role as a teacher is not just about the bottom line; he recognised that he can assume the status of a role model for some of his pupils. I asked him whether, from a personal point of view, he sought to invoke changes in behaviour amongst his pupils. He responded:

> Well I think obviously you always, well, you put your opinions to pupils, I think that is the best way to do it, you can be honest with them and say: 'This is how I feel about it but these are the possible options, you make your own decisions.'

In the main, however, he saw his role as being one of raising awareness and as an educator about the environment. When I pressed him on the freedom he has to decide which issues to focus on he replied:

> Well obviously there are constraints from the curriculum, but if you find a topic that you find interesting you can manipulate your schemes of work to tick the boxes for the government but you can cover different issues that you might find interesting as a teacher.

We can return here to the discussion on passion begun above in regard to Georgina. Despite George's attentiveness to the curriculum, he does concede that he does have freedom to explore issues in more depth if he wants to. There is clearly an opportunity here for a teacher with passion for environmental issues to explore these issues at a deeper depth than that allowed for by the curriculum. George, for several reasons, including, for example, a lack of support amongst other staff in the school for the setting up of an extra-curricular environmental club and the impact of other pressures on his time, felt he was unable to explore environmental issues in more depth. His

passion, or the apparent lack of passion that came out in the interview for doing this, may well also have played a part.

The National Curriculum, in a similar and related way to restricted funding, influences the very existence of environmental education beyond the formal school environment. In combination with several other internal and external factors, it also plays a large part in shaping the environmental education designed and delivered in formal and free-choice sectors of the EEI. This sub-section has explored some of the ways in which the National Curriculum affected the practice of the educators studied for this research. However, it was not possible to discuss all the potential factors and other factors may not have been covered at all.

The next sub-section will explore how another external factor shaped the environmental education of the sample studied.

6.3.3 The influence of natural resources on issues covered and approach taken

All sixteen educators studied here provided environmental education that was either simply about the environment, with the aim of increasing awareness or knowledge of certain issues; about the environment, with the intention of generating changes in behaviour; or simply the provision of information about how to change behaviour for the sake of the environment. The environment, in every case, was in some way or another the starting point. The issues tackled and the aims of the education were subject to many influencing factors, this section will deal with the influence that the natural resources available to the educator has on the issues covered and the approach taken.

I will focus here on two educators, Woody Learner and Clare Parks. Both of these educators are responsible for the design and delivery of environmental education in natural or semi-natural environments. Woody Learner has two roles within the EEI; firstly, he advises teachers within his local authority on education for sustainable development, and, secondly, he is the head of a rural environmental education centre. The centre is set within the grounds of a national grid substation and is surrounded by

woodlands, meadows and ponds. The issues that are focused on at the centre make use of these resources, as he states:

> The issues we are focusing on at the moment, and I suppose always have done are habitats, because we have 70 acres of woodland, ponds, meadows and so on, so it would be silly not to make use of those, but also because that is one of the prime reasons schools come out, to study habitats, but within those we look at man's impact on those habitats and we are not looking at high level conservation, we are talking about actions individually in the home that might have an impact.

The impact of energy demand is also explored at the centre, as well as issues surrounding water and sustainable building, as the following quote highlights:

> Energy is obviously a big one for us as we are on a National Grid substation site, so a lot of what we do implicit in programmes is to do with linking energy and the environment and our own use of energy, looking at fossil fuels, we have a programme called 'care-takers' that looks at energy and all those issues. Water is one that we would like to do more of; we don't have a huge uptake of all our water programmes in schools. Sustainability generally, building materials, our use of the land, our use of energy, water is implicit through all our programmes.

Clare Parks is employed by a national charity that protects over 300 historic houses and gardens as well as many sites of historical and environmental significance. She is employed as an environmental education officer at a large garden park in the suburbs of a major city. A river flows through this park and she therefore teaches about rivers and habitats through something she calls the 'river game'. The river game is an activity for children visiting the gardens on school trips and she sees the education as being 'very much education about the environment rather than for.' Outside of curriculum driven education Parks seems to be more concerned with education for the environment. However, this is shaped by the natural resources available to her as the following quote highlights:

> The rest is more focused on the work we do here, that will be a lot of the information provision. A lot of that will be the river, because we have got he river here, so we will talk what lives in the river and how things cope with the river, which leads us on to how we can protect the river here and how other people can be involved in the protection of the river. So most of our focus I guess is the park and what we have here in the park.

The natural resources available to both Woody Learner and Clare Parks influence the issues that they teach about. It can be concluded that the environment, within which

environmental education takes place, is likely to have a strong influence on the approach taken. In the next sub-section the impact that the audience has on the environmental education will be explored.

6.3.4 The effect of audiences on the design and delivery of environmental education

The audience is important to environmental educators in several ways. Firstly, environmental educators need an audience. Secondly, that audience needs to be retained through, for example, engagement and entertainment. Thirdly, environmental educators must consider the needs of their audience, to be able to pitch their approach appropriately. This sub-section will be divided into two further sections; the first will explore issues surrounding audience attraction and retention and the second will investigate the consideration of the needs of the audience.

6.3.4.1 Attracting, engaging and retaining an audience

Those involved in providing opportunities for free-choice learning have an implicit need to attract an audience. In attempts to gain an audience environmental educators must consider several things. For example, they need to decide what sort and what size of audience they want to attract, they must also consider how they will retain that audience and the approach to environmental education most appropriate to that audience. In many cases the EEI may do some of the work for the environmental educator. The EEI may have stimulated interest about environmental issues within an individual. Minimal exposure may therefore draw the interest of an individual to any one distinct environmental education channel. To borrow from the language of marketing, the educator is not trying to sell a completely unique product.

Section 6.3.2 discussed how the National Curriculum influences the way some educators attract an audience. Attracting an audience, however, is only a small part of the battle for the EEI as a whole. For the individual educator the rest of the battle lies in engaging and retaining an audience, motivating individuals or social actors to want to change their behaviour and ultimately to play a part in invoking actual behaviour change.

Of interest here is the effect that audiences have on the approach taken to environmental education; the research conducted highlighted several ways in which it does. I will begin by discussing the importance attached to engaging and entertaining the audience. Phil Maker described the need for her films to be entertaining in order to attract and retain a large audience. She was keen to point out the difference between conservation and wildlife films as the following extract highlights:

> There are a lot of wildlife films and programmes about that have no sensitivity towards conservation whatsoever as we all know and people tend to think their sensitive, they're not.

Phil went on to discuss the relationship filmmakers have with broadcasters, specifically commercial broadcasters and their need for viewing figures:

> [It is] a case of understanding who we are working with and what they have to do to provide to the world. National Geographic have wildlife films, they have conservation films they support a lot of conservation work, but the bottom line for them is that they are driven... the funding for national geographic comes in from advertisers and if each programme that they make doesn't reach 'X' million people the funders say 'we are not getting value for money, we have to hit 5, 6, 8, 10 million people, that's our equivalent for an advert, so you know.... we are withdrawing the funding.' So National Geographic are in a position of having to draw in 'X' million people otherwise they won't exist anymore.

She continued immediately to discuss the implications of this for the type of films produced by both wildlife and conservation filmmakers:

> They do a lot of research on what are people watching, what do they want to see and that means they have to hit the lowest common denominator in many ways. The biggest audience corresponds with the lowest common denominator often. Which is where all of these wrestling crocodiles and those kind of programmes come from, because people on the ground will stop and watch that and they won't flick to another channel. So it is difficult and all they can do... all we can do as filmmakers is to provide them with films that try and address an issue, while understanding that that's there background.

This external factor shaping the approach taken to environmental education was also evident in the practice of Sundae Reader. In writing her weekly column on environmental and other ethical issues she has to take the reader into consideration. The following extracts indicate how and why she does this:

> What I do is quite informal, because I am also coming from an entertainment perspective. I need to entertain the readers as well otherwise they won't read me.

She was asked which issues she mainly focuses on:

> Well I try to broaden it a lot. I suppose a lot of them are energy based, because I'm talking to domestic readers on a Sunday, so domestic energy, which seems to be one of the great issues of our time, and it is very relevant to them. That's the one we cover most, but we also cover waste a lot. In the next few weeks we are going to be looking at air miles, holidays etc. You know all the things that people do, its very lifestyle. We also then do some issue-based stuff, so we look at wind turbines for example.

> **Interviewer: What's the rationale behind picking each issue that you deal with?**
> Reader: First of all it needs to be worthy of a page in a national newspaper. I can be interested in something really specific, like a certain sort of composter or something, but it won't necessarily mean anyone else is. I have to be quite strict with it [what to cover] and look at it quite objectively and think 'is this worth a whole page?' So it has to be a robust idea and it has to have some active element, so it can't be too theoretical because readers need to be able to think 'oh, this is what she's saying, this is what I'm going to do about it'. So there is always that connection, or nearly always that connection.

> From the feedback we've had we know that everyone has really loved the practical and the levity of the way that we have approached the subject.

> I have to remember that we have a mixed gender readership for example. Also it is on a Sunday and there should be a certain tone.

The audience is robustly considered by Sundae Reader in the design of her weekly column. It is clear that Sundae Reader believes that if she was to be 'global boring' or too alarmist (see section 4.3.4.1, chapter 4), her readership would shrink and it would ultimately jeopardise her column and her job entirely. Consequently, she takes a largely micro approach that appeals to her readers to make small changes in behaviour for the sake of the environment. This is a typical example of the 'it'll be alright, if we do something' optimistic repertoire discussed in section 4.3.4.3 of chapter 4. The result is that the smaller the sacrifice (or the larger the benefit) to the reader's perceived quality of life and well-being, the more likely the prescribed behaviour will be adopted. The bottom line for a newspaper is the readership; it is therefore very important that they understand the needs of their readers to retain them. Sundae

Reader knows her audience well and designs her column to ensure that her relationship with her readers flourishes.

When an educator does not have a detailed enough understanding of their audience, their approach to environmental education may fail to engage and retain an audience and almost inevitably fail to meet its aims. Cam Paine discussed the first 'One Ton Person' event he designed and delivered. He described how the event struggled both to attract the audience he was seeking and to engage and inspire the audience that actually attended. Cam explained how he believed that approximately 10% of the UK public are motivated to do something about environmental issues. He hoped through his campaign to attract not only the people in that 10%, but people in the other 90% as he explains like this: 'Doing the [One Ton Person campaign] I wanted to reach not just that 10%, or 1-10%, but the 90% who don't generally engage, I wanted to reach them.'

Cam conducted extensive (relative to the size of the event) marketing for the event involving leafleting and a strategy of promoting a 'One Ton Person' as a person people should want to be. Cam, however, admitted that 'I don't think we reached the 90%, I think we still only reached the 10%.' Cam then discussed his disappointments about the event itself, and he conceded the following: 'we hadn't quite worked out how to do the format so I think we lost quite a few people at the interval.' The approach taken failed in two ways; firstly to attract the desired audience and secondly to retain, engage and inspire the individuals who actually came to the event. As discussed in section 6.2, Cam re-assessed the aims of what he does. He has learned from experience and from external training about how to more successfully attract and engage an audience. This experience has contributed to his more recent activities.

6.3.4.2 The impact of audience's perceptions of the environmental educator

Cam Paine discussed his intention to seek a celebrity speaker to attend an upcoming event that he would be involved in organising, designing and running in collaboration with other environmental groups and campaigners in his region. Cam explained the purpose of this and expressed his feelings about inviting a celebrity speaker as follows: 'we have to draw people in with celebrities these days unfortunately!' This is

another example of how the need to attract an audience can impact on the message delivered. Celebrities can be used very effectively to draw crowds and raise awareness about issues. The audience's perception of the messenger, however, must not be underestimated by environmental education. Madonna and by extension the entire Live Earth event was labelled hypocritical by many observers (NME, 2007; The Independent, 2007; FoxNews.com, 2007) because, as ABC news (2008) point out, Madonna's Ray of Light Foundation has 'owned, within the last two years, shares of companies that log forests, drill for oil and mine for metals.' Madonna was also criticised for the carbon footprint generated by her touring commitments as a globally supported pop star (BBC, 2007). Being labelled as a hypocrite is a hazard that all those involved in the EEI have to be wary of. Simon Chat, who was interviewed as a concerned member of the public was asked how important he feels it is for environmentalists to lead by example, he replied:

> That is really important, because if you are not taking action, people don't take you seriously, it is just rhetoric and it can do more bad than good.

In section 6.3.1 I began the discussion surrounding the importance of the audience's perception of the environmental educator and their behaviour. To gain further insights, the educators were first asked whether their own behaviour matched up with their environmental knowledge. They all recognised, to varying degrees, that a knowledge-action gap existed in their own lives and proceeded to explain and analyse why that was with the interviewer. The educators were then asked to think about how their experience of the knowledge-action gap and their own behaviour influenced both how they design and deliver environmental education and how their education is received. Ed Townsend was asked whether he practises what he preaches. He replied: 'Well, you have to or I don't think it works.' The question was then reversed to ask whether he preaches what he practices; in other words does he only talk about things that he does in order to remove the possibility of being labelled a hypocrite. He said that he had not previously considered it that way, but stated: 'young people are the first to pick up on hypocrisy!' Clare Parks analysed the situation slightly differently; she was asked if her audience ever questioned whether she behaved in line with the environmental values she advocates. She replied as follows:

> I think they assume that I do... Whatever I'm talking about they'll assume that I'm the fountain of knowledge and that yes I do, do all of that. A lot of the

> times I can produce the answers... So I think that assumption is already there, because I am in environmental education I must do all these wonderful things and I'm going to go to heaven!

The following extract reveals that Sundae Reader considers the issue of hypocrisy in writing her column:

> **Interviewer: When you are choosing which issues you are going to address are you trying to practice what you preach to a certain extent?**
> Sundae Reader: Yes.
> **Interviewer: And on the flip side of that do you tend to sort of preach what you practice? In other words, would you be uncomfortable writing about an issue and a desirable behaviour if you didn't actually do it yourself?**
> Sundae Reader: No, not really.
> **Interviewer: Any circumstances?**
> Sundae Reader: Well I suppose the only one is children, because I don't have any children so sometimes I have to say I would rather people should use....but I would never say 'should', I would say there is this nappy service you can use because 8 million nappies a week are dumped on landfill, but then I actually haven't approached that subject because I don't have children and I feel it is a little bit hypocritical you know, because if I did have, would I want to wash a load of nappies, you know?

