The Social Worlds of Children

Connie Marsh

A thesis submitted in partial fulfilment of the requirements of The Nottingham Trent University for the degree of Doctor of Philosophy.

June, 1997.

ABSTRACT

This thesis describes an investigation into the social worlds of a sample of children aged from 8 years to 11 years old attending primary schools in Britain..

The aim of the study is to contribute to the development of a pedagogical axiom incorporating a negotiatory theory of learning and recognising the importance of the social construction of meaning.

Using a five stage method of data collection to explore the **'cultural filter'** through which children perceive their environment and construct their own meanings, it was possible to elicit the children's Ideas about the relationship between human beings and nature. The value structures underlying these children's beliefs about ecological issues could then be examined.

It was found that the views of the children in the sample could be described along a series of dimensions. Although an ecocentric approach was dominant, most indicated that they saw humans to be distinctly separate from the natural world, 'Apart from nature' rather than 'A part of nature'. Overall the children in the sample displayed high levels of idealism and altruism. This finding questions the recommendations of many Educationalists arguing for classroom strategies aiming for fundamental value change. Recognition of the disastrous ecological implications of some dysfunctional adult cultural values requires re-evaluation of basic educational principles.

It would seem more appropriate that adults learn from children. The questions asked by children need to be given far more attention. Pedagogy needs to take account of the fundamental shift represented by Quantum Physics away from Classical Science. Certainties have become less clear and the connections between human behaviour and natural phenomenon need to be recognised.

Acknowledgements

There are many people I need to thank for the help and support which has led to the submission of this thesis.

My family and friends have been there with unfailing patience and confidence which has made this daunting task possible..

In the course of this study I have been privileged to experience teaching at its best. Firstly, from my supervisors, Dr. Mark Lofthouse and Dr. Colin Hughes who have guided and listened, providing me with the most positive learning experiences and models of ideal teachers. Secondly from the two teachers, Mrs.Suzanne Kirk and Stuart Cope, who granted me invaluable access to observe and participate in Primary School practice at its best.

Sincere thanks are also due to the children who eagerly agreed to participate in whatever activities I asked of them, and without whom no learning on my part could have taken place.

I remain indebted to all these people, and can only hope that the opportunity to repay will present itself in the future.

TABLE OF CONTENTS

	Page Number
Chapter 1	
Introduction	1- 3
Literature Review	
Section 1: Intellectual Biography	4- 11
Section 2: Philosophy and Contextual Questions	12- 15
Section 3: Ecology & Scientific Questions/Issues	16- 43
Section 4: Myth-making & Utopia in our cultural filter	44- 50
Section 5: Anthropocentrism in our cultural filter	51- 65
Section 6: Moral Development-Environmental ethics	66- 85
Chapter 2	
Nature and Purpose of the Research	86- 99
Chapter 3	
Research Methodology	100-123
Chapter 4	
Children's Responses to the Data Collection Activities	124-185
Chapter 5	
Summary/Conclusions	186-207
References	208-212
Appendices	
Appendix A Stage 1 Data Collection Activities	213-221
Appendix B Stage 3 Data Collection Activities	222-225
Appendix C Data Collection Activities	226-227
Appendix D Children's Responses to Stage 1	228-231
Appendix E Children's Responses to Stage 3	232-249
Appendix F Children's Responses to Stage 4.1	250-264
Appendix G Children's Responses to Stage 4.2	265-267
Appendix H Children's Responses to Stage 4.4	268-272
Appendix I Children's Responses to Stage 5	273-277

LIST OF TABLES

TABLE NO.	TITLE	PAGE N0
1.1	Principal Concepts of Ecology	18
1.2	Basic Points of the platform of Deep Ecology	32
1.3	The Stage Sequence of Kohlberg's System	69
3.1	Summary of Data Collection Activities	103
3.2	Triangulation	104
3.3	Stage 1: Data Collection Activities	107
3.4	Stage 2: Data Collection Activities	109
3.5	Interview Questions	114
3.6	Age and Gender Composition	116
3.7	Stage 3: Data Collection Activities	116
3.8	Stage 4: Data Collection Activities	119
3.9	Environmental Groups	121
3.10	Stage 5: Data Collection Activities	123
4.1	Pupil Responses to Research Activity No.1.1	127
4.2	Pupil Responses to Research Activity No.1.2	129
4.3	Pupil Responses to Research Activity No.1.3	131
4.4	Pupil Responses to Research Activity No.3.1	139
4.5	Reasons for Responses to Question 1 in 3.1	142
4.6	Reasons for Responses to Question 2 in 3.1	143
4.7	Reasons for Responses to Question 3 in 3.1	143
4.8	Reasons for Responses to Question 4 in 3.1	143
4.9	Reasons for Responses to Question 5 in 3.1	144
4.10	Reasons for Responses to Question 6 in 3.1	144
4.11	Reasons for Responses to Question 7 in 3.1	144
4.12	Responses to Question 17 in 3.1	148
4.13	Responses to Question 18 in 3.1	149
4.14	Responses to Question 19 in 3.1	149
4.15	Responses to Question 20 in 3.1	150
4.16	Responses to Question 21 in 3.1	150
4.17	Responses to Questions 25,26,27 in 3.1	150

4.18	Responses to Question 22 in 3.1	151
4.19	Responses to Question 23 in 3.1	152
4.20	Responses to Question 24 in 3.1	153
4.21	Responses to Question 28 in 3.1	154
4.22	Responses to Question 29 in 3.1	154
4.23	Responses to Question 30 in 3.1	155
4.24	Pupil Responses to Research Activity No.5 Reasons for NOT taking the Pill	184
4.25	Pupil Responses to Research Activity No.5 Reasons for taking the Pill	184

Chapter 1

Review of the Literature

Introduction

This study will investigate the social worlds of children, focusing on the meanings which they construct in order to understand their worlds.

An understanding of these meanings and intentional worlds, may provide guidance for those concerned to help children to develop deeper understanding of their place in the world. This view is supported by Bruner(1986) who points out that

> *"Social realities are not bricks that we trip over or bruise ourselves on when we kick at them, but the meanings that we achieve by the sharing of human cognitions. A negotiatory or 'hermeneutic' or transactional view...has deep and direct implications for the conduct of education. The most general implication is that a culture is constantly in the process of being recreated as it is interpreted and renegotiated by its members. In this view a culture is as much a forum for negotiating and re-negotiating meaning....What we lack is a reasoned theory of how the negotiation of meaning as socially arrived at is to be interpreted as a pedagogical axiom."*
> *[Bruner, J.(1986) p.122]*

The aim of this study is to contribute towards the development of that pedagogical axiom by examining the social construction of learning, and the negotiation of meaning.

It must also be stated that there is a secondary theme implicit in the desire to develop a pedagogical axiom, which is to influence those processes and to affect those meanings.

Considerable thought has already been given to ways in which children can be helped to develop their understanding of their

place in the world. It would, therefore, be appropriate to review some of the work which has been done in this area, as a starting point for further investigation. In view of the enormity of the issues being covered, however, this review of the literature will be divided into six sections as outlined below.

Section 1: Intellectual biography - starting points.

This section will begin with a brief personal intellectual biography intended to indicate how the present study develops from, and is built upon earlier investigations into children's conceptual development. Summarising earlier work which focused more narrowly on children's understanding of social, economic and political concepts but which led to an awareness of the need to broaden the area of study to adopt the new perspectives of cultural psychology within which education is seen as part of the broader cultural context.

Section 2: Philosophy and contextual questions.

This section will focus on the place of the present study within a broader range of questions concerning the nature and purposes of education. The main question to be posed is that of '**What is education**'?

Section 3: Ecology and Scientific issues/questions

This section will highlight the centrality of the debate about the nature and purposes of Ecology within the explorations of the nature and purposes of Education. Attention will be given particularly to the conflict between **'scientific'** definitions of Ecology and **moral/philosophical** approaches. This debate is

seen as one aspect of the 'cultural filter' (Jeans, 1974) through which we perceive all aspects of our environmental context including, of course, our views about the nature and purposes of education.