In the interview with Simon Chat, this issue was explored in some detail. Simon acknowledged that the knowledge-action gap was most evident for him in regards to aviation. He stated:

> The one that I struggle with is flights. You know if I need to fly for whatever reason. It is easier to justify when it is for work, but even for holidays that's the one that I find difficult.

In discussing climate change Simon feels it is important not to shirk the issue of flying because of a fear of being labelled hypocritical. He, in fact noted that by questioning why we fly the discussion often began to look deeply into the reasons why people fly, allowing critique of them. He is, however, concerned about how his message comes across. The following series of extracts detail his consideration of audience perceptions of environmental educators both personally and in general:

> **Interviewer: You have identified two camps, you have got 'the converted' and the 'to be converted' camps.**
> S. Chat: Yes. Can I just make one point?
> **Interviewer: Yes**

S. Chat: In everyday life, I find a big proportion of people, if not the majority don't even want to hear it, because it is a smack in their head, they don't want to know, they have got enough problems in their life and its difficult to make the climate change spiel without coming across as patronising, critical, condescending and judgemental and I find that difficult to do, I find it difficult to broach the topic that people are so incredibly resistant to a lot of the time.

The resistance was something also experienced by Nat Charity as the following extract shows:

With environmental education, people are aware but they are also very quick to switch their ears off when they are preached to and also when they think 'that's so massive, how can I do anything about that?'

Returning to Simon Chat, he was asked whether he sometimes had a reluctance to talk about climate change issues and whether occasionally he felt he could not be bothered. He replied:

S. Chat: Its not that I can't be bothered, but sometimes you worry that you are going to be doing more bad than good... Because you are perceived as like a little 'sting' like an annoying bee that buzzes around and might sting a person with all this criticism.
Interviewer: Do you feel sometimes like a killjoy?
S. Chat: Like a killjoy?
Interviewer: Yes
S. Chat: Yes, big time! Big time!

He then expanded on this fear of doing more harm than good by arguing that at present the issue of climate change is laden with too many negative associations:

You don't want to make the climate change movement a negative association in people's minds and I think it is. I think the climate change movement just falls down; it is difficult to get around.

Simon also feels that the way in which the audience perceives an educator is important:

S. Chat: maybe by...being this perfect person you might alienate people even more and make it seem even more...
Interviewer: Impractical?
S. Chat: Impractical. On the other hand when you are flawed it takes away from your integrity basically, it takes away from the integrity of your message but at the same time maybe it is a bit more comforting, makes it feel a bit more within reach for the average person.

The uncertainty Simon feels about how best to approach the issue of climate change in conversation reflects the many different approaches to climate change education that exist in the EEI. Further exploration of the role of the audience in shaping environmental education will help to clear this uncertainty up and is an area for further research.

These two sub-sections have explored how the external factor of the audience has an impact on the environmental education designed and delivered by the educators studied here. The transcripts in appendix 2 reveal further evidence of this, which due to the thesis structure and length have not been analysed here.

6.4 Identifying the potential for macro approaches

To solve a problem it is important to know its causes. Once the causes have been identified, it is possible to assess the relative influence of each cause allowing focus to be placed on what needs to be done. This thesis argues that the dominance of micro approaches to environmental education limits the pursuit of sustainable development and for the development of macro approaches. Thus far chapter 6 has explored some of the external and internal factors shaping the, predominately micro, approaches to environmental education of the educators studied for this research. It is unlikely that the discussion provides a comprehensive analysis even for the sample studied here. In turn, the EEI is extremely large in comparison to the sample studied here. The factors identified here are therefore unlikely to represent all of the possible factors that shape environmental education. It is also difficult to categorically state the relative influence of each factor and, therefore, how important each one is to the design and delivery of environmental education. Only through further research of this type can more factors be discovered and assessed for their influence and commonality. It is, however, possible to explore and state with some confidence the major factors shaping the approach of any one unique environmental educator. Two case studies were conducted during the primary research of this thesis with that intention. The subjects were purposely chosen to be examples of two very different approaches. They will be discussed in detail and in turn in the next chapter. The remainder of this chapter will address its second purpose, the identification of the potential for macro approaches.

Throughout each interview each educator's underlying understandings of the causes of environmental education gradually emerged. For some a clear understanding that environmental problems were largely the result of the way in which social actors interrelate under current cultural, social, political and economic conditions was evident. However, because of the external and internal factors shaping the approaches to environmental education studied, practice did not always correlate with these macro understandings. The purpose of this section is to reveal this evidence of macro understandings and to argue how it signifies the potential for macro approaches to emerge.

Prior to each interview and during the interview preamble, each educator was presented with a brief explanation of the difference between micro and macro approaches. The first half of the interview focused on the approach taken to environmental education and explored some of the factors driving it. The second half of the interview began with a discussion of the knowledge-action gap. This was firstly to ensure that the educator understood the phenomenon, secondly to explore the educator's own experience of it, their observations about its existence in others and finally, to discuss how much they considered it in the design and delivery of environmental education. The purpose of discussing the knowledge-action gap was to allow the educator to begin to think and talk about why the gap exists both for themselves and for others. Building on the thoughts and analysis of the educator, the factors shaping the behaviour of social actors were explored further. In each case comprehension (although of varied degree) of the problems of plural rationalities (Gough, 2002) and the macro factors driving behaviour and therefore environmental problems was evident. The following question, which from here onwards I will refer to as the 'big' question, was then posed to the educators:

> Given that our behaviour (environmentally friendly or not) is driven by many different social and cultural factors and not just environmental values, how do you think that the behaviour of individuals can be shifted towards behaviour that has less of an impact on the environment?

In many cases the educator's thoughts on this 'big' question had emerged spontaneously earlier in the interview. The following extracts reveal the beliefs of some of the educators about the causes and solutions to environmental problems.

During the discussion on the knowledge-action gap, Nat Charity revealed her understandings of why it exists for so many people, both in regard to health and the environment:

> The difficulty with both is that we have established social structures. It is very difficult to decide that you want to lead a lifestyle, for example, in the UK of not drinking beer and that is not even drinking heavily, it could be just a casual drink after work or whatever. If you make a decision to not be part of that lifestyle and to not actually walk into a pub for that reason, then that is a very very difficult thing because there is an entire social structure. It is really embedded in social structure and social interaction and just a whole lid on health behaviours, so that makes it quite difficult, so it really does depend on the issue, how heavily it is embedded, something like waste and energy as well are very difficult as well, because they are so embedded in our consumer... the waste we produce is embedded in our consumption.

She continued on this theme in relation to the drivers of consumption:

> There's just purchasing and buying and going shopping and all that kind of thing are just so embedded. Having things and possessing and you know owning all these toys, having all these electronic things that are on standby all over the place that you can just push a little remote and away they go and you've got all your home entertainment and that. Our whole social system is so based on that being desirable and achievable, that that's what people want... you know to change that is very very difficult.

Cam Paine's response to this challenge could best be described as uncompromising. He agreed with the opening statement in the 'big' question before responding as follows:

> C. Paine: Through legislation
> **Interviewer: Ok...Full stop?**
> C. Paine: Through legislation, I think that is our best hope.

He went on to critique the draft climate change bill, labelling it as 'completely inadequate' and proposed that legislation should invoke swift radical changes in behaviour and lifestyles. Cam was then asked if he thought this sort of legislation would be popular, given the likelihood that the majority of the public would perceive the impact involving large sacrifices on their part?

> Oh God no! But that's why we need legislation, because it is not going to happen voluntarily.

Nat, however, argued that a radical change to social structure could have very detrimental effects upon individuals and expressed the need for caution in the delivery

of education about values and meanings. The following extract represents her concerns and her recommendations:

> If it is your values then your whole social structure is built on that and you start sweeping that out from underneath then your whole social structure is built on consuming and having toys and bright shiny things, you sweep that away from someone and that is a bit difficult for them. Because if everything you've ever believed is about making money so you can buy all these things, then you get told that that is actually not so meaningful, or that that is something that has all these other impacts then it says some pretty negative things for yourself, so you have got to approach that with baby steps, you have to be very careful how you educate people about something like that.

Due to the largely external constraints on her practice, chiefly that her job is to deliver aspects of the National Curriculum in schools and is funded by the government, Nat does not have the opportunity to develop a macro approach. The extract above suggests that she is also unconfident about how she would actually do it. In the following extract, she describes how she approaches the problem of the knowledge-action gap:

> My approach to education is always trying to bridge that gap and I think the first thing is to find an easy step for people to take, because once you're on that step and you feel the difference on that step and see that it is going to make some difference, then it is easier to sort of snowball it from there.

The extracts from the interview with Nat that are reproduced earlier in this section, suggest that she recognises that the gap can only be closed for certain issues. The charity that she works for focuses on those issues. The reality of the snowball effect, which Nat hopes for, actually happening is uncertain and remains questionable. For example, the educators could all recognise evidence of the knowledge-action gap in their own lives and the lives of others. Cam Paine's experience has led him to view micro approaches to education as inadequate. Following his statement about the unlikelihood of social actors changing their behaviour voluntarily he was asked what role education could play if dramatic behaviour change legislation was to be enforced, he replied:

> Um...I don't know, because...[sigh]... because education, you know, it is almost too fluffy really for this. Its almost we need to... in a way it needs to be, not propaganda, because that suggests that its not true, but if you think in the second world war when we had all the kind of posters, you know: 'Dig for plenty'?

Cam Paine clearly sees the current form of environmental education as inadequate and limited, based as it is in appealing to the environmental consciousness of individuals in an attempt to invoke voluntary behaviour change. Cam clearly does not consider that there is another way of approaching environmental education. His focus and practice, however, remains largely micro in that it is based on trying to persuade individuals to become campaigners for a stronger governmental response to environmental problems.

The interview with Nat Charity indicates potential for a macro approach. She displayed an appreciation of the deeper, macro, drivers of human behaviour, which given the right working conditions could be built upon to create a macro approach. However, she still takes a micro approach to environmental education. To how large a degree she is comfortable with taking this approach is difficult to assess. Plausibly, the reasons she willingly takes it are a combination of the external factors that remove her choice in the matter and her inability to imagine an alternative. The extracts above do however highlight her reservations over an approach that would encourage individuals to question their materialistic values. This suggests that another factor stalling a macro approach is that she believes that the cultural, economic and social conditions shaping consumerist and consequently environmentally damaging behaviour will endure. This is a fatalistic position and typifies a micro approach; the emphasis is on coping with the problems created by consumer culture. The alternative approach is a macro approach based on trying to shift away from that culture, to a culture where material goods and services hold less meaning and are therefore valued less by social actors. The actual shape of macro approaches will be explored further in the final 3 chapters. The remainder of this section will highlight further evidence of the potential for macro approaches to emerge from the educators studied.

Macro understandings, coupled with reservations about micro approaches were evident in several other educators. This suggests that given the existence of workable macro approaches, educators would be receptive to the idea of practising them. The extracts below highlight this potential.

During discussion about the knowledge-action gap Clare Parks, like Cam Paine, seemed to question the value of micro approaches. She queried:

> I wonder how much what we're doing does challenge people. I mean, they say 'every little bit makes a difference' for example the 'are you doing your bit?' Sometimes I think we are trying to say 'do a bit' but actually it almost more than a bit, we need to do a lot more than that, to make any practical difference.

In the following extract Ed Townsend discusses the change he notices, as teenagers get older. This exemplifies his understandings of the knowledge-action gap, plural rationalities and the limitations of a micro approach:

> When they are young they will say 'oh yes of course we will always walk, or take the bus' and they'll run through all the reasons why. When they get to 17 or 18, the car is the goal, they want the car, they want to drive, and they want to be independent. So we have these conversations, they know that they should use the car less, they want their own wheels, it is a lot more important to them at that point in their lives, than being green.

Laura Green-Schools discussed how she attempts to discuss issues surrounding advertising and the cultivation of needs and wants:

> Well we try, certainly with the older children, years 7 to 9, the age of 11 or 12 upwards. We talk to them about why you buy the product, what makes you buy the product? Etc... Quite often they say 'because of the advertising, because we are going to get a toy, they tell us its going to do this or, "look at this it has got this much Calcium in it" so it is going to make my bones really healthy.' I say 'yeah but there are a lot of other things...' So yes I think the children are very aware about how they are influenced, and they are aware that they have seen it on the TV, so they want one, but nobody actually talks to them about advertising and what role it can play and getting them to design their own advertising campaigns for school, but for the recycling schemes. Saying 'what makes an effective campaign?' They are aware of how they can be influenced I think and what makes them buy certain things, but they still buy them. [Laughs].

The fact that Laura does not perceive that this approach works, despite the fact that children are aware of the influence of advertising, is useful to the future design of macro approaches. Her willingness to begin to question the value children place on products as part of her approach to environmental education does however suggest potential for her to take a macro approach.

In the following extract Rhian Cycler expresses her understanding of the influence of consumer culture on behaviour and how it limits the effectiveness of the awareness raising approach that her organisation takes:

> I think it is important to get the micro right as well, but then from the other hand, as we do at work, which is promotion, so we print hundreds of thousands of leaflets effectively to persuade people to do stuff, to take up new schemes, to educate them about waste reduction, you always feel the pressure from the consumer end, it is a little bit like what your letter says, you know you are going in one direction, but up above you've got this culture of consumption, material goods and that's what's important and that's what defines you as an individual, it is not you as an individual that defines, it is actually the car you drive the house you live in the things you buy these things become important. That has become important over several centuries I would think in a way. So it is not a recent thing, you are actually digging away at the real control, the real culture, the whole western world in a way and in fact in the developing world now as well, because no doubt they are trying to achieve the things we have as well.

In the following quote Walter Native expresses an internal motivation to focus the work of the alternative energy centre on a critique of consumer culture:

> It's to get people, specifically young people to question the way that we live, the amount that we consume, in the broader sense, including transport and everything else. And to try to look at possible futures that will not contribute to climate change in the way that we do at the moment, but also that will provide a fair world for everybody. In simple terms that is it really. It is definitely trying to provide people with information so they understand a lot about the issues, but definitely about trying to think 'yes a better world is possible' and think that 'a better world with a perfectly good quality of life is possible.' So that is the underlying thing.

Walter, in fact, does practice some environmental education that could be labelled as a macro approach. He describes it in the following extract:

> Then with the A-level design and technology groups I do an activity where we look at a product, the product we look at is just a Kinder egg normally because it works really well, because it has lots of different materials. I get them to look at the life cycle of it if you like by looking at little cards. Kinder egg works brilliantly, because it throws up lots of issues and one of the questions is then 'how can you reduce the impact of this thing?' Really the only answer is 'you never make it all in the first place.' But I also do a session with them about needs and wants, you know: 'what do we really need to make life worth living?' as opposed to what we want. So it is throwing up those things in that sort of way.

Later in the interview in response to the 'big' question Walter expressed his concerns with micro approaches, specifically around the issue of waste and recycling:

> There are all sorts of choices we make in life and sometimes people are putting a fair bit of effort into doing things that really don't make that much impact at all globally. Recycling is a classic example. Recycling your plastic bottles makes very little difference and if it actually encourages you to think, it is fine to buy more plastic bottles, then it is negative.

Finally, Woody Learner expressed his understandings of the origins and implications of consumer culture:

> The Material consumption... there are millions of pounds spent on advertising, there are huge amounts of peer pressure and the whole fabric of our society is based on consumption. The whole of the fossil fuel revolution of the past 200 years has enabled us to have a lifestyle that is not sustainable in the long term and much a better standard of living than anyone could have aspired to before the industrial revolution. Sadly, it looks like in the long term it is not going to be sustainable although many people would argue; it is not going to be possible for us to continue enjoying that standard of living.

Although he is uncertain of how it could be done, Woody does argue that environmental education needs to begin to help individuals understand the drivers of their behaviour and begin to envisage other ways of life and conceptions of quality of life:

> One of the big issues, and I don't have any answers for this, is helping young people to differentiate between quality of life and standard of living. I personally believe that the only way forward, the only future for the human race is probably if we adopt different lifestyles, but also celebrate the basis of those lifestyles and those lifestyles are not going to be based on material goods and material possessions. They are going to be based on sustainable communities, they are going to based on people caring more for each other, spending more time with each other, enjoying socialising more, enjoying the things within their own community rather than jetting off to the other side of the world and having all the material goods and so on. That is going to require a huge shift in people's perceptions, if we can just start getting young people just thinking about the issues of 'do I need all these material possessions are the other things?' If we can actually get them to appreciate some other quality of life then I think we have started the process.

Given the right external conditions, it is quite possible that Woody would embrace a macro approach to environmental education. Unfortunately, similar to the majority of other educators studied, the various external and internal factors shaping Woody's

approach to environmental education produce a micro approach that seek to cope with the problems of consumer culture rather than attempting to shift that culture.

The potential for macro approaches to emerge from the educators studied has been evidenced in this section. The barriers preventing macro approaches often correlate with the factors shaping micro approaches. One major barrier, clearly evident in the interviews with both Nat Charity and Simon Chat was a lack of guidance about a macro approach. When this is coupled with a lack of support for it, both externally and within the EEI's 'community of practice' (Lave and Wenger, 1991), it is prevented from emerging. Chapter's 8 and 9 will look at the second part of research question 2 to further explore what a macro approach to environmental education could be.

6.5 Conclusion

The interactions between the factors shaping environmental education are extremely complex. It is difficult to explain with any confidence how and why environmental education, in general or even in one individual case, takes the shape it does. However the analysis presented here does provide some clues. The factors shaping environmental education can be thought of as both internal and external. Internal factors centre on the beliefs held by environmental educators about the purpose, shape and best methodology for environmental education. An assessment of the origins of these beliefs is a difficult task and this chapter has shown that, for the educators studied here, beliefs do not always correlate well with practice. This inconsistency was due, in many of the cases studied, to the influence of external factors such as funding, the national curriculum and the affects of audiences. In chapter 7, two case studies will be discussed to explore the factors shaping the environmental education designed and delivered by two unique educators.

Chapter 7 - Exploring the factors shaping micro approaches and the potential for macro approaches to emerge – part 2

***All names of individuals and organisations studied have been changed for reasons of anonymity. Text in square brackets represents these changes or additions, for clarity, by the author.**

Chapter 6 highlighted how it is difficult to identify, with any great certainty, all of the factors shaping an environmental education initiative. The difficulty in ascertaining the exact amount of influence each one of these factors has, was also discussed. However, numerous factors shaping the environmental education designed and delivered by those interviewed became apparent. This helped to explain the nature of the approach taken and the analysis contributes to understandings of why micro approaches occur and what needs to be done to allow macro approaches to flourish. Secondly, chapter 6 investigated the potential for macro approaches to emerge from the current environmental education infrastructure (EEI). Several of the educators studied revealed their potential, given the right set of conditions and circumstances, to design and deliver a macro approach. The second phase of the primary research for this thesis used semi-structured interviews and silent observer case studies to investigate both these areas in more depth in relation to two unique environmental educators.

This chapter will report, in turn, on two case studies to reveal the factors shaping the environmental education initiatives under study and explore the conditions generating, and nature of, any apparent macro elements. Section 7.1 will introduce and analyse the environmental education designed and delivered by Artie Pilot. This will be followed, in section 7.2, by analysis of the approach taken by Conner Sultan.

7.1 Artie Pilot

Artie Pilot played the central role in a pilot project organised by a major national arts organisation that aimed to make a link between sustainability and the arts. The project was one of four pilots that were run simultaneously in four schools in two British cities. Artie Pilot was employed on a temporary contract for six months at a primary

school in a middle class area of a culturally diverse, medium to large sized city. During the project Artie was required to design and deliver regular workshops and outdoor, off site activities in conjunction with the teacher of a primary school year 4 (8 and 9 year olds) group and several environmental specialists to link art with sustainability.

In my role as researcher, my attention was drawn to the project during the Internet search for appropriate environmental educators to study. Given the finite duration, locality and relevance of the project, it seemed, on further investigation, to be an ideal initiative for case study. I was interested primarily in the project as a piece of environmental education. I established contact with the arts organisation and received permission to conduct a case study on one of educators involved. The study began during the initial planning stages, I was therefore was able to study the design and delivery of the entire project. Through a series of emails and meetings, with the main personnel involved, the format and direction of the project were explained. These meetings and emails also allowed me to outline why I wanted to study the project and what they could expect of me during it. The study included several semi-structured interviews with the most important personnel, combined with silent observation of key stages of the project's design and its delivery. Care was taken not to reveal my opinions on the progress of the project or to make any suggestions about its approach. This was important as it ensured that I, as a researcher, was not influencing the course of the initiative in any way.

Although the project under study was a pilot and therefore partly considered by the arts organisation as a learning experience, it must be remembered that for many of the people involved, the project was an end itself and consequently a very real and stand alone piece of environmental education. It is from the latter perspective that this case study was conducted.

Section 7.1.1 will discuss the structure of the project and the roles played by the major personnel involved in the design the initiative. Section 7.1.2 will analyse the project's delivery.

7.1.1 Designing 'Sustainability and the Arts'

The 'Sustainability and the Arts' project was initiated by a national arts organisation in an attempt to use the arts as a way of improving children's understandings of the issues surrounding sustainability. The pilot program was part of a wider initiative linking sustainability and the arts, which was created and run by the national arts organisation. The pilot project analysed here was funded, in the main, by a charitable trust, with further contributions from the arts organisation and their project partner, the government creative learning programme. I attended a meeting between representatives of these three stakeholders that was held prior to the selection of schools and artists. The aim of the meeting was to finalise the project's direction and funding. The charitable trust appeared happy to let the project develop freely, they were encouraged by the sustainability element of the project and stated that this was the major reason for their involvement. The design and delivery of the project was therefore left to the arts organisation and the government creative learning programme. Michael was the major representative of the former, while Lucy represented the latter.

During a semi-structured interview in the design period of the project Lucy outlined her role to me:

> I will see my role as organisational, sort of setting ground rules and that initial liaison between schools. Very much about making sure that the relationship between schools and the artists is a respectable, functioning, effective relationship because they are very different areas and lots of people who start working at schools the confines of school. But also making sure that the school is open enough to take on the ideas that hopefully both the artists will be bringing to it. And to do boring budgets, meetings, minutes and things like that.

Lucy then portrayed Michael as being 'the ideas person and the spark'. Both Lucy and Michael described themselves as coming from an arts based background. Lucy had experience of education as a consultant and teacher, but neither had had any formal environmental education or training on how to conduct it. Michael, who was the driving force behind the entire projects existence, shared his growing environmental concerns with me during an informal discussion when we first met in person. It was clear that he had developed a passion to find a positive link between his speciality (the arts) and the challenges of sustainability.

Lucy and Michael were in charge of choosing two artists to go into two separate schools to deliver the project in one of the cities. The first stage of the project's design therefore involved finding and establishing the commitment of the two artists and two suitable schools. Lucy and Michael interviewed six artists for the two posts. The interviews required the artists to give a presentation outlining how they thought their skills and experience could contribute to the project. Having observed the interviews I asked Lucy, face to face and Michael by email to discuss what they were looking for in the interview and why they appointed the two chosen artists. Lucy explained her position as follows:

> What I was looking for was someone obviously with a passion for the issues around this, or some interest in that, but also with an attitude to their practice, a lot of it was to do with how their practice relates to working with children and I see art as a piece of the real world... So I was interested to hear from the people we were interviewing, just how they were thinking about how art can stimulate ideas and how art can be a vehicle to express children's thoughts that they didn't have a way of expressing in any other way because they don't have the written capability to write a persuasive argument.

Michael relayed what he was looking for in the artist by email, outlining the criteria as follows:

> I was looking for someone who had integrity as an artist, good communication skills, an interest in environmental issues, an ability to work with young people. For me it is really important that their practice as an artist is innovative and interesting.
>
> I also wanted to select two people with different ways of working and using different media. The decision to have someone who uses technology and someone who is more craft based in a sense, means that we will be able to explore different approaches, and different means of communicating and exploring.

This case study was limited to just one of the artists, Artie Pilot, the artist described as 'craft based' above. In the same email Michael described Artie and outlined why he was selected:

> Interesting as an artist with plenty of confidence working across different media. I particularly liked the books and his very reduced way of commenting. Felt absolutely confident that he would work very sensitively with children and with them find a way of addressing environmental issues - he seemed absolutely to understand the brief and to be enthusiastic about working on the project. He's serious and has a range of experience that will be very helpful -

teacher training, research, his background in landscape architecture, public commissions, and exhibitions. He's young but confident.

Michael also discussed the other artists interviewed, his comments highlighted the importance of the artist's ability to communicate well with school children and apply their artistic skills to match the brief. Strong environmental awareness and a clear vision of how their art could contribute positively to sustainability were also important in the selection process. I attended the interviews in person; it was noticeable that little attention was paid to the outcomes of the project from a sustainability standpoint. Environmental education and its goals, approaches, design and delivery were not discussed at all during the interview process. The emphasis was on art and the artist's ability to meet the project's brief. In the shaping of the approach taken during the delivery, the selection of the artist was crucial. The artist was employed as project manager for their specific project, although input and assistance from Lucy and the classroom teacher was available. It was, however, the artist who would be responsible for the projects content and direction. As will be discussed further in section 7.1.2, Artie's understanding of environmental education and how best to conduct it, was therefore a very important element in the design of what he finally delivered.

A project brief had been made available to all applicants prior to interview. The brief was co-designed by the two project partners (The national arts organisation and the government creative learning programme). It was emailed to me by Michael and emphasised the project's aim of 'making the learning relevant to the individual child and, instead of focusing solely on content to focus more on encouraging life skills and competencies such as creativity, critical thinking and learning how to learn.' The key educational objectives were outlined as follows:

- To provide a means for participating primary schools to learn about and develop their understanding of ecological issues, particularly education for sustainable development
- To foster the creativity of the young people taking part by experimenting with new and innovative forms of learning
- To develop links between participating primary schools and their local community

- To encourage interaction between children, arts practitioners and scientists to develop new ways of disseminating sustainable development issues

- To encourage participating schools to work in more creative ways with different artistic disciplines

- To encourage the young people taking part to understand how different decisions and actions can impact positively and negatively on the environment

- To provide young people taking part with an appreciation of how to express their concerns about issues and how to communicate these

- To impact on the participating schools in the longer term in developing awareness of ecological and sustainable development issues with their children, parents and wider community and to encourage them to disseminate their good practice

During an informal discussion at the beginning of the project Michael explained to me the importance of aligning the objectives of 'Sustainability and the Arts' close to those of the National Curriculum. This was important because the project needed to be attractive to potential participating schools. The brief showed how the project could help schools to meet several elements of the curriculum. Primarily the project addressed the education for sustainable development and art requirements of the curriculum as well as focusing heavily on the department for education and skills recommendation to 'Make learning vivid & real: develop understanding through enquiry, creativity, e-learning & group problem-solving' (DfES, 2003, p. 29). The combination of the vision of the arts organisation and the needs of the National Curriculum were therefore instrumental in the production of a workable brief for the project. Artie Pilot was in charge of responding to this brief. However, he initially found the brief problematic. He described to me, during a semi-structured interview, how he was finding it challenging as the following extract shows:

> **Interviewer: so what has it been like for you so far?**
> Artie Pilot: It's been really exciting, it's been quite frustrating at times [laughs] and it's been really challenging as well, it has been challenging me more intellectually than I thought it would do just about how to actually work, when you don't really know what you are trying to do. I mean at the beginning, it has got a lot of objectives, but there is no, it's very sort of open ended.

The open-ended nature of the brief meant that Artie had a lot of freedom to design and run the project as he thought best. Notably the brief offered little advice on which

aspects of sustainable development to address or how to address them, it was therefore left up to Artie to decide.

This section has highlighted the impact that the vision of the national arts organisation, the National Curriculum and the two individuals in charge of selecting arts participants (Lucy and Michael) had on the design of the project. The next section will analyse how Artie Pilot delivered the project.