.Section 4: Myth-making and Utopia in our 'Cultural Filter'

This section will examine some of the central aspects of the 'cultural filter' , considering the processes of myth-making, particularly visions of an ideal society, or **Utopia**. This examination presents an alternative perspective through which some of the influences upon our perceptions of the world may be highlighted. Particular consideration will be given within this section to the impact of science which is identified by many writers as a central feature of our cultural filter

Section 5: Anthropocentrism in our 'Cultural Filter'

This section will focus on another aspect of the 'cultural filter' by considering the impact of anthropocentrism (man-centredness), particularly in literature for children. The purpose of this examination is to explore some of the effects this anthropocentrism may have on the development of children's cultural filter.

Section 6: Moral Development - Environmental Ethics and Ecological Morality

examines the contribution of theories of moral development to the understanding of the basis upon which children make environmental and ecological choices.

Literature Review

Section No.1: Intellectual biography.

The need to understand how children develop an understanding of the world in which they live has been the focus of extensive investigation. It has long been recognised that conceptual development lies at the heart of this work. Many eminent researchers have focused on exploring what concepts children understand about the social and natural world, and how that development progresses. Having a background in Sociology my own interest has been in children's understanding of social concepts. This interest led to the completion of a Master of Philosophy degree studying children's understanding of social, economic and political concepts. This study established the intellectual framework from which the present investigation will begin and as such it would seem appropriate to provide a brief summary of the issues raised within the earlier work.

At the time of the study in the mid 1980's, prior to the introduction of the National Curriculum, teacher's had considerable freedom over the content and methods of their teaching. Following my survey of schools in Nottinghamshire three main conclusions could be drawn about teacher's approaches to teaching what was then referred to as 'Topic' which was the curriculum area within which children would learn about their social world. Firstly, there were wide definitions of 'Topic' both between and within individual schools. Secondly, few schools had a clear policy on 'Topic'. In the schools with a policy, problems were experienced in the effective execution of that policy. Thirdly, none of

the schools used any formal techniques for the evaluation of the levels of understanding of individual pupils.

These conclusions mirrored an earlier investigation by Vincent Rogers (1968). After visiting over seventy schools Rogers (1969) criticised work in 'Topic' as being:

> *"overtly simplistic, intellectually undemanding studies emphasising the 'concrete' and therefore the nearby, while consistently putting off more challenging approaches that might begin to develop more complex thinking strategies and studies at much earlier age levels."[Rogers,V.(1969)p.40]*

Rogers placed the blame for this situation on the undue influence of the theories of Jean Piaget in which behaviour is explained in terms of cognitive structures which are thought to be responsible. Children's thinking, Piaget suggested, passes through various stages of development, each stage being characterised by its own particular mode of thought. These types of thinking were claimed by Piaget to be not merely quantitatively different but also qualitatively different from each other. This was described in the earlier Master of Philosophy study as follows:

> *"At the pre-operational stage, for example, thinking is ego-centric, limited to perceptual awareness, lacking in concentration and organisation and is often contradictory. Through the processes of 'assimilation' and 'accommodation', environmental stimuli require the re-arrangement of existing cognitive structures as these are fund to be inadequate. The analogy of a filing system has been used to describe these processes succinctly. The child 'files' information and understanding of the environment, and checks each new experience against these 'files', if an appropriate 'file' does not exist, the system will be re-arranged and the new experience will be fitted into the new system, as the child finds that his egocentric disorganised view of the world does not explain many of his actual experience, he has to establish new categories. This process often involves the formation of different cognitive*

structures, providing a better explanation of the child's experiences, and represents the transition from stage to stage. Thinking in each stage is seen as a development from relatively simple modes to more complex levels of understanding from thinking in concrete terms to more abstract methods of thinking.."[Marsh,C.(1987)p.21]

It did seem though, that these notions of 'ages and stages' could be interpreted by teachers as placing a ceiling on children's conceptual understanding. The tasks provided would then be of the 'concrete' kind criticised by Rogers (1969).

However, it was found that there were many research studies which cast doubt on the framework of conceptual development outlined by Piaget, indicating that children can understand complex social, economic and political concepts, and that not all children go through these stages of mental development at the same time. A brief summary of the review of these research studies provided in the earlier study may illustrate the nature of the debate.

Burris (1976) investigated children's understanding of six economic concepts. The concepts chosen were commodity, exchange, value, property, labour and class. Using a clinical interview technique it was found that children's understanding of these ideas progressed through clearly identifiable stages which linked directly to Piagetian assumptions about the characteristics of each stage in thinking, involving assessment of the extent of ego-centricity, perceptual awareness, and organisation of thought on the concrete/abstract continuum.

Similarly Fox (1978) used Piagetian criteria to evaluate levels of understanding of ownership, pricing and wealth. Interviewing twenty-five children between the ages of four and six years, it was found that the children were unable to understand the reciprocal relationships between buyer and seller, and there were age-related qualitative changes in children's understanding of these economic concepts. Fox (1978) also pointed out the fact that most people acquire economic information outside school, and that teachers need to recognise that children have had direct experience of a full range of economic activities. Teachers, therefore, need to take this prior knowledge into account and to be aware that many children will have developed misconceptions about economic issues which will need to be addressed.

In the area of political understanding, similar investigations have been conducted, though fewer have adhered to the Piagetian framework, although the vocabulary of 'ages and stages' and the criteria of concrete/abstract are a unifying feature.

Greenstein (1965) studied the process of political socialisation, concluding that:

> *"The child's first conception of political authority seems to have more affective than cognitive content. The child, like the adult, has a quite firm impression that figures such as the President of the United States are important, but he has no clear understanding of what these individuals do. The affective response to political leaders is strikingly positive...Party preferences are fixed early; they precede the advent of issue orientations, or 'mature' evaluations of candidates. Thus from an early age, party preferences are available for shaping issue and candidate preferences, and more generally, for perceiving the world of politics." [Greenstein, F.(1965)p.154)*

Similarly Stevens (1982) investigated children's understanding of politics using a Piagetian framework, she found that political understanding develops through stages closely resembling Piaget's model of cognitive growth. Children from the age of seven were found to possess some basic political information, ideas and vocabulary which became more specific and diverse as they became older. Jackson(1971) found that:

> *"recognition of politically powerful figures grew with age. Several eight year olds were able to distinguish verbally between the different kinds of power and authority exercised by a policeman, the monarch and the Prime Minister; but many more recognised the political distinction without being able to explain how or why they did so."[Jackson,R.(1971)p.52]*

This latter finding raises some particularly interesting, and difficult issues. It is difficult to imagine how it is possible to establish that political distinctions are being made in the absence of an explanation of those distinctions. This difficulty emphasises the importance of language as a factor in the investigation of children's conceptual understanding. In the majority of the research studies quoted, the subjects were required to answer either orally or in written form direct questions about their understanding of social, economic or political concepts. It may well be that the meaning of these questions was not understood, or was misinterpreted by the children. The responses would then indicate a difference in language development rather than in levels of conceptual understanding, as Donaldson (1978) points out relevance is always relevance to a given question. If the children do not understand the question their answers will be misleading if researchers take these as indicating their levels of conceptual development.

Evidence from Jahoda (1959) highlights the relevance of the socio-cultural context of testing on children's responses. This study of 107 children aged nine to eleven, living in Harare where the dominant method of economic activity is small trading, questioned them about their understanding of the economic concept of 'profit'. The children were presented with a mock shop situation and were asked questions about buying and selling, what happened to money in the till at the end of the day, and whether the shopkeeper could use the money. Results were compared with a sample of Scottish, English and Dutch children tested by the same methods. Results showed that being active in trading leads to an earlier grasp of the concept. Jahoda concluded that:

> *"cross-cultural comparison of rates as well as end-points of cognitive development, based exclusively on Piagetian tasks, are apt to be misleading. One cannot, therefore, ignore the socio-cultural context of behaviour."[Jahoda,G.(1959)p.113-120]*

It seemed that studies of the kind outlined above provided useful information about the ways in which children develop an understanding of social, economic and political concepts, but they are of little practical assistance to teachers. Indeed their purpose is not to provide such help. Research of this kind may, however, guide teachers by providing a framework for the planning of tasks to help to promote that development.. Substantial material has been produced in the form of Curriculum Projects such as those produced by Taba (1962), Bruner (1966), the Inner London Education Authority (1976) and 'Place, Time and Society' (1977), yet there was little evidence of their influence on teaching in practice.

It was a wish to provide some practical assistance to teachers which led to the testing of a range of strategies to enable teachers to evaluate children's understanding of social, economic and political concepts. Using a series of open-ended stimulus stories designed to elicit responses for evaluation, it was found that each story produced very different kinds of responses. One particular story led to replies which could be categorised on a scale, the stages of which could be characterised in terms of the extent to which they used social, economic or political concepts. The study found a remarkable level of propensity in the sample of children tested to use social, economic and political concepts. The results provided evidence of the lack of correlation between teacher's evaluations and achievement on the story test and on the Bristol Standardised Achievement Test.

However, perhaps the central conclusion was the crucial effect of the kind of stories used as a stimulus on the replies given by the children which was seen as an area which required further research. The context of the test stimulus could not be excluded from the interpretation of the responses. The research indicated the need for a greater awareness of the myriad of influences on any research results particularly in the educational field, and the dangers of studying children's responses in the school context in isolation from the broader social and cultural influences on their reactions.

These issues are in line with the latest developments in educational debates identified by Bruner (1996) who points out the importance of studying the relationships between schooling and other ways in which culture's induct young people into the requirements of communal living.

Bruner(1996) points out the need to adopt a broad definition of 'education', since

> *"What we resolve to do in school only makes sense when considered in the broader context of what the society intends to accomplish through its educational investment in the young, How one conceives of education, we have finally come to recognise, is a function of how one conceives of the culture and its aims professed and otherwise."[Bruner,J.(1996)p.x]*

Section 2: Philosophy and Contextual Questions

What is Education?

Education, in whatever way this is defined, involves the exercise of power, and the desire to effect change in particular ways. The starting point of this study is a commitment to the rights of the child to construct their own relationships, and to negotiate their own meanings. This commitment will, inevitably, affect the nature of the axiom to be developed, since this value position generates particular approaches to teaching and learning. Pedagogical approaches which deny the learner the freedom to choose their own value positions may be considered effective by some criteria, but not within the stated framework of the present study.

As Barrow(1975) states:-

> *"Educational debate does not only revolve around questions as to what is the case and what can be done. It also involves the question of what ought to be done or what it is best to do. We need to reflect upon what we want to do, as well as on what we can do."[Barrow,R.(1975)p.37]*

However, reflecting upon what we 'ought' to do involves the weighing of rival evaluative statements in the balance.

> *"One has to have a value structure before one can analyse such normative terms, and therefore, if the analysis is to be meaningful, the value structure itself must come under examination."[Barrow, R.(1975)p.39]*

It is the intention of this study to focus upon an examination of this value structure

At the heart of this value structure are beliefs about fundamental human dilemmas such as:-

- how to judge what is right and wrong;
- how to determine what is true and what is false
- how to ensure basic survival
- what and how to teach the next generation.

All of which must be addressed within the question **'what is education'?** A question at the heart of any attempt to develop a pedagogical axiom.

Barrow(1988) presents a working answer to this question, whilst providing a framework for philosophising, arguing that there are certain elements that are necessary to being educated:-

> *"**Firstly,**...some awareness of our place in the totality - awareness of the cultural and historical tradition to which we belong, and of rival traditions, and in addition awareness of man's place in relation to the wider story of the universe...a general appreciation of the pattern of evolution of the world.*
> ***Secondly,** ...appreciates and is alert to people as individuals and to the power of individuality....*
> ***Third...**the ability to distinguish logically distinct types of question...There are empirical questions, there are aesthetic questions and there are moral questions (and there are others and also hybrid questions).*
> ***Finally,** there is what I call the capacity for discrimination, by which I mean the ability to think in terms of precise and specific concepts rather than blurred and general ones."[Barrow, R.(1988)p.43-44]*

An examination of each of these elements may provide a useful framework for the development of a pedagogical axiom focusing on the negotiation of meaning.

Element No.1: Awareness of our place in the totality.

It must be recognised that the development of this first element of 'education' poses many difficulties. Firstly, there is no agreement about what our place **is** in the totality. Precisely what man's place is in relation to the wider story of the universe is a matter of considerable debate and disagreement.

The extent of this disagreement can be appreciated by considering the two disciplines which focus on the study of the place of humans in the universe, Environmental Science and Ecology.

Environmental Scientists, however, focus on Man's effect on the Environment and the Environment's effect on Man whereas the focus of Ecology is on the nature of the interrelationships between these two variables. Although this may seem to be a subtle difference, it is, in practice, a very important difference in emphasis.

Within this study it is intended to adopt an Ecological perspective.

In choosing to focus upon Ecological rather than Environmental issues, a clear choice has been made in favour of an emphasis on the pattern of interrelationships.

Ecology examines the connections between the various elements of the Universe, within which Man is one inseparable part. Whereas, Environmental Science can adopt a perspective within which humans can be seen as apart from the natural world.

This study will therefore, focus upon an investigation into the question of **what do children understand about ecological issues,** as one aspect of the broader question **what is education**?

Summary No.1

In summary, therefore, it is being argued within this first section of the review of the literature, that in order to develop the pedagogical axiom suggested by Bruner(1986) the question of '**what is education**?' has to be addressed. This requires an examination of the structure of values which underpin our educational practices. Using the framework provided by Barrow(1981), which identifies four of the central aspects involved in being 'educated' leads to the question of **what children understand about their place in the world.** The first element in Barrow's framework is an awareness of our place in the totality which focuses on answers provided within Environmental Science and Ecology. This study will adopt an Ecological perspective, concentrating on the interrelationships between the various aspects of the environment, rather than focusing on those approaches which separate human beings from their environment.

Section No. 3: Ecology and Scientific Issues/ Questions

What do children understand about ecological issues?

To explore the question **what do children understand about ecological issues** a definition is needed of what is meant by 'ecological issues'. There is little agreement amongst writers in Ecology about what precisely should be included in this area of study. There seems to be two broad schools of thought:-

- those who would define ecological concepts in scientific terms
- those who would see ecological issues as being concerned with moral and philosophical realms.

Scientific definitions of Ecology.

The dominance of scientific definitions has been such that many will find it difficult to identify the effects of this approach on our views of the world. Indeed Pepper(1989) argues that science can be seen as informing, affecting and determining our conception of nature on three different levels:

> *"ideological: science now provides a major element of our basic presuppositions about the world and man's relationship to it...*
> *theoretical: in its theories, science explicitly or implicitly embodies particular concepts of the man-nature relationship - for example in evolutionary theories in biology....*
> *practise or methodology: it involves the scientist in particular methodological positions which describe especially the relationship between himself as the subject - the observer of nature - and the object under observation. Thus, in the process - in the very act - of gaining knowledge of nature, the scientist defines his relations to nature in a particular way."*
> *[Pepper,D.(1989),p.37/38]*

Scientific approaches to Ecology, therefore, involve the systematic examination of elements of the environment, searching for understanding of the processes affecting the natural world. The assumptions underlying this approach are that these methods will lead to understanding the laws governing the phenomena of the natural world. The control and manipulation of the environment for the benefit of 'man' seems to have been a central feature of this approach. Ecological issues are, therefore, seen as aspects to be examined as objectively as possible in order to understand the processes determining Ecological phenomena.

An example of this approach, which indicates the types of issues seen as relevant for study, is provided by a survey of the British Ecological Society's membership conducted by Cherrett(1989). Respondents were asked to list the ten principal concepts comprising modern Ecology. Results are listed in Table.1.1 below.

Table No.1.1

British Ecological Society Rank	Principal Concepts of Ecology
1.	The ecosystem
2	Succession
3	Energy flow
4	Conservation of resources
5	Competition
6	Niche
7	Materials cycling
8	The community
9	Life history strategies
10	Ecosystem fragility
11	Food webs
12	Ecological adaptation
13	Environmental heterogeneity
14.	Species diversity
15	Density dependent regulation
16	Limiting factors
17	Carrying capacity
18	Maximum sustainable yield
19	Population cycles
20	Predator-prey relationships
21	Plant-herbivore interactions
22	Island biogeography theory
23	Bioaccumulation in food chain
24	Co-evolution
25	Stochastic processes
26	Natural disturbance
27	Habitat restoration
28	The managed nature reserve
29	indicator organisms
30	Competition and species exclusion
31	Trophic levels
32	Pattern
33	r and K selection
34	Plant/animal co-evolution
35	Diversity/stability hypothesis
36	Socioecology
37	Optimal foraging
33	Parasite-host interaction
39	Species-area relationships
40	The ecotype
41	Climax
42	Territoriality
43	Allocation theory
44	Intrinsic regulation
45	Pyramid of numbers
46	Keystone species
47	The biome
48	Species packing
49	The 3/2 thinning law
50	The guild

[Cherrett, J.M.(1989)p.1-16]

From this diverse list, it can be seen that there is little agreement on focus or priorities for study within Ecology, and this indicates some of the difficulties within scientific approaches.