7.1.2 Delivering 'Sustainability and the Arts'

Artie began the project by posting objects such as flip-flops, driftwood and rubber gloves to the pupils of the class he would later be working with. The class teacher knew where the objects were coming from, but the pupils were told that a mystery artist was sending them. The objects led to a discussion between the class teacher and the pupils about the life stories of each item. Artie was later introduced to the class and explained the open-ended nature of the project, emphasising the need for the pupils to have an input into the project's direction. Following this meeting with the class and their teacher, Artie went away on another art project and was unable to visit the class for a period of six weeks. During these weeks he continued to post unusual items to the class but attached tasks to them. The tasks asked the pupils to discuss domestic environmental issues such as heating and recycling, write about their ideas for making the world a 'better place' and to collect resources for later art based activities.

Artie discussed, with me, the reason for sending things by post. He wanted to emphasise to the pupils that they had a voice and that the postal system represented a way to air their concerns about issues. A project called 'post your voice' emerged and it was the pupils concerns and questions about environmental issues that were to be voiced. I interviewed Artie shortly after his six-week break and asking him to define environmental education. He found the question difficult to answer as the following passage shows:

> **Interviewer: How would you define environmental education, what does it mean to you?**
> Artie Pilot: [pause] That's quite a difficult one to answer!
> **Everybody struggles!**

Because I don't know what environmental stuff is stuff. I suppose it is sort of just environmental awareness that a teacher brings into a class, especially at primary school level, because I don't know if its in the curriculum or not?
It is kind of a little bit, yes.
I think it sort of comes in at an everyday level.
Sort of in the media and stuff like that?
Yes and the teachers coming in and they talk about recycling and things and that sort of, they are very much more aware, sort of that awareness of the environment on a very basic level.
OK, so is that kind of, how you see it as, obviously when you are doing classes your idea of what environmental education is?
That's how it is taught in a school.
Is that how you feel it is?
Yes. I don't actually know if it is a specific subject. I've been in and seen the teacher, teaching and he'll teach them about algebra, decimals and stuff, and its very obvious if its a numeracy subject, or a literacy subject, I don't actually know if there are slots there for environmental education.

He described his role in environmental education as follows: 'My role is to bring a creative element into environmental education; I think that is my biggest role in this project.' Artie had some knowledge of the environment, but was uncertain about which issues to focus on and how best to do this. His response was to allow the pupils, following on from their discussion about the posted items and earlier tasks, to decide what they wanted to focus on and react to that. When I asked him which issues the projects were focusing on he replied:

Artie Pilot: Its quite a broad span, but the issues that they have mainly brought up are recycling and rubbish issues, global warming issues, a little bit about transport, pollution and ecology.
Interviewer: So that comes from?
That comes from the children, from their questions. I've been sending them tasks that have been talking about lots of different things, so one of them has been about recycling; one of them has been about energy; ones been about electricity and one about water, so although I'm not the scientist or the environmentalist, I'm actually just giving them little prompters that will hopefully develop work after that.

It is possible that the National Curriculum played a role in the choice of issues to cover. It is possible that the pupils would have discussed sustainable development during their school life at some point prior to the project and would therefore have been made aware of the key issues. The pupils were also prompted as they came up with issues to address by both Artie and the class teacher, who would have been fully aware of the requirements of the National Curriculum.

'Post your voice' became the central element of the wider project as the pupils wrote letters and postcards to various companies, organisations, politicians and charities asking them questions about the environmental issues that they were interested in. The questions were mostly micro in nature, asking for advice and information on recycling, transport, energy and climate change for example. Beyond the 'Post your Voice' part of the project, Artie explained how, overall, the project aimed to increase environmental awareness through creativity. During several visits to observe Artie in his role as environmental educator I witnessed how this was done. The environmental awareness of the pupils was increased through several activities that used the environment as a theme for projects such as making books with recycled paper and building solar powered toy boats out of old plastic bottles. I also accompanied Artie and the pupils on an 'Earth Walk' through a local wood that aimed to heighten the pupil's awareness and connection to the natural environment.

The project's overall micro direction is unsurprising given the background of those involved in it. This thesis has argued that a macro approach to environmental education would be more efficient in encouraging environmentally less damaging behaviour and ways of living. Although the sort of micro environmental education delivered by Artie can have the impact of raising awareness of environmental issues and create a motivation to act accordingly, behaviour change is usually hampered by the existence of plural rationalities.

It is however conceivable that an artist, given a sufficient degree of support and training, could lead a more macro approach to environmental education. Prior to the project's launch Lucy discussed her opinions on the use of art to explore the issue of sustainability and her hopes for the project. During my interview with her, she argued art has a quality of 'depth' and that it 'has a very good function of getting to the root of this sort of issue.' She elaborated on this as follows:

> I'm interested in the commonality between science and art, which you know this project is. So you've got skills like observation, like experimentation, testing hypotheses, hunches you know trying things out, risking things, just doing things and seeing what comes out. So it's those kind of open ended attitudes that I'm hopeful will actually sort of come out. And yes you may not be able to impart much knowledge to children that they may remember, but if

> you get children to question and to be curious and to look to open their eyes and just stimulate them, then even if they don't remember the facts, at least in the future they'll have that 'ooh I want to know more' it is building up those kind of attributes and competencies.

This clearly shows that there was a potential for a macro approach within the 'Sustainability and the Arts' project, the ingredient that was missing was a deep enough exploration of the root causes of environmental problems. At the end of the project I attended an evaluation session. This was held between the artists, Lucy, Michael and an external evaluator. One of the key recommendations was for greater involvement of, and continual access to, an environmental expert to help guide the project's direction and content. This is a recommendation I would endorse in the hope that the expert had a deep, macro understanding of environmental issues.

The project was successful in terms of developing the pupil's life skills, specifically their creativity, their communication skills and their ability to think critically about an issue. Sustainability seemed to be used as a vehicle for that, it is possible to imagine the pupils developing similar skills by considering, through art, another issue, such as international development, health or even sport. Increased awareness about Sustainable Development was an undoubted outcome for the pupils, teachers, the artist and those connected to them. The education, although having the potential to be macro in its approach, was however almost entirely micro education about the environment and its problems. This was due to a combination of influencing factors, the most important of which was the way those involved (specifically Artie Pilot) understood environmental education and the best way to practice it and the requirements of the National Curriculum.

7.2 Conner Sultan

The second research question of this thesis asks: 'How can a macro approach be applied in environmental education?' This section will help in the exploration of this question and will address both of its key sub-questions. Conner Sultan described himself as a change agent; he acts as a consultant for businesses and organisations, but prefers not to be labelled a management consultant. Conner became involved in this research when I approached him asking to interview him as an environmental

educator. It was clear from this initial interview that he understood how environmental problems are a product of a complex system, a system within which social actors interrelate with each other and their local and global environments, in hugely complicated and immeasurable ways. Conner's approach to consultancy stemmed from this understanding. Analysis of his approach is of use in the consideration of the critical sub-question: What exactly is a macro approach to environmental education? Study of Conner's work also revealed insights into the related sub-question: Is there potential for macro approaches to evolve from within the current Environmental Education Infrastructure (EEI)? This section will deal with both sub-questions in turn.

7.2.1 A macro approach to environmental education - Exploring the detail

Conner Sultan was the managing director of a company that runs two hotels, two shops, an outdoor adventure centre and a management consultancy. Conner had two roles, one as the managing director of the entire business and the other as a change agent or consultant. He described the latter as his daily vocation and it is this role that will be focused on here. During the first interview with Conner I asked him whether he saw his work as environmental education. The following extract was his response to this question and indicated his understanding of the difference between micro and macro environmental education:

> Conner Sultan: No, I wouldn't describe it as Environmental Education, certainly in terms of the management programmes we do, some of the rest of the business does environmental education type work in terms of, you can go and leap off cliffs and learn about the environment; but that's not what we do on the programs. At the same time we hesitate, wherever possible, to fall into a reductionist trap, of actually naming what we are doing and ticking boxes, because that's such as big part of the problem in the first place. So we don't describe it.
>
> **Interviewer: So if its not education, then are they programs that try to have a positive effect on the environment or sustainable development?**
>
> Yes, I would say that they are definitely intended to have a positive effect on the environment, but not by itself. They are not programs about recycling or replanting or whatever. What we try to do is try to help people see the connections between what they do and the broad state of the world. Anything from the patterns about consumption, society, depression, wellness, the condition of the environment, the global commons, a whole load of stuff, and try to understand it from a big picture perspective. We don't say 'right you've got to look after the environment because 'that's' important' You've got to recognise the connections between the environment and oil, and consumption, and materialism, and North-South inequality and so on. Take that view and say

that you cannot fix things at a component level, so let's not think about it too much from that perspective.

So rather than being an education about specific behaviours which individuals can do, such as recycling. It's more looking at their role and how they interact with each other, which causes...

Yes, correct, it's their role in the big picture. It's their role in the big picture and whilst people undoubtedly go away and start to do stuff at the small step level, and that will tend to be because they are sensitised to it, not because we have been telling people that they should be recycling. We know that some people have bought smaller cars as a consequence of our courses, but we don't tell them they should buy smaller cars, we try and teach them to think and let them make up their own minds about what is *important*. Does that make sense?

Yes that makes sense; I understand that you don't view it as environmental education per says, because it does not come under the traditional definition of environmental education. But, if you divide environmental education into education 'about', 'in/through' (that is kind of outdoor education, that sort of thing) and education 'for' the environment. Then it might fit into that education 'for'?

It would fit more into education 'for' the environment, and if anything it would be more ecological education rather than environmental. We are teaching people about ecology, in terms of the interaction between components and systems and systems and systems rather than looking a system in isolation if that makes sense?

Conner was clear in his belief that the majority of individuals he deals with have a mainly reductionist view of the world. This he asserted was what was causing social actors to act independently as bounded sub-systems. As the interview progressed it was clear that Conner equated these responses to the micro approaches to environmental education I discussed with him. Micro approaches try to change the behaviour of an individual social actor (a sub-system) without recognising that their behaviour is a product of the way they interrelate with other social actors (sub-systems) within the wider system that they all inhabit. In this situation social actors consider themselves as an independent sub-system and conceive other social actors in the same way. Underlying the approach taken by Conner is an understanding that the behaviour of a social actor is a macro process that both shapes and is shaped by the system they inhabit. It is only from this perspective that macro environmental education can emerge. I asked Conner to clarify which issues he focused on when doing his consultancy work and to explain why. In the next extract he explains how he puts his work into context for his clients:

Interviewer: Just to clarify, which issues do you focus on and why do you focus on them?

C. Sultan: It's probably easier to say what we not focus on, we don't talk about dog shit for example! On most programs there are several things we would talk about in terms of framing the context, which would include: Climate change, regardless of cause or effect; Carbon, the end of oil, North-South inequality, the mismatch between consumerism and happiness, we talk about resources and talk quite a lot about happiness and fear.

OK that's actually quite interesting that you talk about the mismatch between consumerism and happiness, how do you teach that, how do you get it across?

Well we tend to use it at a crude level, with GDP data and other indicators such as ISU and so on that we'll use to say: 'Look one set of data does this, which is the GDP data, by which we measure the success of our society' we help people to see that it is a measure of activity, actually measured in pounds, not value. We find that if you talk to people about what they value it is rarely money, it is wellness, it is happiness, and it is family and the things that go with that. So we will talk about the inappropriateness of GDP and at a local level, if we are running courses here we will remind people of things like the [Coastal Oil spill] which put £79 million into the [Local] economy, which it did by spilling 70,000 tonnes of light crude kind of stuff. So we talk about the inappropriateness of that measure. It [using GDP as a measure of success] was the right thing at the time, but it is no longer as appropriate and we illustrate that with other data to show that in most countries in Europe, for instance, the indicators around wellness have decreased in recent years, so that even though we think consumerism makes us happy it doesn't work. Although in their hearts people can actually see the sense in that there is a still a strong sense of denial, so we have people be OK with that denial and just listen to it, rather than try and push against it, which is not how we tend to work.

Is that a major part of what you do, is that what underlies it all, or is it just one thing among lots of things?

It's a major part of context. I don't think I've run a program in the last year that hasn't included that piece in it regardless of what the client brief has been. We just say, "if you want us to work with you, this is what comes with it." You can't, I believe, develop a strategy for a financial services company without taking some of that stuff into account. I think from that, we then probably try and break that down, we say that 'big stuff counts... which parts of that do you most strongly identify with?' It then relates back to what they're actually there for on the day in terms of creating change or helping teams get more motivated about what they're doing. Which will then break that down into some of the things that will actually impact on personal wellness; around happiness, purpose, courage all those softer things which are actually a part of the bigger global picture anyway and so again helping people make the hyper-links back to the bigger topic that we are talking about through them as possible.

Conner, as a consultant, educated individuals employed at every level of the businesses or organisations that were his clients. His work focused on helping these

individuals understand their role in the system that they inhabit. For the majority of employees, the wide system is often understood as the whole of their organisation. For the more senior members of the organisation, the system may be framed globally with the organisation as a social actor within it. Conner described an example of the sort of experiential learning technique he uses to help employees understand how they and their system currently works:

> We have an exercise that we do called 'Kingdom of the Blind' which is a very large scale 'bunny grab' machines they have at the fairgrounds, we have a large version of that about the size of a dining table where the strings are controlled by people with blindfolds on who are given instructions by other people who can't speak and a manager who is quite far away but can see and speak, but can't see the detail. For instance what generally happens is that the people working the machine, the operators, generally speaking, never say anything to anyone. Just because as soon as they are given a blindfold and told to do something they just do it and they wait to be told. The managers, who can see the big picture, never tell people the big picture, they just say: 'pull; let go; move this; move that' they never tell anyone what the big picture is. That so accurately replicates what happens in business and it can be quite cathartic sometimes that people recognise that 'hey, we do this all the time'. It helps them get that insight that 'oh god this happens', you know 'I've met the devil and its me' recognising that its rather than 'I've met the devil and its you' and that is a key shift for getting people to take responsibility, recognising that 'its up to me to make that change.'

Conner discussed the work of Senge *et al.* (2005) particularly what they describe as the 'U-Movement' (Senge *et al.*, 2005, p. 219) and explained how it informed the work that he does. Figure 7.1 shows the seven capacities of the U-Movement. Conner describes the U-Movement as 'a great discussion of how a lack of system awareness is stopping changes from happening.' The U-Movement describes how change results from fully developed system awareness. The movement goes through three stages, the most influential being 'Presencing' at the bottom of the 'U'. The Senge *et al.* (2005) book is presented as a conversation between the books authors.