Hale and Hardie(1993) point out that if Ecologists do not agree on what are the most important ecological concepts, and are studying a wide range of special interests, then Ecology as a science lacks a unifying or theoretical base. This lack will present a severe problem of communication, which Cherrett(1989) identifies as that of how to explain ecological science to the wider lay world, and in particular how to target discussion with schools in ways which may influence the curriculum.

The importance of this point is graphically illustrated by reference to the treatment of Ecological concepts within the Science National Curriculum at Key Stages 1 and 2. In the revised document Department for Education(1995), Programmes of Study for Science, Life Processes and Living Things only the following section seemed to refer directly to the development of an understanding of Ecology:

"5.Living Things in the Environment

adaptation	*a.that different plants and animals are found in different habitats* *b.how animals and plants in two different habitats are suited to their environment;*
feeding relationships	*c.that food chains show feeding relationships in an ecosystem;* *d.that nearly all food chains start with a green plant;* *[DFE.(1995)p.46]*

In the Programmes of Study for Geography HMSO(1995) under the heading of Thematic Study, it is required that pupils should be taught:

> *"a. to express views on the attractive and unattractive features,eg tidiness, noise, of the environment concerned, eg a play area, a street, a small area of woodland;*
> *b. how that environment is changing eg increasing traffic*
> *c. how the quality of that environment can be sustained and improved, eg creating cycle lanes, excluding cars from an area."[DFE (1995)p.87]*

In the non-statutory element of the National Curriculum, five Cross-Curricular Themes are identified. One of these themes is Environmental Education, outlined in Curriculum Guidance No.7: Environmental Education(1990) which recommends teachers to encourage children's awareness of the environment, leading to informed choices and active participation in resolving environment problems.

It is recognised within this document that the issues raised by Environmental Education are controversial, and that teachers need to provide children with the opportunity to clarify their own value positions. Teachers are advised to focus on three elements of Environmental Education, namely;

- **education about the environment** within which children are given 'facts' about the environment;

- **education for the environment**, within which children are encouraged to consider ways in which the environment can be conserved; and

- **education in and through the environment** within which children are encouraged to use the environment as a resource for learning.

The non-statutory nature of their guidelines, however, leads to questions about the extent to which these issues will be raised. Indeed the context of the National Curriculum framework which identifies the Core elements as being English, Maths and Science seems to direct attention away from these issues. The emphasis within the classroom must inevitably be placed in these three curriculum areas and this will undoubtedly set the tone and the context within which children will develop their understanding of Man's place within the universe.

Science presents a very particular world view and considerable attention has been given to developing ways in which children can be introduced to that perspective.

Two examples of work in this area will serve to demonstrate the focus of such studies.

The first example is The Learning in Science Project established in February 1979 to study teaching and learning of science in New Zealand. In a report of one phase of this investigation Bell and Barker (1982) noted concern about the abstract nature of many of the ecological concepts included within the curriculum. It was felt that children may not have the prerequisite knowledge of individual animals and plants which was seen as essential in undertaking a study of Ecology. Three particular concepts were chosen as being basic to understanding Ecology, namely; 'living', 'animal', and 'plant'. Rather

than teaching the scientifically acceptable concept, the project aimed to establish a learning environment within which student's beliefs were challenged, and if found inadequate would then be modified.

> *" Three components considered important in such a learning environment were:*
> *(a) having the students physically categorising many examples and non-examples of the scientific concept of animal,*
> *(b) the discussions by students in small groups as to whether, for example, an insect is to be categorised as an animal or non-animal, and*
> *(c) the development of an environment where children's views are accepted as worthy of discussion and as valuable contributions to the learning experiences of the class.*
> *It was felt that these three components would help to illustrate to students that different people do have different meanings for the word 'animal' and help the students to clarify their own meanings."[Bell,B.& Barker,M.(1982)p.197-200]*

One important conclusion of the study was the need for teacher's to be aware of the meanings which children attach to basic scientific words and the need to design curricula which build on, rather than ignores these meanings.

It should be noted, however, that the task of discovering the meanings which children develop is no easy, or straight-forward task.

The second example is the Primary Science Processes and Concept Exploration Project under the direction of Professor Wynne Harlen and Professor Paul Black. One of the research reports from this project produced by Russell and Watt(1990) identified the aims of the project as being to establish the ideas which primary school children have in particular science concept areas, and the possibility of children modifying their ideas as a result of relevant experiences.

The project found that teachers became much more aware of the understandings which children brought with them to the classroom, and recognised the importance of involvement and observation, rather than direct teaching.

As a result of projects such as these, in recent years the focus has been less on the transmission of scientific 'facts' and more on the process of scientific inquiry.

However, it is important to recognise that differences in approaches to Ecology have very practical implications, and so are not solely a matter of academic interest. Very different educational practices will follow from these varying perspectives, and will lead to very different types of learning. As Robotham(1993) argues, assumptions by teachers that children's acquisition of scientific understanding of the environment would prevent environmentally damaging actions, has exacerbated the problems.

> *"The irony of this trend is that to the very extent that the problems and solutions came to be seen from a scientific perspective ... our rationality came to be of the technocratic kind. Technocratic rationality tends to be marked by a dominant and almost blind faith in the capacities and qualities of science...to deal effectively and efficiently with the range of problems that beset us. As this dominant technocratic rationality subsumed the fledgling environmental education movement, there was a diminishment of the important capacity to see environmental problems as essentially political issues to do with contests between differing vested interests."[Robotham,J.(1993)p.2]*

Some of the other implications of the emphasis on scientific understanding are identified by Parker(1990), who points out that the

status and prestige of primary science have been raised by a belief in the importance of scientism and it now dominates the National Curriculum. He describes this approach as being one in which

> *"...understanding and truth are principally achieved by empirical experience and reasoning working together with rigorous analysis based on repetitive observation and testing." [Parker,D.(1990)p.40]*

Parker(1990) argues that one consequence of this approach is the danger of ignoring the importance of children's imaginative understanding gained via the emotions and intuitions. These understandings are often seen, by the followers of scientism, as unwelcome biases and barriers. In order to counter this danger Parker (1990) argues that teachers need to open out children's minds to the many ways of knowing so that they do not lose their capacity to feel things. Instead of focusing on scientific method, primary science should aim to inspire children with a sense of wonder and mystery about the universe, encouraging them to contemplate the unfathomable, and to appreciate the beauty and harmony of nature.

The ethos on which the National Curriculum is built is that of scientism, despite rhetoric to the contrary, the emphasis is on the transmission of stated programmes of study centred around Maths, English and Science

LaChapelle(1988) identifies some of the consequences of the narrow, rational mentality of scientism, which not only prevent us from living fully, but more seriously, could actually lead to the destruction of the earth itself. She argues that this mentality leads to the 'deadly delusions' outlined below.

"THE SEVEN DEADLY DELUSIONS

1. *Ideas and Ideal -dating back to Plato*
2. *The false dichotomy of spirit vs nature.*
3. *Eurocentrism - that Europeans discovered everything first and know how to run the world better than any other culture.*
4. *Noosphere - that humans create the mind/wisdom of the earth.*
5. *Anthropocentrism - that man is the most significant entity in the universe; therefore the entire earth is for human "use".*
6. *Perfectionism*
7. *Tragic heroism.""*

[LaChapelle, D.(1988)p.17]

These delusions will be considered in greater depth throughout this study, as they present a critique of scientific definitions of Ecology, and suggest that alternative perspectives are needed.

Moral and Philosophical Definitions of Ecology

The second school of thought within Ecology provides just such an alternative perspective beginning with a recognition of the social construction of what we perceive as 'the environment'. As Di Chiro(1987)states:

> *"...the environment is not something that has a reality totally outside or separate from ourselves and our social milieux. Rather it should be understood as the conceptual interactions between our physical surroundings and the social, political and economic forces that organise us in the context of those surroundings. If we view the environment as a social construct, we can also view the 'environmental problem' very differently...Environmental problems are social problems, caused by societal practices and structures, and only viewed or socially constructed as problems because of their effects on human individuals and groups."[DiChiro,J.(1987)p.25]*

Exploring the social construction of the environment, within what might be called the phenomenology of home, Grange(1990) identifies two fundamentally opposed ways of understanding Ecology which he refers to as Dividend Ecology and Foundational Ecology. In 'Dividend Ecology' the concern is with the survival of man. This concern, however, is driven by fear of the consequences of our behaviour, and as such will not overcome our ecological problems, but rather will actually reinforce the ways of thinking which led to those problems in the first place. In contrast 'Foundational Ecology' is concerned more with seeing our environment as our home, and adopting a more authentic way of being human.

> *"human homecoming" is not merely in the act of returning to a specific place that we call "home.....Home is not a spatial location. Home is the region of nearness within which our relationship to nature is characterised....Human homecoming is a matter of learning how to dwell intimately with that which resists our attempts to control, shape, manipulate and exploit it..*
>
> *Foundational ecology is therefore the effort to structure our modes of dwelling so that they reflect an essential and authentic way of being human"*
> *[Grange,J.(1990)p.33]*

Several other writers have highlighted the nature and implications of these different approaches within Ecology. Rifkin(1983) argues that the different approaches to Ecology can be described as the engineering and ecological approaches to Ecology, and these correspond to two forms of knowledge which he refers to as technological knowledge and empathetic knowledge.

> *"Technological knowledge gives us foresight so that we can better appropriate the life around us. Empathetic knowledge gives us foresight so that we*

can better co-operate with the community to life. With technological foresight, security comes in exercising power over nature. With empathetic foresight security comes from belonging to a community."
[Rifkin, J.(1983)p.252]

These differences are also identified by Worster(1985) who perceives Ecology to have suffered from an identity crisis, unsure whether it is a science of manipulation and control or a philosophy of inter-relatedness.

A similar point is made by Roszak(1973), who sees Ecology as standing at an important cross-roads requiring a choice of direction.

"Is it, too to become another anthropocentric technique of more efficient manipulation, a matter of enlightened self-interest. ..Or will it meet the nature mystics on their own terms and so recognise that we are to embrace nature as if indeed it were a beloved person in whom, as in ourselves, something sacred dwells?....The question remains open....which will ecology be, the last of the old sciences or the first of the new?"[Roszak,T.(1973)p.403-4]

These views link closely with those expressed by many writers concerned about Ecological issues, such as White(1967) who states that

"What we do about Ecology depends on our ideas about the Man-nature relationship...More science and more technology are not going to get us out of the present ecological crisis...We must rethink and refeel our destiny....We deserve our increasing pollution because according to our structure of values, so many other things have priority over achieving a viable ecology."[White,L.(1967)p.28]

This suggests that Ecology should be redefined to include an examination of this structure of values, and this is precisely what is

proposed by this second broad school of thought which argues that Ecological issues are essentially concerned with the moral and philosophical realms.

Adopting a moral and philosophical approach to ecological issues requires consideration of the ethical basis of our values. This will necessarily direct attention away from factors outside the individual and social groups to more internal processes. The social and natural world are drawn together in an analysis of the appropriateness of the relationships between the various interrelated elements of our universe.

In a positive sense this type of analysis can lead to the development of broader perspectives, and a movement aware from narrower anthropocentric approaches.

Toulmin(1982) argues that concern with developing understanding of the natural world involves more than learning how to make better use of the resources it provides. It also requires us to make sense of all our patterns of relationships and to understand how these relationships fit into the pattern of the whole Universe.

However, developing this sense of proper relations may be a more difficult enterprise that it at first appears. Even our patterns of communication may affect our ability to understand our place in the world, indeed the kind of questions it is possible to ask may be limited by the language available to us Toulmin(1982) notes the way in which so many attempts to reflect on the world have been

concerned with making sense of the universe as a whole, even though this is a particularly difficult task.

> *"Questions that can be asked with perfect propriety of particular things, or parts of the world, or stretches of time, tend to go wrong on us, if we ask them about 'everything-there-is' or 'the universe as a whole' or 'about time itself'...The attitude which we should adopt towards nature cannot be settled in the way in which one establishes what the facts of nature are, and when disputes arise about the proper attitude to adopt, scientific considerations alone will be incompetent to resolve them."[Toulmin,S(1982)p.42-43]*

Luhmann(1985) argues for the need to consider the key question of how society structures its capacity for processing environmental information. Pointing out that the functional differentiation of modern society places constraints on communication about ecological problems which are necessary to an analysis of Ecological Communications. In a functionally differentiated society subsystems deal with specialised areas of the social world. Each element of society structures their communication through binary codes which divide the world into two values such as true/false, legal/illegal, power/lack of power.

Environmental issues are channelled into one of the function systems of society, and treated there in accordance with one code or another. Luhmann(1985) argues that recognition of this, changes the focal point of the ecological problematic from developing ways in which we can dominate nature, or even ways in which we can protect nature, to examining how society structures its capacity for processing environmental information.

He describes these processes as involving the operation of autopoiesis - the unique capacity of living systems to maintain their autonomy and unity through their very own operation. In social terms everything that functions as an element in the system is itself a product of the system. This creates, in effect, a closed system which is self-justifying. It is because of this process that Luhmann doubts the effectiveness of educational responses to ecological questions since education is only one element in the social system, and is concerned with its chief function of social selection.

Thus, it would seem necessary to find some way of 'breaking the binary code', in order to overcome the compartmentalisation of our differentiated social organisation. One way in which this may be achieved could be the adoption of a broader perspective, or cosmology.

Calls for an holistic view, and the need to consider our world view or cosmology have been a common feature within the Ecological literature., for instance Skolimowski(1989) points out the importance of

> *"our view of the world and the universe and how we relate to them as being the source of our values. Our cosmology is a function of our underlying philosophy and this is one which is at present far too heavily based on empiricism and scientism and is too mechanistic and analytic " [Skolimowski,M.(1989)p.5]*

This echoes the concern of Robotham(1993) outlined earlier, that the dominance of technocratic rationality masks the political context of ecological issues.

Element No.3: the ability to distinguish logically distinct types of questions.

It may now be helpful to consider the ability to distinguish between different types of questions, which is the third element Barrow(1981) identifies as an essential aspect of 'education'. Recognition of this aspect of education is a central feature of an alternative approach to Ecology represented by which has come to be known as Deep Ecology.

Shallow and Deep Ecology:-

Fox(1990) argues that the predominant typology within Ecology has become that of 'shallow' and 'deep' Ecology. This typology was identified by Naess(1973), and described by Devall and Sessions(1985) who state that

> *"The essence of deep ecology is to keep asking more searching questions about human life, society, and Nature...As examples of this deep questioning, Naess points out "that we ask why and how, where others do not. For instance, ecology as a science does not ask what kind of society would be best for maintaining a particular ecosystem - that is considered for value theory, for politics, for ethics" Thus deep ecology goes beyond the so-called factual scientific level to the level of self and Earth wisdom."*
> *[Devall & Sessions (1985)p.65]*

Naess(1985) identified a platform or key terms which he proposes as basic to Deep Ecology. The eight points are set out in Table No.2.2 below

Table No.1.2

THE BASIC POINTS OF THE PLATFORM OF DEEP ECOLOGY

"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 realisation of these values and are also values in themselves.

3. Humans have no right to reduce this richness and diversity except to satisfy vital 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."

[Devall & Sessions(1985)p.70]

Fox(1990) points out that Deep Ecology is predicated on the idea of asking deeper questions, and Naess provides a description of the types of questions which are central to Deep Ecology. He argues that questions can be divided into everyday, technical, scientific and philosophical types, and that the asking of deeper and deeper questions is an essential way to increasing our understanding.

For Naess, therefore posing strings of why and how questions will eventually help the questioner to move beyond everyday levels of understanding and into the realm of the philosophical.