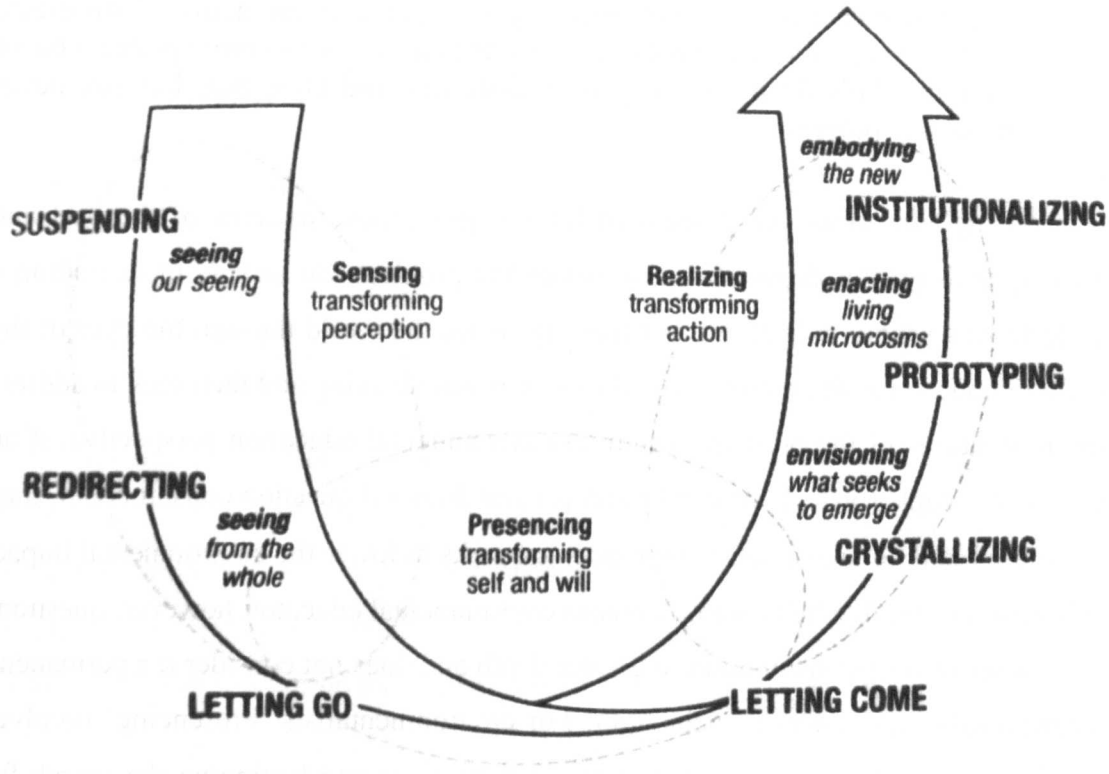

Figure 7.1: The Seven Capacities of the U-Movement (Senge *et al.*, 2005, p. 219)

In their discussion of 'Presencing' (Senge *et al.*, 2005, p. 218-220) the discourse surrounds the struggle to understand exactly what 'Presencing' *is*. To fully grasp it one must understand what precedes it. Prior to 'Presencing' comes 'Sensing.' During this stage we learn to see our seeing. Conner explained this as follows:

> Seeing our seeing means being able to see ourselves seeing the world... so we are conscience of the way we are receiving information, we are conscience of the lenses through which we are seeing the world... when we are able to see our seeing, we stop treating information as absolute and can take it as a view and start to consider it differently.

Conner explained what happens when there is a failure to look with greater depth at an issue. The tendency is to look to the past for a solution and apply it in the present. Conner uses the examples of crime and bad behaviour in schools to explain this process:

> If there is an issue with increasing crime on the streets we deal with it by getting more police, bigger jails; kids behaving badly at school means we exclude them, it makes sense. So we download patterns from the past so we end up *reacting* and creating circumstances that actually lead us right back to where you are. So there is a *massive* knowledge-action gap, in effect, because

> you can create activity but arguably you don't create action. You create activity because you can measure the fact that you've got more police, you've excluded kids from school, you've done this and done that, but you never make any progress.

'Presencing' describes the process of letting go of these patterns of the past and looking with greater depth at the causes of the problem. So instead of excluding a child from a school, a head teacher may try to see the world through the eyes of the child to understand the reasons why the child is misbehaving and then seek to address the root causes of the problem. From an environmental education perspective, if an educator accepts (or feels forced to accept) and does not question consumerism, they are more likely to take a micro approach that seeks to lower the environmental impact of over-consumptive behaviour. A macro environmental educator, however, questions the causes of over-consumption in greater depth and does not consider it a permanent, unchangeable influencer of behaviour. For environmentalists 'Presencing' involves the letting go of consumerist, materialist perspectives and beginning the search for other possible futures. It is about understanding the entire system in its present form and imagining how it can change. Conner explained what happens with environmentalists who do not question the whole system:

> Environmentalists who don't think about consumption and capitalism, business profit and business motivation have difficulty engaging in the system and therefore can't have an impact on it.

In the Senge *et al.* (2005) book Otto discusses his conceptions of 'Presencing' he says:

> To me, presencing is about 'pre-sensing' and bringing into presence – and into the present – your highest future potential. It's not just 'the future' in some abstract sense but my own highest future possibility as a human being. (Senge *et al.*, 2005, p. 220)

The right hand side of the U-movement describes the way in which this is done, it involves crystallizing ideas of the future, prototyping new ways of operating, testing them, failing, prototyping again, before they eventually become institutionalised and 'present'. Environmentalism may actually be about bringing the highest future possibility of the entire human species into the present. Macro environmental education is crucial to this whole process as it helps individuals to be 'present', to see their seeing and understand and question the current system they inhabit.

7.2.2. Delivering macro approaches to environmental education

To further understand the approach taken by Conner I accompanied him to a conference on innovation organised for approximately six hundred public service workers. The conference was two days long in total and Conner had been given a slot of nearly three hours on the second day. Conner opened with a thirty-minute presentation. He began by listing several systemic issues that needed to be resolved in the modern world including climate change, obesity and natural resources. He then used graphs similar to those presented in chapter two of this thesis (figures 2.3 and 2.4) to show the divergence between the growth in GDP and well-being. He also pointed out problems surrounding farming, security and crime and argued that all these were reasons why change and therefore innovation were needed. He stressed to the audience the importance of thinking about innovation in the context of their place in the world, not just within the organisation they work for.

Conner's presentation moved on to introduce the U-movement, he argued that the reason why we do not question the current system, is because we are scared of looking for alternatives and operated with 'blinkers' on. The presentation explained that to make innovation and change possible it was the necessary for us to firstly 'see our seeing', before 'Presencing' and eventually 'realising' a different future. Conner concluded the presentation by recognising that although it appears that 'we have never had it so good' there are systemic problems and therefore a need for innovation. He argued that to make change happen at any level, whether it is within an organisation or globally, it is useful to see our seeing. The presentation was followed by a workshop designed to help individuals to do this.

Each workshop was comprised of eight participants and a facilitator. The participants were all employed by different public service organisations, the facilitators were provided by the conference organisers. Conner had spent a day with the facilitators to ensure they were confident and competent enough to run the workshops. The workshops encouraged the participants to think about their role within their own organisation, thinking therefore of their organisation as a system. The exercises within the workshops were experiential and the participants were made aware of the impact that their perception of others has on the way they behave towards them. The

workshop showed how the labels the participants place on others can lead to unsatisfactory working relationships. Through this workshop participants were able to assess problems in their work place resulting from the way colleagues perceive each other. The U-movement was re-visited as the facilitator pointed out how, questioning their perceptions of others and pondering how other might perceive them, was an action of seeing their seeing.

At first glance, the 'Perceptions' workshop appears limited as a piece of macro environmental education. Conner related to me in a semi-structured interview a few days after the conference why he pitched the workshops at the level he did.

> So whilst trying to frame it from that piece earlier on [the half hour presentation] saying there are global constraints here, you know it was a conference on innovation and change in [region name] and so by being too strong in terms of specific sustainability stuff, people would latch on to it and think 'oh now it is more of that eco claptrap' and switch off. So talking to them in their language I believe is better way of trying to keep the audience engaged and teach them at the same time the principles about sustainable development, which is about being able to let go of the fact that there is only one way of doing this.

The audience clearly had an impact on the approach Conner took, in the initial interview he talked about the importance of meeting the needs of his clients and explained how his organisation 'can't afford to bite the hands that feeds us, we need to meet our clients needs at the same time as finding a way of helping people to think differently.' During the initial interview I also asked Conner whether, when he critiques materialism, consumerism and the culture that surrounds it, he receives some opposition. His response highlighted an important consideration in the design of macro environmental education and relates to the comment in the extract above about people switching off when they perceive the message as 'eco claptrap'.

> **Interviewer: Do you come up against any opposition, depending upon who you are working for, for instance if you are working with a business for which consumerism is important to them, it is something that drives their profit, do you come up against opposition?**
> Conner Sultan: Yes sure, the opposition to ideas, disagreement perhaps more than opposition, can come from a number of places, anything from saying: 'its not true that people aren't motivated by money' because for people who have virtually been stuck in that space, for all their working life, and are totally hooked into materialism, the idea that they could be more happy with less money is directly in opposition to everything they've stood for throughout their working career. That will tend to be it, opposition does not tend to be at a

> senior level, because most people when they get to senior management / director level have experienced enough of the stress to realise that the reward doesn't give the payback it was promised to.
> **That's interesting. So in general most of the opposition happens at the lower levels within an organisation.**
> Lower levels that tend to reflect, relatively young age and immaturity in terms of understanding the bigger picture and pressure and everything else. Also I think, there are still a lot of people out there who will still deny the fact; I suppose in terms of Climate Change specifically, will deny the fact climate change is anthropomorphic, therefore we shouldn't do anything about it, deny that it is actually happening for instance, which is quite interesting. So we try to separate those two and say: 'well regardless of anything there's adaptation, there may be adaptation you want to do' which is talking about lifestyle, planning and where you are doing your building and stuff and also mitigation, in terms of saying: 'regardless of anything else, regardless of what we've done this stuff is happening anyway, therefore there are some things you want to consider relating to that'.

Conner's approach at the public services conference did not focus on the need for change at a global systemic level, for sustainability, although it was placed within that context. The focus was on change within public services in one specific region of the UK. However, by encouraging the participants to see their seeing in their work context, they may have developed their ability to do this in a wider context. Echoing what he had said in the conclusion of his session Conner told me how he viewed the underlying theme of his work at the conference:

> I think the underlying theme that I had in the back of my mind all the time was saying that unless... it was based on a perception that unless we make system level connections and system level changes in the way that people work, we only end up with component based solutions which never capitalise on the best of people's capacity, potential or capability.

This perception lies at the heart of macro approaches to environmental education that make system level connections and seek system level changes, encouraging social actors to critique the current system and imagine possible future systems. Micro approaches fail to encourage individuals to see their seeing, they ignore system level connections, seek isolated, component-based solutions and fail to recognise that most behaviour results from system level connections.

7.3 Conclusion

This chapter has looked in detail at two, vastly different approaches to environmental education. The approach taken by Artie Pilot, had the potential, through the depth quality of art, to become a macro approach. Unfortunately, due to a lack of understanding of the need for a macro approach it became a largely micro approach. The study of the work of Conner Sultan, however, is useful in the refinement of a macro approach. His emphasis on systems thinking and the importance of questioning our current global social, cultural, economic and ecological situations has potentially large instructive value for the future of environmental education. Chapter 8 will begin the conclusion of this thesis by exploring, in more depth, the question of what exactly a macro approach is. This important chapter will do this by analysing the apparent contemporary emergence of a macro approach.

Chapter 8 – On the possibility of macro environmental education

'Going Home to Teach' is Anthony C. Winkler's (2006) autobiographical account of a year spent educating trainee teachers at a rural college in his native Jamaica. It was the 1970s and Winkler had returned to Jamaica after many years spent in the USA. On his return, Winkler experienced Michael Manley's socialist government first hand. His book describes his own impressions of socialism and often recounts the impassioned political debate of the college staff room. In the book's epilogue Winkler (2006) reflects on the careers of his former colleagues. Mendoza, a Canadian math teacher, is described as mercenary, avaricious and uncharitable; she despised the Socialist government of Manley and remained as a teacher in Jamaica only because of an administrative error in her home country that meant she was being ludicrously over paid affording her a luxury lifestyle in a cliff top house. Her career in Jamaica ended when, after ten years, this error was finally spotted and her pay was cut to that of a missionary, which comparatively was a pittance. Winkler (2006) argues that her decision to leave Jamaica as soon as her pay was dramatically cut, points out one of the reasons why Manley's socialism failed in Jamaica:

> Betterment was what Mendoza found in Jamaica, what kept her there. When she left Jamaica she was richer by far than when she had come. Betterment of this sort is what human beings universally want for themselves and their loved ones. The idealistic appeals of socialism that call for unselfish sacrifice in exchange for the collective betterment of one's nation are too remote and monastic to stir ordinary hearts. Humans crave betterment that is personal, exact, measurable in teaspoons. Yes, yes, we want a better nation; but first we want a better hat. Many scowling Russian old men find this lust ugly and rage against it, but the craving to better oneself is in the blood and will persist to the end of humanity's days. (Winkler, 2006, p. 315)

The same problem seems to face environmentalism. The message of environmentalism, which equates to expecting unselfish sacrifice by individuals for the collective betterment of the planet and future generations, is always going to have limited impact if the craving to better oneself is defined only in materialist consumerist terms. Chapter 1 of this thesis explored the phenomenon of the knowledge-action gap and its hindrance on environmental education. Chapters 3 and 4 discussed the origins and current state of environmentalism and environmental education. Both 3 and 4 sought to explain why micro environmental education has

emerged and why it so often suffers from the knowledge-action gap. Drawing on primary research, chapters 6 and 7 explored how a sample of environmental educators recognised the gap, both in their own lives and the lives of others.