Fox(1990) summarises Naess' own ecologically inspired philosophy which he labelled Ecosophy T, noting that at the heart of this system was the fundamental goal of 'Self-realisation'. The claim is that, as we try to understand our place in the world, we will identify more with the world, and come to realise a more expansive sense of self. Naess acknowledged the profound influence of Spinoza and Ghandi in the development of his ideas. This influence led to a focus on the need for action as part of the processes of development.

However, Naess does point out that Deep Ecology is not derived from Ecology by logic or induction, but that ecological understanding has suggested, inspired and fortified the developments within the Deep Ecology Movement.

> *"Ecology is a limited science which makes use of scientific methods. Philosophy is the most general forum of debate on fundamentals...By an ecosophy I mean a philosophy of ecological harmony or equilibrium. A philosophy is a kind of sophia, wisdom, is openly normative, it contains both norms, rules, postulates, value priority announcements and hypotheses concerning the state of affairs of our universe.""[Naess,A.(1990)p155]*

Thus within Deep Ecology there is a broadening of the sphere of concern of Ecology, outlining a structure of values which are seen as radically different from those dominant in present Society. The central feature of difference with other types of Ecology is the merging of issues which have previously been seen as philosophical, yet

including also a requirement to action in order to effect a change in behaviour.

These different approaches within Ecology may well be part of an even wider set of differences in ways of thinking and understanding the world, as is claimed by Bruner(1986) who states that,

> *"There are two modes of cognitive functioning, two modes of thought, each providing distinctive ways of ordering experiences, of constructing reality. The two, though complementary, are irreducible to one another...Each of the ways of knowing, moreover, has operating principles of its own and its own criteria of well-formedness. They differ radically in their procedures for verification."[Bruner,J.(1986)p.11]*

He identifies one mode of thinking as the paradigmatic or logico-scientific one which adopts the ideal of a formal mathematical system of description and explanation, dealing in general causes, and making use of procedures to test for empirical truth. The second mode of thinking he describes as,

> *"The imaginative application of the narrative mode which leads instead to good stories, gripping drama, believable (though not necessarily "true")historical accounts. It deals in human or human-like intention and action."[Bruner,J.(1986)p.13]*

Bruner(1986) argues that

> *"it is far more important in appreciating the human condition to understand the ways human beings construct their worlds (and their castles) than it is to establish the ontological status of the products of these processes."[Bruner,J.(1986)p.46]*

It is the development of just such an understanding which is involved in the second element of what Barrow(1988) identified as a necessary aspect of what it means to be 'educated'.

Element No.2: awareness of people as individuals

Barrow(1988) highlights the role of education as a means of understanding and responding to individuality. He argues that, In order to be regarded as 'educated', individuals need to develop awareness of the responsibilities which are an inevitable element of our ability to manipulate our environment.

Metacognition:-

The development of this kind of understanding in children has been the focus of considerable research attention which has attempted to develop an understanding of the mind, or **metacognition**. Metacognitive research has studied the ways in which children learn about their own minds and those of other people. Within the process children begin to develop awareness of the differences between the animate and inanimate world, and the potential for perceiving the world in an entirely different way. Astington, Harris and Olson(1988) identified some of the important consequences of these developments, which mark awareness of the distinction between the world and mental representations of the world, such as the recognition of themselves and others as 'things which think' .

However, perhaps even more importantly, they argue that this remarkable achievement spreads over into many other areas of understanding. In particular, with the development of a theory of the mind children recognise the distinction between appearance and reality, and become aware of mental states in themselves and others via explicit and interconnected concepts representing those states. Remarkable as these developments may be, however, Mead(1970)

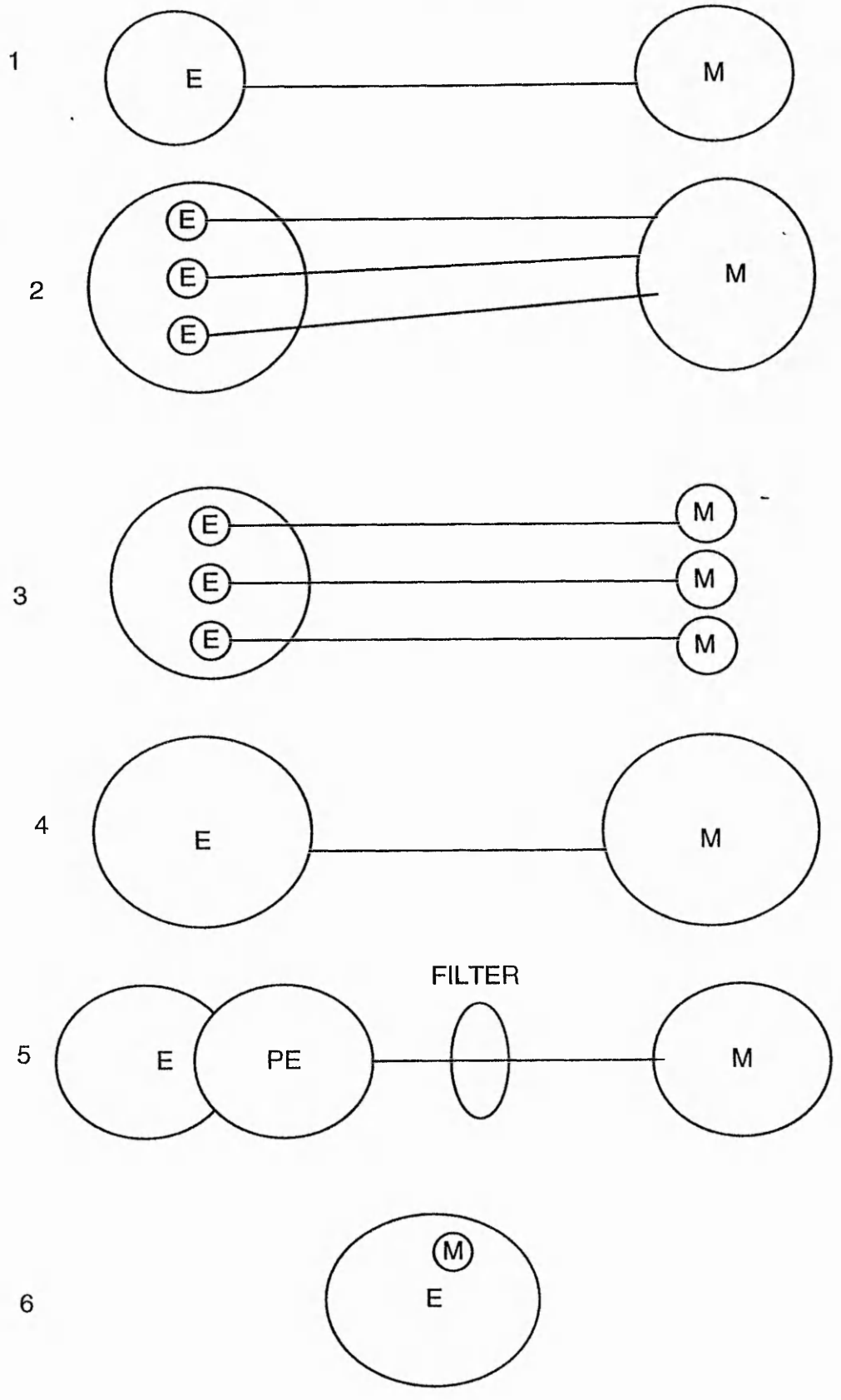
points out some of the negative elements in this growing understanding. She argues that the world we have created within our minds presents particular difficulties, and she identifies the self-destructive tendencies inherent in our attitudes and approaches towards the social and natural world. These attitudes have led to a series of traps which need to be changed in order to develop more viable cosmologies. It does seem that an understanding of the mind is fundamental to our understanding of the emerging cosmology developing through childhood, but more particularly on their perceptions of 'reality', rather than establishing the nature of that 'reality', as Roszak(1973) argues:-

> *"What is important in the examination of a people's mindscape is not what they articulately know or say they believe...What matters is something deeper; the feel of the world around us, the sense of reality; the taste that spontaneously discriminates between knowledge and fantasy"[Roszak,T.(1973)p.403-4]*

This study will, therefore, focus on children's discrimination between reality and fantasy. This task may be facilitated by the notions outlined by Pepper(1989) who states that

> *"it is of prime importance for us to study, as well as the real' and tangible physical environment, how different groups and individuals perceive that environment and the nature of the ecologically, socially and culturally based presuppositions which colour this perception, or as some express it, the cultural filter... "[Pepper,D.(1989)p.6]*

The notion of a 'cultural filter' as being involved in the relationship between 'real' and perceived environments is represented by Jeans (1974) in the diagram reproduced below.