The existence of plural rationalities and the complex interrelationships that exist between social actors have been examined throughout this thesis. Dolan (2002) describes consumption as a macro process in operation. This can be extrapolated to behaviour. The reasons individuals do things are complex and often extremely difficult to fully discern. In the above passage Winkler (2006, p. 315) describes an individual's basic desire for improvements in their quality of life, standard of living or well-being as a 'craving to better oneself'. Chapter 2 of this thesis explored the negative impacts of consumer culture on the environment, and reviewed part of the growing body of evidence linking high materialistic value orientation with mental health problems. Chapter 2 argued that consumer culture lies at the heart of most environmental problems. Increasingly the reasons why people over-consume material goods and services are being examined and questioned. The evolution of the sign value of commodities *and* activities means that the purchase and use of material goods and services have developed increasingly deeper meanings. Decisions to purchase goods and services are now based on far more factors than their mere functionality. Consumerism has dramatically influenced modern day perceptions of what is meant by a quality of life, well-being and what an individual should do to 'better oneself'. I argue here that the core challenge for environmentalism is to invoke a widespread re-definition of what it takes to better oneself.

Denunciation of consumerist, hedonist existences and calls for a widespread re-definition of the necessary elements required for a good quality of life and/or sense of well-being are not new. However, increasing concern about the relationship between consumer culture and a combination of pressing environmental, social, mental and physical health problems, has meant that these calls are intensifying and emanating from varying fields, in chorus.

Through a review of calls for a wide spread re-definition of the constituents of well-being, this chapter will argue that a macro approach is developing and gaining prominence. It will also highlight key issues that macro environmental educators and designers of macro approaches need to consider.

8.1 The Emergence of Macro Environmental Education?

Before discussing the apparent emergence of macro approaches to environmental education, this section will firstly present a historical context.

8.1.1 Edward Bernays and The Hidden Persuaders

In the late 1950s American author Vance Packard (1957) released 'The Hidden Persuaders' an expose of marketing, motivational analysis and the depth approach. Packard (1957, p. 11) was deeply concerned about the impact on humans of the employment of mass psychoanalysis by 'professional persuaders', who understood and aimed to target the deep, unconscious desires within the humans, to manipulate their behaviour. Packard (1957) exposed how professional ('hidden') persuaders were discovering more effective and efficient ways in which to sell products, services, political candidates and ideas. In his concluding chapter Packard (1957, p. 215) re-emphasises his ambitions for his book and reassures his readers, that despite the increasing sophistication of marketing, they still ultimately have control over their behaviour:

> We still have a strong defence available against such persuaders: we can choose not to be persuaded. In virtually all situations we still have the choice, and we cannot be too seriously manipulated if we know what is going on. It is my hope that this book may contribute to the general awareness.

Since the first publication of the Packard (1957) book, the hidden persuaders have continued to exert strong influence over citizens. In his documentary 'Century of the Self' (Century of the Self, 2002) Adam Curtis begins by exploring the origins of consumerism and positions Edward Bernays as the father of manipulative marketing and the depth approach berated by Packard (1957). Curtis argues that it has given rise to a culture of selfish individualism. The example of the 'Torches of Freedom'

outlined in chapter 2 exemplified how a depth approach works. The Curtis film charts the rise and history of the depth approach explaining how it was and is used to several different ends by politicians and corporations. Packard (1957, p. 179) explains how 'publicist-persuaders turned to the depth approach in great numbers during the fifties.' Packard (1957) points to the impact of the Bernays edited book, *The Engineering of Consent* (Bernays, 1955), which explained how people could be controlled through manipulation of their instincts and emotions. The book outlined how this could be done to persuade people to buy goods and services.

The justifications for using the depth approach vary. In the 1920s American President Hoover instructed advertising and public relations experts to create 'constantly moving happiness machines' (Century of the Self, 2002). These consumers, it was hoped, would be led into a docile, happy state. In this state they would, it was believed, be less likely to engage in the unruly violent, instinct driven behaviour that Freud's writings both warned of and sought to explain. A population of passive consumers also benefited the economy and staved off worries of overproduction. Packard (1957) argued that some depth marketers made the assumption that anything that helps the economy grow is automatically good for America. The ends therefore justifying the means, as Packard (1957, p. 207) explains through an example:

> An ad executive from Milwaukee related in *Printer's Ink* that America was growing great by the systematic creation of dissatisfaction. He talked specifically of the triumph of the cosmetics industry in reaching the billion-dollar class by the sale of hope and by making women more anxious and critical about their appearance. Triumphantly he concluded: 'And everybody is happy.'

Curtis explains how Adolf Hitler and the German Nazi party also used the depth approach and describes its role in the beginnings of the second World War (Century of the Self, 2002). The depth approach has been used by a succession of politicians and corporations and continues to be used, with increasing sophistication, right up to the present day (The Hard Sell, 2008). Neil Boorman describes 'Century of the Self' as

an 'astonishingly sinister film about consumerism' (Boorman, 2007, p. 54). The documentary never explicitly states Curtis' position on the morality of the use of the depth approach, but the tone of the film does, however, lead the audience to question the morality of the depth approach. Curtis seems to share similar concerns to the one's Packard (1957) related. Packard (1957, pp. 209-210) encouraged the public and the persuaders to consider the following sorts of questions:

> What is the morality of the practice of encouraging housewives to be non-rational and impulsive in buying the family food?
>
> What is the morality of the playing upon hidden weaknesses and frailties – such as our anxieties, aggressive feelings, dread of non-conformity, and infantile hangovers to sell products? Specifically, what are the ethics of businesses that shape campaigns designed to thrive on these weaknesses they have diagnosed?
>
> What is the morality of manipulating small children even before they reach the age where they are legally responsible for their actions?
>
> What is the morality of treating voters like customers, and child customers seeking father images at that?
>
> What is the morality of exploiting our deepest sexual sensitivities and yearnings for commercial purposes?
>
> What is the morality of appealing for our charity by playing upon our secret desires for self-enhancement?
>
> What is the morality of developing in the public an attitude of wastefulness toward national resources by encouraging the 'psychological obsolescence' of products already in use?
>
> What is the morality of subordinating truth to cheerfulness in keeping the citizen posted on the state of his nation?

These moral questions lie within one wider question regarding consumer driven societies and economies that seems as relevant now, if not more relevant, than it did fifty years ago: Do the ends justify the means? Century of the Self (2002) is not alone in exploring this question, as the negative ends associated with consumerism intensify so too does its critique. Oliver James (2008) followed up his case study based exploration of the affluenza 'virus' with a broader review of its underlying causes. James (2008) named his latest book 'The Selfish Capitalist' and argued that that is what the majority of individuals in the UK (and the majority of the English speaking world) have become. His analysis centres on what he terms 'relative materialism' (James, 2008, p. 10) he describes a person engaged in relative materialism as being: 'a

person whose fundamental practical needs are met, as is the case for most of the citizens in the developed world, but is still highly materialistic' (James, 2008, p. 10). In chapter 2 (2.4) it was mentioned that James (2008) equates selfish capitalism with Thatcherite and Reaganite Neo-Conservatism. He argues that their politics have ultimately led to previously unprecedented rates of consumerism and financial inequality across society. James (2008) draws on the evidence of concerned psychologists such as Kasser *et al* (1993, 1995, 2000, 2002), Sirgy (1998) and Diener (2000) to add to their calls for the need to address the tendency of individuals to become highly materialistic.

James (2008) argues that under a system of selfish capitalism, society, in terms of financial wealth, becomes increasingly unequal. This is largely due to both privatisations of manufacturing and services, and the increased dependence of the economy on individuals as consumers. History shows that this inequality does not necessarily equate to emotional distress; when hierarchical social class systems are rigidly in place, lower class individuals *know their place* and do not even conceive that that they could enter the social elite (James, 2008). The argument presented by James (2007, 2008) is that, in a theoretically equal society, it is inequality combined with relative materialism that leads to emotional distress, as the following passage explains:

> The Selfish Capitalist toxins that are most poisonous to well-being are the systematic encouragement of the ideas that material affluence is the key to fulfilment, that only the affluent are winners and that access to the top is open to anyone willing to work hard enough, regardless of their familial, ethnic or social class background – if you do not succeed there is only one person to blame. (James, 2008, p. 149-150)

When the belief within individuals that financial wealth and the means to purchase the dream home, the exotic holiday, the glamorous wedding, the big and/or fast expensive car are signifiers of a fulfilled and successful life, spending on these things (and many more) becomes the number one goal in life. The anxieties associated with achieving and maintaining status in a consumer driven society are explored in depth by De Botton (2004) and termed 'Status Anxiety'. As discussed in chapter 2 (2.3.1.3) De Botton (2004) like Marmot (2005) points out that status is relative and its achievement

and maintenance is a basic human need. When an individual's desire for improved status (conferred as it is by the perceived respect of others) is strong, this motivates them to better themselves. As Durning (2008) points out, materialism results when the perceived respect of others, and therefore status, is derived from the acquisition, ownership and display of material goods and services.

> We are beings who need to belong. In the consumer society, that need to be valued and respected by others is acted out through consumption...Buying things becomes both a proof of self-esteem... and a means to social acceptance... Much consumption is motivated by this desire for approval: wearing the right clothes, driving the right car, and living in the right quarters are all simply ways of saying, "I'm OK. I'm in the group." (Durning, 2008)

James (2008), Kasser (2002), Hamilton and Dennis (2005), De Graff *et al.* (2002) and De Botton (2004) all argue that highly materialistic individuals become emotionally distressed as they fail to satisfactorily fulfil their basic, non-material needs (for love/belongingness and esteem especially) in material ways. They remain locked in a fruitless search for fulfilment, driven by a cycle of false hope and dissatisfaction. James (2008) points out that in a consumer driven economy it is in the interests of the social elite, corporations and the government to maintain a population of materialistic 'happiness machines' (Century of the Self, 2002). The result is a complex spreading and widespread acceptance of the core message that a successful life is a materialistic life.

8.1.2 Happiness as Feeling or Happiness as Authenticity?

A key element driving materialism is the word 'happiness'. James (2008, p. 10) states that his latest two books are 'not about happiness, life satisfaction or quality of life.' He goes on to argue that:

> The enthusiastic adoption of the fantasy of happiness as a lure for electors and of sticking-plaster psychologies, like CBT [Cognitive Behavioural Therapy], by Selfish Capitalism has been a major distraction from the real problem: the epidemic of emotional distress. (James, 2008, p. 11)

James' (2008) concerns surround illusionary happiness and the propagation of the belief that optimism is a natural state. James (2008, p. 197) points out that this

optimism is 'attractive for Selfish Capitalism because it encourages us to be the happy clappy, consumerism-obsessed, unquestioning dupes of corporations and politicians.' Durning (2008) quotes Aristotle, Lucretius and Tolstoy who all noted that human desire is insatiable. Building on their arguments and the more contemporary evidence presented by Lapham (1988), Durning (2008) argues that 'If human desires are in fact infinitely expandable, consumption is ultimately incapable of providing fulfilment.' James (2008) argues that it is exactly because human desires are insatiable that focus should not be placed on satisfying them. He criticises the growing field of CBT and labels it a quick fix to emotional distress that rarely delivers long-term success. CBT could be labelled as a micro approach as it fails to address the deeper psychological and social-environmental causes of mental health problems. James (2008, p. 197) admonishes it metaphorically as follows:

> CBT is mental hygiene. However filthy the kitchen linoleum of your mind, CBT soon covers it with a thin veneer of positive cleaning fluids. Unfortunately, shiny surfaces tend not to last.

James (2008) is seeking to address what he feels is the real problem: the epidemic of emotional distress. It is logical to assume that as emotional distress declines, emotional well-being grows. The definition of what constitutes well-being is, therefore, crucial. When well-being is defined as happy feelings, human desire to maximise the frequency and intensity of happy feelings leads them into an insatiable pursuit of hedonistic pleasure. In this situation well-being is judged by how happy a person feels, if they are not feeling happy all the time, then there is something wrong. The result, as explored in chapter 2, is the 'Hedonic treadmill' (Easterlin, 1974). Consumerism, plays on this mindset by providing goods, services and experiences that promise happiness, hence James' (2008) reservations with the term when it is defined as a feeling.

Hallam *et al.* (2006) highlight the importance of recognising the difference between happiness as feeling and happiness as authenticity. The focus of their paper is on young people and they point out that 'The need to be happy - and be seen to be so - is an insatiable drive of daily behaviours for most people' (Hallam, *et al.*, 2006). Their

concern is with the philosophical hedonism that underlies modern western cultural values. They go on to explain their concerns:

> Without an evolved framework of values, the search to feel good can lead to unhelpful ideas, for example, how the female body should look, what constitutes educational success, what it means to experience intimacy, the role of substance use in having fun, the importance of popularity for personal worth. Furthermore, when hedonic values determine what clothes to buy, what sex to provide, what aspirations to aspire to and what behaviour is appropriate, it can be extremely difficult for young people to know what it means to be true to oneself (Hallam, *et al.*, 2006).

Hallam *et al.* (2006) argue that when hedonism shapes value systems, the result is a 'relentless pursuit of good feelings'. They link this pursuit to materialism and the impact of highly materialistic values on well-being, ultimately questioning 'whether the best values to model and offer to our youth are the competitive social values of hedonic self-interest' (Hallam, *et al.*, 2006). Usefully they proceed to uncover an alternative. They draw on the writings of Aristotle and state that

> He proposed happiness and well-being (eudaimonia) derive from well-doing, and that well-doing and well-being are inseparable. Aristotle's notion of a happy or meaningful life was an authentic life in which personally owned ethical values (such as generosity, courage, kindness and justice) under-girded and inspired daily behaviours. Aristotelian or eudaimonic ethical values express who one is, and wants to be, and how one wants to act rather than how one wants to feel (Hallam, *et al.*, 2006).

Having critiqued materialism as a route to happiness in much the same way as James (2008) and Hallam *et al.* (2006), Durning (2008) argues that:

> The main determinants of happiness in life are not related to consumption at all - prominent among them are satisfaction with family life, especially marriage, followed by satisfaction with work, leisure to develop talents, and friendships.

Hallam *et al.* (2006) describe the work of Erikson (1968) as regrettably forgotten, but draw on his conceptions of generative behaviour:

> Erikson (1968) was more specific in proposing that human psychological growth was characterised by the development of identity and meaning. The development, through stages, of generative values (dispositions) - including

> love, care, willpower, purposefulness, fidelity - provided a basis for identity formation and offered an alternative motivational system to hedonic desires. In this way, generative behaviour was seen to foster meaning, maturity and well-being.

Echoing James' (2008) critique of CBT, Hallam *et al.* (2006) conclude by suggesting that 'seeking to gain well-being through the pursuit of happiness may undermine the very happiness we seek.' They then recommend that:

> The challenge is to think of happiness in broader terms than simply feeling good. To be true to ourselves we may need to ensure that generative values supersede hedonic pursuits lest, as a culture, we remain immature, unwell and unhappy (Hallam, *et al.*, 2006).

Environmentalists have begun taking note of the evidence emerging from psychology in regard to the relationship between consumerism, materialism and well-being. The cultural construction of needs and wants by consumerism, the spreading of hedonistic values and the apparent pursuit of the wrong sort of happiness appear to cause a reliance on material goods and services that causes not only environmental problems, but also emotional distress. Macro environmental education seems to be emerging as it becomes clearer that the consumer culture creating unsustainable development appears also to be failing individuals. Macro environmental education seeks to explore, explain and ultimately challenge and shift consumer culture. Section 8.1.3 will identify examples of apparent macro approaches. This emergence could represent a significant step forward from micro environmental education, which (despite its best intentions) can only ever really deal with the consequences of consumerism.

8.1.3 Recent evidence of macro environmental education

Chapters 6 and 7 highlighted aspects of a macro approach to environmental education and discussed the potential for its furtherance in the education designed and delivered by those studied. The exact nature of a macro approach is not entirely clear at this point. It is likely, however, to include an unpicking of the drivers of individual behaviour and a questioning of the behaviour promoted by a consumerist society in terms of its benefits to individual well-being. I would argue that an individual could become less materialistic as a result of learning about the affluenza virus from, for

example, the books by Kasser (2002), De Graff *et al.* (2002), Hamilton and Dennis (2005) and James (2007, 2008). Becoming less materialistic, meeting basic needs in real and authentic ways, conceiving happiness and well-being as being based in well-doing, as argued by Hallam *et al.* (2006), could potentially lessen an individuals impact on the environment. In this situation a gradual letting go of materialism is based on a re-evaluation of the constituents of well-being and ways to better oneself. As was the case for Neil Boorman (2007) (see chapter 3), the environmental benefits can then provide an added motivator and justifier for behaviour change. The crucial point is that the environmental and social benefits are secondary to the benefits for the individual. This section will briefly review recent evidence of a link up between negative impacts of consumerism on the individual as well as the environment.

8.1.3.1 Downshifting

Downshifting is not a new phenomenon; American, Elaine St. James (2006) describes how she made the decision to downshift in 1990. She was certainly not the first person to make this decision. In fact Thoreau's (2004) account of two years spent at Walden, in the mid nineteenth century, could be described as downshifting, disturbed as he was with the fundamental values underlying the society he was escaping. In The Ecologist magazine, Sevier (2007) discusses the many different motivators and forms of downshifting; she generalises it this way:

> Put simply, it's about living more simply, slowing down; about making life less frantic and fraught. It values time over money and possessions – which usually means freely trading part of your income for more time and reducing the amount of stuff you buy. It's about taking control of your life and seeking more of a work/life balance. Which means different things to different people. (Sevier, 2007, p. 48)

Sevier's (2007) article can be seen as macro environmental education as, for example, she critiques consumerism's response to downshifting, especially the way popular media portrays it:

> One reason why downshifting is not widely seen as a form of modern heroism is the way in which it's depicted in the popular media, which exists to sell stuff, and lives and dies by the amount of advertising it carries. For this reason

> downshifting is usually presented as just another lifestyle choice, with plenty of things you can purchase to make it happen. (Sevier, 2007, p. 51)

Critics of ethical and/or sustainable consumption (Dolan, 2002; Thomas, 2007) recognise this trend, the Sevier (2007) article points out this danger and explicitly discusses the need for a cultural shift both for emotional well being and environmental reasons.

8.1.3.2 The Idler

Again in The Ecologist magazine, Tom Hodgkinson's regular column 'How to be free' (Hodgkinson, 2007a) brings some regular macro environmental education to readers. Hodgkinson also edits a magazine called The Idler and contributed recently to the Simms and Smith (2008) edited book 'Do good lives have to cost the Earth?' Simms and Smith (2008, p. 25) introduce Hodgkinson's chapter and sum up his recommendations as follows:

> His main advice for us is that to tackle climate change, possibly the best thing we could do is nothing at all. But he means it literally, not in the sense of just keep on doing what you are doing. He wants us all to stop and take it easy. No more shopping, no more upgrading consumer durables. The answer he says is to 'decommodify our fun.'

Hodgkinson regularly points out the anxieties and stresses created by modern consumer culture and in his chapter goes as far as saying that the environmental movement, with its emphasis on technological development creates even more stress and should therefore be handled with caution. His articles, (Hodgkinson, 2007a, 2007b, 2007c, 2008a, 2008b) also point out the importance of finding meaning in one's life and living in the present and not worrying too much about money. His philosophy can be summed up by the following quote: 'When you stop working and stop spending you start living' (Hodgkinson, 2008c).

8.1.3.3 Do good lives have to cost the Earth?

Simms and Smith (2008, p. 1) introduce a book, contributed to by several environmentalists, psychologists, academics, journalists and popular figures, in a way that immediately outlines its themes:

> In the last four decades people in the UK have become vastly more wealthy, and yet no happier. At the same time, environmental problems, above all climate change, suggest that our lifestyles have potentially catastrophic consequences.

Monbiot (2005) argues that the problems of climate change expose the neo-classical economic idea of *progress* as a myth. The Simms and Smith (2008) book argues that climate change actually provides an opportunity for citizens of the western world to question their current way of life and conceptions of progress. In a similar way to Oliver James (2007, 2008), who himself contributes a chapter, the book argues that current social, economic and cultural conditions are not bringing about the improvements in well-being that they promise. Alongside this critique there are chapters discussing a less consumerist, less materialistic, less environmentally damaging society and what could be done to bring it about. Crucially, it also points out its attractive qualities. By focusing on the benefits of a less consumerist lifestyle, the book does not talk in terms of sacrifice and pessimism and works well as a piece of macro environmental education.

8.1.3.4 Enough

2008 also saw the publication of John Naish's (2008) book 'Enough'. Naish (2008) develops an evolutionary perspective and argues that humans are hard wired to desire more. He argues that in a consumer culture it is this hard-wiring that conditions humans to be materialistic and money driven. He argues the need for a mindset of 'enoughism' (Naish, 2008, p. 2), a situation in which individuals have developed a sense of having enough (food, goods, travel, services etc, not of life!). The book takes a thoroughly contemporary look at modern British life and argues that individuals are doing too much for their own good and the good of the planet. Naish (2008) is optimistic that the present consumerist, hedonist culture can shift towards one that is

emotionally and environmentally sustainable. He is, however, troubled by one big question; he puts it like this:

> What would happen to our exclusively growth-based economy if we suddenly did all start to embrace enoughism? Would the world's finances collapse? This question turns out to be the fiscal elephant in the eco-living room. (Naish, 2008, p. 220)

During the interview with Simon Chat, for the primary research of this thesis, this question was also raised. Chat approached the issue like this: 'There must be clever powerful people thinking about how to shift the economy, how to shift the economic model? Because that is what it comes down to really' (app 2.11.5). This question is extremely important; it is a brave one to ask, because the answers are uncertain and not immediately obvious. As a DEFRA (2007) study points out this is a priority area of research if changes are to be made to limit the impact that consumerism is having on the environment and individual emotional well-being. This 'big question' will be analysed in the next section (8.2).

Section 8.1.3 has highlighted an emerging macro approach to environmental education. Chapter 2 concluded by discussing an important article by Bill McKibben (2007) in The Ecologist magazine. His article not only argued for a macro approach, it was a piece of macro environmental education in its own right. Seeds of an evolving macro approach are also evident in the 'Slow' movement championed recently by Gillespie (2008) and in a book by Honore (2004). The Ecologist also interviewed Dr Rowan Williams, the Archbishop of Canterbury. Dr Williams (2007) is another to have recognised the negative impacts that consumerism is having on both emotional well-being and the environment. Williams (2007) was pessimistic about consumerism and climate change. He did however maintain that 'even if you knew that climate change was irreversible, there would be better ways to live. The right thing to do is the right thing to do' (Williams, 2007, p. 57). Dr Williams' argument is that it is important that we search for a different way of life, for our own sakes as individuals and as societies. Asking and searching for an answer to the big question of an alternative to consumerism, as an underlying basis to the economy and society, is a priority. Macro environmental education could be instrumental in doing this.

8.2 The Big Question – if not growth then what?

The big question centres around the need for a sustainable economy. In his search for a model of it, Naish (2008) was guided by several environmental economists towards Tim Jackson, Professor of sustainable development at the University of Surrey. Naish (2008) was surprised that Jackson was almost as equally in the dark about the reality of a sustainable economy as he was. In his interview with Naish (2008), Jackson highlighted the difficulty of finding the political space to have this discussion. Jackson tells Naish (2008, p. 221) that:

> It is closed down very quickly by the interests of economic stability – there's a lot of "We have to protect the economy at all costs". Eastern Europe during the collapse of the Soviet Union shows what can happen to people's levels of happiness in a falling economy. I don't know the answer to this, but I feel that it's the only question worth working to solve. On my own I don't feel that I have got what it takes to come up with the answer. It's astonishingly difficult. It will have to entail a cultural shift with its own momentum.

Naish (2008) reports that Jackson did, however, display some optimism and pointed to the increased media and public awareness of environmental problems and emotional distress as signs that a cultural shift could occur and quite quickly given the right political leadership.

Jackson, in collaboration with four other leading academics in this area, Nic Marks, Sam Thompson, Richard Eckersley and Tim Kasser, contributed to a DEFRA commissioned study titled: 'Sustainable Development and well being: relationships, challenges and policy implications' (DEFRA, 2007). Under the banner of the New Economics Foundation, their paper explores the conflicts and complements between materialism, sustainable development and well-being. The study reviews the evidence suggesting that societies and economies underpinned by consumerism do not necessarily bring the improvements in well-being that they promise. They argue for a well-being led economy but point out that 'perhaps the biggest obstacle to a materially lighter, well-being led economy is the current structural requirement for ever greater consumption' (DEFRA, 2007, p. 10). They then suggest that 'the challenge of sustainable development is to negotiate a path that dematerialises consumption

without creating a downward spiral of increasing unemployment and poverty' (DEFRA, 2007, p. 10).

In the late 1920s The Wall Street Crash in the USA had the impact of forcing a drop in consumption levels to levels at which individuals consumed goods and services to meet only their most basic material needs. The result was widespread unemployment as manufacturing, retailing and several related industries retracted. It is worth considering the impact of forcing a population, who in the majority are materialistic, to sacrifice their high levels of material consumption for the sake of the environment and a promise that it is better for their own well-being. The reaction would, most likely, be one of collective resentment of whoever forced them to do it. The DEFRA (2007) study also suggests that the impact, in terms of unemployment, that would result would be catastrophic for general well-being. As Jackson, in his interview with Naish (2008) suggested any cultural shift would need to happen with its own momentum; it would need to be a bottom up process if it was happen at all. In reality this would involve a collective disillusionment with consumerism. Followed by a collective shift of emphasis from pursuing happiness as a feeling, often dependent upon material consumption, to happiness as authenticity, characterised by less dependency on material goods and services.

Human beings have an inbuilt capacity to adapt and evolve new patterns of living when established ones begin to fail. The focus of this thesis is education, the DEFRA (2007) study calls for more research into the drivers of emotional well-being and more education about that. This is beginning to happen and it must and can grow and flourish to bring about sustainable development. Educators must, however, be careful in how they approach this challenge. There is a huge danger in taking an information deficit approach and instructing individuals to: 'consume less, it is better for you and the environment, trust me I'm a doctor/ psychologist/ environmentalist/ physician/ sociologist.' Chapter 7 introduced the 'U-Movement' (Senge, *et al.*, 2005), in order to invoke the sort of bottom up cultural shift needed individuals need to travel through that U-movement and come to that decision, naturally, themselves. It is likely, given the social nature of human beings that there needs to be a collective U-movement, so

that new behaviours are normalised, socially reinforced and consequently strengthened. The word education comes from the Latin 'Educe' which literally translated means 'to bring out.' This is the challenge for environmental education, it needs to help individuals to understand how and why they behave in the ways that they do, analyse their own definitions of well-being and to envision and construct different ways of living. This macro environmental education also needs to exemplify different ways of living, discuss happiness as authenticity and clearly show pathways to it. Micro environmental education can then complement this by providing information and further incentives to live in as environmentally sustainable way as possible.

Further research into how best to do macro environmental education needs to happen, as well as research into how it can be more widely adopted in the environmental education infrastructure (EEI). The more macro environmental education emanating from the EEI the more people there will be who will think about and propose solutions to the big question of what lies beyond consumerism. In the meantime, as Naish (2008) points out, it must be remembered that in most cases, it is self-interest that ultimately drives behaviour change. As the material wealth equals happiness myth unravels more individuals will strive to change their lifestyles, slow down (Honore, 2004), develop their senses of enough (Naish, 2008) and perhaps conclude that the best thing to do is nothing at all (Hodgkinson, 2008c). Climate change and decreasing emotional well-being are both signs that our current way of living is failing. It is important, therefore, to remember the words of the Archbishop of Canterbury: 'the right thing to, is the right thing to do' (Williams, 2007, p. 57). If we do not look for alternatives things are only going to get worse. Provided that it is allowed to flourish, macro environmental education has a potentially huge role to play both in guiding changes in the way we live and in the discovery, design and development of a new economic model based on well-being and environmental and social sustainability.