Source: Jean,D.H. 'Changing Formulations of the Man-Environment Relationship in Angle-American Geography' in "The Journal of Geography" (1974) Vol.73,Part 3 pages 36-40

Tracing the changes in the formulation of the Man-Environment relationship in Anglo-American Geography Jeans(1974) describes the movement from 'Environmental Determinism' reinforced by the theories of Darwin, in which man's economic activities were seen as products of particular natural environments, through to the 'Cultural Relativist', 'The Landscape School', 'Perceptions of the Environment' and the 'Ecological Approach' in which men, animals, plants and other elements are seen as elements of an ecosystem.

The fifth formulation 'Perceptions of the Environment' is of particular relevance to this present study, providing a framework for studying children's understanding of their environment, since this emphasises that

> *"Man consciously responds to his environment as he perceives it, the perceived environment will usually contain some but not all of the relevant parts of the real environment, and may well contain elements imagined by man and not present in the real environment...The 'real' environment is seen through a cultural filter made up of attitudes, limits set by observation techniques, and past experience. By studying the filter and reconstructing the perceived environment, the observer is able to explain particular options and actions on the part of the group being studied."[Jeans,D.H.(1974)p.39]*

The filter can be seen in a variety of ways, for example, it could be envisaged as a filter similar to that of an oil filter in an engine which permits some material to be perceived and other aspects of the environment to be blocked from experience. The image of a lens may provide a slightly different image of the process of cultural filtering, seeing this as hypothetical spectacles through which individuals perceive their environment, leading to some experiences being clearly

perceived but other aspects of the environment being out of focus or unseen.

The notion of a cultural filter thus originated as a Geographical concept which presents a model of the way in which Environmental understandings can be influenced by Sociological and Psychological factors. It is clear that elements of the filter are held in common with other members of an individual's cultural group, involving some of the attitudes, values and beliefs which are transmitted from generation to generation. The cultural framework thus becomes an element in our understanding of our environment. Beliefs about what the world is, how the world can be studied, and the place of humans in that world will become intrinsic elements in our perceptions of that world. These will be learned from the social experiences which are part of the formal and informal socialisation of the young, within the family, from peers, in school and from the media.

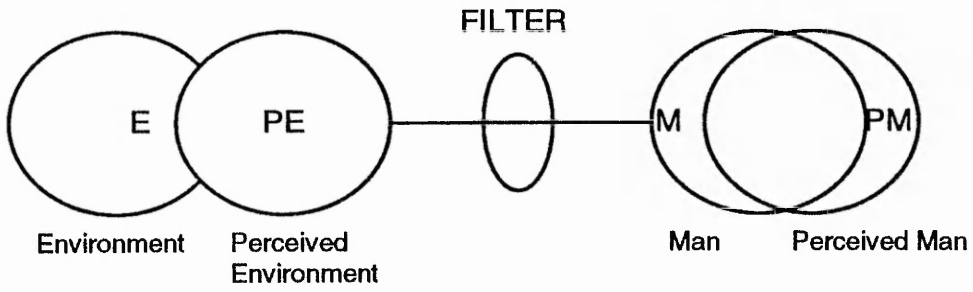
These are precisely the issues raised by Bruner (1996) referred to in Section 1 of this review, who argues that you cannot understand mental activity unless you take into account the cultural setting, placing the study of education problem within the newly developing field of "cultural psychology". Bruner (1996) argues for the need to recognise:

> *"...how closely linked were the problems of education and the questions that loomed large in creating a cultural psychology - questions about the making and negotiating of meanings, about the constructing of self and a sense of agency, about the acquisition of symbolic skills, and especially about cultural "situatedness" of all mental activity...Learning, remembering, talking, imagining; all of them made possible by participating in a culture."[Bruner,J.(1996)p.x]*

However, it is the central thesis of Bruner's latest work which is of particular relevance to the present study. Bruner(1996) states that:

> *"culture shapes mind, that is it provides us with the toolkit by which we construct not only our worlds but our very conception of our selves and our powers."*
> *[Bruner,J.(1996)p.x]*

This indicates the possibility of an extension to the model of a cultural filter as described by Jeans(1974) in which the cultural filter becomes even more important, since this affects not only our perceptions of our environment but also our perceptions of ourselves. This is represented in the diagram below:-



It is precisely this cultural filter which the present investigation will focus upon in order to understand some of the ways in which children perceive their environment. These perceptions are seen as central beliefs and values which influence their choices and behaviour, their perceptions of their environment and of themselves.

This position has an extensive pedigree which can be traced to the German philosopher Hegel who argued for the primacy of the realm of ideas. From this perspective social change is effected by ideological changes. Beliefs are thought to determine behaviour, an idea which has been used within Ecology in order to explain the failure of many programmes for social action.

However, identifying the behavioural consequences of the environmentally damaging beliefs and delusions which are included within our own cultural filter may provide help in finding ways to change these aspects of our thinking.

A central element in the cultural filter of modern Britain for children has been the National Curriculum. In particular the identification of the Core subjects of the National Curriculum as being Science, Maths and English, which indicates that the technocratic rationality remains largely unchallenged. However, this is merely one indication of the dominance of scientism within our culture.

Summary No.2

In summary, therefore, it is being argued within this second section of the review of the literature, that even within Ecological approaches there are varying perspectives. One approach adopting a scientific definition of Ecology another a moral/philosophical definition. Scientific definitions do seem to be dominant particularly in western societies and specifically within the National Curriculum in Britain. However, the literature does point towards some major difficulties with scientism particularly in terms of the educational practices which lead to a vicious cycle of reliance on scientific remedies to problems with a scientific origin.

It is argued that recognition of the social construction of our perceptions of the environment re-defines the nature of ecological issues as being social, moral and philosophical issues. This re-definition does not necessarily lead to the solution of ecological problems. There are many complex influences upon our environmental perceptions, particularly the nature of our Ecological Communications, the very language we use is itself part of the ecological problem. These types of issues can only be examined in terms of the structure of values which underpin our views on ecological issues.

The development of alternative approaches and educational practises can be found within the literature classified as 'Deep Ecology'. This approach is concerned with the posing of deeper and deeper questions, and as such is directly relevant to the third element which

Barrow(1988) identified as an essential element in the notion of what it means to be 'educated' which is the ability to distinguish between different types of questions. This provides a link between Ecology and Philosophy, since this questioning is one aspect in the application of philosophical approaches to the concerns about Ecology.

Examination of the second element of Barrow's definition of what it means to be 'educated' leads to some of the central concerns within research on **metacognition**, children's understanding of the mind, and these are also relevant to their understanding of ecological issues.

Theories of the mind are seen to include awareness of important differences such as between:

- animate and inanimate objects,
- sentient and non-sentient beings
- appearance and reality.

The development of these meta-representations involves the parallel growth of social and self knowledge - a central feature in ecological awareness. Yet it is not the validity of these representations which should concern us. Pepper(1989) argues that we should be more concerned with the interaction between the 'real' and the 'perceived' environment. Our perceptions of the relationships between Man and Nature have varied considerably over the years, in particular Jeans(1974) highlights the importance of our **'cultural filter'** through which we perceive our environment. An examination of the 'cultural filter' through which children develop their understanding of ecological issues provides a tangible starting point for the empirical element of this present study.

Section No.4: Myth-making and Utopia in our cultural filter:-

The emphasis on empiricism and scientism within our cosmology, Toulmin(1982) argues can even be found in our myths, which, in present day society he believes take the form of 'Scientific Myths' which are used to justify and explain natural phenomena. He points out that although we may prefer to think of myths as things of the past which were used to explain things such as the stability of the earth, the fertility of the soil before we were able to understand these processes, the need for myth-making is still with us:

> *"They have set out to show people not only how it is that Nature and Society and Man have come to be related as they are, but also why these relations are rightly as they are...Ethical and political issues were thereby given cosmological foundations, the Nature of Things being identified with the Right Order of Things. This ambition to find 'a cosmic sanction for ethics', a 'natural'' foundation on which our human superstructure of right and wrong may safely rest, is an enduring one."[Toulmin,S.(1982)p.23]*

The importance of myth-making is acknowledged by Kumar(1987) who calls attention to writings within the Utopian tradition, inspired by the mythical society described in the fifteenth century by Sir Thomas More, in which ideas about the relationship between man and nature can be found. Kumar argues that this tradition has been downgraded by social theorists, and far from being an eccentric side-tracking of important issues, Utopian writings focus on the same issues as conventional social theory but in a different way. By adopting an

unfamiliar angle, a different perspective they are able to offer important insights into possible rather than actual worlds.