Chapter 9 – Conclusions and recommendations

Throughout this thesis I have argued that micro approaches to environmental education are limited in their ability to invoke the level of behaviour change, within all social actors, that is needed for sustainable development to become a reality. This thesis has looked extensively at the reasons why the environmental education infrastructure (EEI) developed to take a predominately micro approach and explored why this approach persists. Chapters 1, 3 and 4 explored this at a general level and discussed the many implications of a reliance on this approach. Chapters 6 and 7 took a more focused look by presenting evidence from the study of a broad sample of sixteen environmental educators. This primary research had two main aims. The first aim was to uncover factors that lead to micro approaches. The following factors were all found to influence the design and delivery of environmental education:

- Educators beliefs about how to approach environmental education (see 6.2.1 and 6.2.2)
- Expectations of educators employers (see 6.3)
- The availability of funding (see 6.3.1 and 6.3.1.1)
- Funding restrictions (see 6.3.1)
- The National Curriculum (see 6.3.2)
- The natural resources available to the educator (see 6.3.3)
- The expectations of the audience (see 6.3.4)
- The type of audience (see 6.3.4)

The second aim was to investigate the potential for an alternative, macro, approach to environmental education. As the remainder of this chapter will argue, the emergence of macro approaches would be aided by:

- Further research into the specifics of macro environmental education
- A trained network of macro environmental educators
- A sustained and engaged audience
- Acceptance of the need for macro environmental education by employers and funders of environmental educators

- Movement towards 'Sustainable Education' (Sterling, 2001) in formal education
- Government leadership

The primary research found that some educators believed in a micro approach and were content in their use of it (see 6.2.1). This was reflected in their practice. In other cases understanding of the limitations of micro approaches, particularly the phenomenon of the knowledge action gap, were evident (6.2.2). Often, however, their response was to carry on regardless, or pursue initiatives, or set aims that prevented the gap from coming into focus (see 6.2.2.1). Others responded to it by taking a fatalistic viewpoint that accepts consumerism as a given and attempts only to deal with its consequences (see 6.2.2.1). Elements of a macro approach were evident for some educators facilitated by their belief in this approach, their own initiative in design and delivery and importantly the freedom to pursue that path (see 6.4). Observation and analysis of Conner Sultan's work exemplified a macro approach and a lot can be learned from it (see 7.2). However, many educators were constrained by their employers or by restricted funding into delivering micro environmental education (see 6.3). Therefore, even if they wanted to deliver macro approaches, it would be very difficult for them to do it in practice.

9.1 Limitations

The environmental education infrastructure is diverse and persistently expands. This study sought to explore the factors shaping the variety of approaches designed and delivered within this infrastructure. Given the limitations of this research it was possible to identify what some of those factors are, but it was not possible to identify all of the factors or how widespread each factor is. The study, therefore, did not intend to be representative or comprehensive, but it is valuable none-the-less as it does reveal and analyse some of the factors that shape the design and delivery of environmental education and provides a platform for future research. Further, more comprehensive, studies could be carried out to seek out more factors, explore specific factors in greater depth and to investigate the importance and spread of these factors within the EEI.

9.2 Recommendations

Macro approaches require macro environmental educators. It may therefore be necessary to educate the educators so that they understand both the need for a macro approach and how to go about it. This is a pressing task for environmental education. In this respect, the primary research in this thesis has revealed three types of educators. Firstly, there are educators who do not recognise, or accept the need for a macro approach (for example: Dev Sustain). Secondly, there are educators who understand the need for a macro approach, yet lack an ability to deliver, or even envisage, a macro approach (for example: Rhian Cycler). Thirdly, there are educators who understand the need for a macro approach and are able to design and deliver it (for example: Conner Sultan). Put simply, the first type of educator could learn from the second type and they could both learn from the third. A trained network of macro environmental educators is needed.

Macro environmental educators, however, need a platform; external factors need to facilitate the approach. This thesis has uncovered several factors, beyond the control of the environmental educator, that either do or would, hamper the progress of macro approaches. These were listed above and include the expectations of audiences, employers and, importantly, funders. These three groups, therefore, must accept the need for a macro approach. Importantly, this also means that they accept the message of macro environmental education. If this were to happen environmental educators would have more freedom to conduct macro approaches.

The National Curriculum had a strong hold over much of the environmental education studied in this thesis. It did not encourage a macro approach and led in the main to micro environmental education, usually in the domain of waste management. Chapter 4 critiqued formal environmental education and explored the impact that the government has on it. The National Curriculum shapes the work of environmental educators far beyond the classroom. As Sterling (2001), in his call for 'Sustainable Education', argues, it may be necessary to re-evaluate the overall goals, purpose and possibly ideology behind the entire formal education system. Strong political leadership is therefore vital to allow a macro approach to flourish. A government showing strong leadership on the politics of well-being and the environment would be

a forceful agent for change in the Environmental Education Infrastructure (EEI). The UK Conservative party has shown signs that they believe that a new economic system, which considers the environment and individual well-being as its focus, needs to emerge. The Quality of Life Policy Group (2007) published a lengthy document 'Blueprint for a Green Economy' that offers great hope. Political will is necessary and will be extremely important if we are to see a revolution in the definition of environmental education and the EEI itself.

Environmental education does not, however, have to wait for the government to show the way. Macro approaches are possible under current cultural conditions; in fact these current cultural conditions may well prove a catalyst. Further detailed research is needed into the specifics of a macro approach, not to mention the implications of what it proposes for the behaviour of social actors and society as a whole. The urgency of the problems emanating from consumerism means that there is no time to wait for research to be completed before change. There is a need to experiment with the kinds of education that may make the world less unsustainable. Action research may be appropriate way to evaluate these new approaches as they happen. Research into the practice of macro environmental education will be critical in order to help the efficient spread of good practice.

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Appendices

Contents

Appendix 1.1	Initial approach to participants	p. 256
Appendix 1.2	Follow up letter	p. 258
Appendix 1.3	Informed consent form	p. 10

Appendix 1.1 – Initial approach to participants

Dear Sir/Madam:

My name is Morgan Phillips I am from the University of Gloucestershire and I am researching for a PhD in Environmental Education and I am looking for people to interview. My main interest is education FOR the environment. Hopefully you can help.

The provisional title of my PhD thesis is 'Macro and Micro approaches to Environmental Education'.

I am trying to gain insights into why environmental education is done in the way it is. Which factors shape its design and delivery, why environmental education and/ or awareness is used or not used?

I am interested in education in its broadest sense, to include formal education (in formal school and university education), non – formal education (education outside school-settings, in which there is an organised, intentional effort to promote and deliver environmental education) and informal education. Environmental education can be defined as education about the environment, education in/ through the environment or education for the environment. It is, of course, in most instances a combination of two or possibly all three of these, with education for the environment being the ultimate aim. My primary interest is education ***for*** the environment, much of which is currently based within education about the environment, or education about environmental action.

The overall aims of my thesis include answering the following:

- How do environmental educators rationalise their practice?
- To what extent is this practice macro or micro in nature?
- What factors are creating the observable differences between macro and micro practice?
- How can a macro approach be applied in environmental education?

To meet these research aims I will interview experienced environmental educators from the sectors of education, media, government and non – governmental organisations, in an attempt to gain insights from formal, non-formal and informal education. The interviews will be semi – structured and should last between thirty and sixty minutes.

I would very much like to interview you as a representative of the media sector. If you provisionally agree to be interviewed I will contact you again with a more detailed and personalised explanation of the research aims and objectives. Could you also please pass this message on to anyone else who may be able to help?

At this point I would also like to point out that any data that I collect will be used anonymously and exclusively for this research project. All recordings and transcripts will be destroyed when they have been fully analysed.

Yours truly,

Morgan Phillips

University of Gloucestershire

Appendix 1.2 – Follow up letter

Research Student,
Bodley Building,
Francis Close Hall Campus,
Swindon Road,
Cheltenham,
GL50 4AZ.
11th May 2005.
Dear [Participant],

Thank-you for agreeing to be interviewed for my PhD research project. Before we meet I would be grateful if you could read the following so that you have a clear idea about the purpose of the interview, the interview structure and are happy about the ethical issues.

My research project is titled 'Macro and micro approaches to environmental education'. Below is a brief contextualisation and overall objectives of the study please pay particular attention to paragraphs 2 and 3 and the concept of the Knowledge – Action gap as an exploration of this is central to the interview:

CONTEXTUALISATION

1. Modern western society is dominated by a culture, which has constructed basic needs and wants that are largely only met through the consumption of goods and services. *Micro* practice within the environment sector is that which does not (even if it intends to) challenge this culture. *Macro* approaches are more desirable, in terms of sustainable development, because they challenge the cultural construction of basic needs that require material realization and question the material fulfilment of more fundamental basic needs.

2. Barrow (1995) in his standard textbook on environmental issues opens with a summary of the human-environment relationship. 'Humanity has exploited the Earth's

natural resources and modified the environment for thousands of years, but in the last two centuries human impact has increased hugely... The last few decades has witnessed a growing awareness of, and concern for, environmental issues and since the mid-1980s these have been linked with calls for better approaches to development' (Barrow, p. xi). Environmental education has played a major role in the increase of this awareness but, as noted by Scott and Gough (2003, p.112), 'a clear, linear mechanism linking learning to change in a positive way remains elusive and probably doesn't exist.' Scott and Gough (2003) draw this conclusion from a review by Kollmuss and Agyeman (2002), which highlights the gap between environmental knowledge and positive behaviour in relation to the environment. Much environmental education research and environmental education practice attempts to close this so-called *knowledge-action gap.* As Scott and Gough (2003) point out many researchers seemingly deny the existence of this gap, and some environmental educators treat it as problematic.

3. A denial or unawareness of the knowledge-action gap has significant implications for the value of environmental education. Work by Dolan (2002) and Connolly and Prothero (2003) in the field of sustainable consumption discusses the relative importance of macro and micro approaches. Dolan (2002, p. 171) in a questioning of the concept of sustainable consumption argues that most approaches to sustainable consumption are *micro* approaches that 'tend to look for answers in the spaces *within* social actors (whether producers or consumers) in terms of their supposed inherent psychology or motivation.' He argues that these approaches are too simplistic and do not appreciate the complex interrelationships that exist between social actors. Dolan (2002, p.171) contends that *macro* approaches should be used to 'address the spaces *in between* actors in terms of their relations and interdependencies. This is because our actions, dispositions, lifestyles, and even our identities are transformed through such social relations.' Despite widespread acknowledgement (e.g. Blake, 1999; Hicks and Bord, 2001; Gough, 2002; Scott and Gough, 2003) that the problems of unsustainable behaviour are largely macro (they are complex and go beyond inherent and intrinsic values held by social actors), Dolan (2002), Phillips (2003), and Connolly and Prothero (2003) have provided evidence to suggest that micro approaches to environmental education continue to dominate.

4. Current environmental education practice, and practice within the environmental sector in general, is largely micro. Micro practice works on the assumption that by strengthening the human-environment relationship, individuals will be more inclined to behave in a manner that protects or improves the environment. Advocates (e.g. Chawla, 1998, 1999, 2001; Palmer and Birch, 2003) of the practice of engineering situations within which the human-environment relationship is strengthened by a 'significant life experience' (Chawla, 2001, p. 451) exemplify one such micro approach. Successful micro approaches foster behaviour by social actors that protects or improves the environment while at the same time allowing social actors to meet and strive to meet ever more demanding culturally constructed needs and wants. According to Dolan (2002) within any culture complex interrelationships between social actors lead to dynamic transformations of the definitions of basic needs and wants. Micro approaches that have reached prominence, therefore, are those that do not disrupt an individual's pursuit of the fulfilment of needs as they have come to be defined within the society and culture that they live. For example, initiatives that seek to increase recycling rates are seen as successful as participation rates rise. The reason for this perceived success is that the individual only has to change the way they deal with waste, rather than making changes to what they buy and therefore their pursuit of need satisfaction. The individual is successfully encouraged to recycle the waste their consumption produces rather than to reduce their consumption and therefore their waste output.

5. At the time of writing it is too early to propose how a macro approach to environmental education would operate in practice. The purpose of this study is to build upon a theoretical discussion of the value of macro approaches to investigate and identify the conditions that would be necessary to design and deliver a macro approach to environmental education.

OBJECTIVES OF THE STUDY

6. The overall objective of the study is to emphasise the importance of tackling environmental problems at a macro rather than micro level and to uncover the

conditions necessary for the integration of macro approaches into environmental education. The sub - objectives of the study are therefore threefold. Firstly there is a need to uncover the social and economic roots of micro and macro approaches. Secondly there is a need to determine the factors that lead to the adoption of micro approaches to macro problems; and thirdly there is a need to highlight the conditions necessary for macro approaches.

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The interview will be semi – structured taking the format of an open discussion and it should last about one hour. It will start with a general discussion of environmental education and your role within it. It will then go to explore the factors that help shape the content and delivery of the education you deliver. The interview will end with a discussion of the future of environmental education and the environmental movement in general.

Please could you read through the informed consent form to ensure you are happy with the ethical issues.

If you have any problems or questions please do not hesitate to contact me.

Thanks again, I look forward to seeing you at 2pm on Wednesday afternoon.

Yours truly,

Morgan Phillips

University of Gloucestershire
[email@glos.ac.uk]
Phone: 0XXXX XXX XX3

Appendix 1.3 – Informed consent form

Informed Consent Form

My name is Morgan Phillips. I am doing research on a project entitled 'Macro and Micro approaches to Environmental Education'. I am directing the project and can be contacted at:

Morgan Phillips
QU009,
Bodley Building,
Francis Close Hall Campus,
University of Gloucestershire,
Cheltenham,
GL50 4AZ
email@glos.ac.uk
01242 532943.

The project is being supervised by [Supervisor 1] and [Supervisor 2] who can be contacted at:

[Supervisor 1]
Head of the School of Education
University of Gloucestershire
Francis Close Hall Campus
Swindon Road
Cheltenham
GL50 4AZ
email@glos.ac.uk
01242 xxxxxxx

[Supervisor 2]
School of Education
University of Gloucestershire
Francis Close Hall Campus
Swindon Road
Cheltenham
GL50 4AZ
email@glos.ac.uk
01242 xxxxx

Thank-you for agreeing to take part in the project. Before we start I would like to emphasize that:

- your participation is entirely voluntary;
- you are free to refuse to answer any question;
- you are free to withdraw at any time;
- the interview will be tape-recorded and transcribed;
- you will be given the opportunity to read the transcript and/or listen to the tape recording to confirm you are happy with what was said

The interview will be kept strictly confidential and will be available only to members of the research team. Excerpts from the interview may be made part of the final research report, but under no circumstances will your name or any identifying characteristics be included in the report.

Please sign this form to show that I have read the contents to you.

_____ (Signed)

_____ (Printed)

_____ Date

Please send the interview transcription and interpretation to the following address:

_____

_____

_____