It does seem, however, that there are differences between the possible worlds envisaged by men and women; as pointed out by Rohrlch(1984), in Utopias written by men women are peripheral, women writers of Utopian stories think more in terms of Utopia**s** rather than of one Utopia, and the kinds of world imagined are very different:

> "*We imagine a world of mavericks creating new myths based on the naturalness of diversity - cultural, social and biological.....A world in which contradictions abound and resolutions are always in process." [Rohrich,R.(1984)p.ix]*

Indeed Baruch(1984) poses the question why is it that recent books on Utopia, such as that by Frank and Frizie Manuel 'Utopian Thought in the Western World' do not consider feminism a type of utopian thought and action, and suggests that it is because they do not consider feminism at all.

> *"But surely its emphasis on new modes of living with regards to the individual, the family and the state, and its attempts to change "human nature" as men traditionally have defined it, entitle feminism to a place among the grand visionary schemes. If male utopias, whether in literary or social thought seek to turn the world upside down, then feminism is the arch utopia with its negation not only of a particular social order, but of the entire principle of patriarchy, .. For men, utopia has often involved imposing control over the individual who is seen as a threat to the group. For women, on the contrary, utopia is a way of arriving at freedom. Perhaps because they have been allowed so little individuation, women do not see the individual as a threat to society.....For men, utopia is the ideal state; for most women, utopia is statelessness and the overcoming of hierarchy and the traditional splits between human beings and name, subject and other,*

man and woman, parent and child."[Baruch, E.H.(1984)p.xii]]

Pearson(1984) identifies another fundamental difference between utopias envisaged by women and men, as exemplified in Marge Piercy's 'Women on the Edge of Time, and Dorothy Bryant's 'The Kin of Ata are Waiting for You' which are based upon modern scientific ideas about time, which move away from a politics based solely upon notions of linear progress, causality and struggle.

> *"The three major principles which emerge from this new politics are all paradoxical:*
> *1. Time is linear; and it is relative. To the degree that we live only in linear time, we are locked into a world governed by laws of causality, dualism, linearity and struggle. But we also have available to us a reality based upon relativity, In this dimension, time and space are not separate, and time/space is curved. It then becomes possible to understand that we can change not only the future but the past Such analyses focus on concepts like paradox, synchronicity, responsibility, commitment and transformation.*
> *2. Although past, present and future co-exist and we are equally real in the present, the only point of action in which anything can be changed is in the present. Paradoxically, widespread social change occurs only as a result of the solitary decisions of individuals to step outside linear time into the "eternal now". Yet, at the same time, no one moves fully into the new world alone. No one is fully there, until we all are.*
> *3. The move into a new, utopian future occurs when we simultaneously take responsibility for our own lives and relinquish any illusions that we can control anything -.[Pearson ,C.S.(1984)p.261]*

There is also a different view of the nature of history, seeing the past as being 'caused' by a complex of actions and responses, including our own, so that we are able to free ourselves from the determinism of the past, when our present understanding allows us to act in ways we have never done before.

> *"The way it has always been" only determines "the way things are: as long as we believe it has to. Individually and collectively, we are limited in our actions by events and attitudes which actually prevail in the present, but we typically feel much less free than we are because we tend to be weighted down by the power of history. Actually history does not have an existence of its own. "History" is merely an abstraction from the accumulated decisions and actions of individuals through time. History does not exist; there are only people, and people can always choose to change."[Pearson, C.S.(1984)p.263-4]*

Pearson(1984)claims that the implications of these ideas about time, causality and the nature of social change for our political theory are immense. These views overturn the despair inherent in previous feminist theories which required a critical mass of people to accept the analysis of their oppression, and thus led to feelings of powerlessness and anger. Whereas these new approaches offer alternative forms of action

> *"When we stop wasting time on futile attempts to control the movement or to force social change and focus on fully claiming our own lives and integrity ...we will have all the time we need. We cannot force or control change but we can take a leap of faith to be citizens of a utopian society - in progress - today. The paradox is that as we take the risk to move into the new world alone, we find to our surprise...that we awaken to a new community which has co-existed with the old all along. Only our lack of belief kept it from view."[Pearson, C.S.1984)p.267-8]*

Support for such a move towards more ecocentric cosmologies is provided by Barbour(1973) who argues in essence for the development of a new ethics for the environment. For example, if the influence of Western religious and cultural assumptions about nature have been used to support man's devastation of nature, these will need to be replaced by a less exploitive outlook. If our economic institutions

have engendered ecologically destructive practices, these must be replaced by policies which are more responsive to the welfare of man and nature. If technologies have been wasteful of raw materials and created vast quantities of waste products, this must be changed so as to conserve natural resources, reduce pollution and recycle wastes. If population growth and increased living standards have produced an unsustainable demand on our environment, we must change our values and social institutions in order to produce stability rather than growth. Pointing out that,

> *"Technological solutions to a succession of particular environmental problems are important, but their results will be short-lived unless the forces which have led men to ravage the earth are altered. If I were proposing a set of principles to guide this redirection, I would start from a number of general values, including survival, a prerequisite of all other values, human fulfilment, freedom and justice, in addition to the welfare of non human species....Starting from these general values I would propose two principles for environmental ethics today....the first principle is ecological wisdom....the second guiding principle is social justice, especially with respect to equality in economic and political power"[Barbour,I.G.1973)p.2]*

Similar views were outlined by Rachel Carsons in her book "Silent Spring" in which as Fox(1990) points out, she

> *"indicted modern humanity for its headlong and unthinking rush down the technological quick fix path of employing synthetic chemicals to control insects....Although Silent Spring was primarily concerned with the biological damage we were doing to the world and, particularly to ourselves, it was clear that at another level Carson's book was also an indictment of our arrogant conception of our place in the larger schemes of things. ....In the last paragraph Carson concluded that "the control of nature" is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man".[Fox,W.(1990)p.4]*

Identification of the consequences of negative conceptions of the relationships between man and nature may assist in the development of more positive attitudes. However, we do need to recognise that these views are part of a complex system of beliefs about the place of human beings in the world. One aspect of this system can be labelled as anthropocentrism, that is the belief in the centrality of man in the Universe.

Within an extensive survey of ecological and environmentalist thought Fox(1990) identifies a complex range of beliefs about the relationship between man and nature which he hopes will

> *"clearly demonstrate that anthropocentric assumptions have been widely perceived as pervading ecological and environmentalist thought, and that this perception has been deemed to be of considerable analytical importance.."[Fox,W.(1990)p.22]*

He quotes examples from a range of writers who have been concerned with the broad characterisation of attitudes towards nature in general, as opposed to those concerned specifically in the context of ecological or environmentalist thought such as conceptions of man apart from nature / man a part of nature(Walter Briant); domination over nature / stewardship of nature / unity with nature(Ian Barbour), and man as despot / stewardship of nature / co-operating with nature(John Passmore).

Not surprisingly, Fox(1990) points out that it is a mistake to regard ecological or environmentalist interests as homogeneously constituted.

> *"The strength and pervasiveness of anthropocentrism in (at least), Western culture is such that it even permeates many of the ideas that have been subsumed under the labels of ecology and environmentalism"[Fox,W.(1990)p.17]*

Summary No.3

In summary, in this fourth section of the review of the literature it has been argued that the myths of a society represent a crucial element in the value structure which underpins human behaviour towards the environment. In particular Utopian writings can provide insight into some features of our 'cultural filter', presenting a vision of a possible future society.

The place of feminist perspectives in imagining alternative value structures, becomes apparent when comparing the Utopias of men with those of women. In particular women's Utopian writings it is argued are closer to modern scientific ideas by including the paradoxes involving ideas about time, causality and the nature of social change.

Barbour(1973) argues that this development of Ecocentric cosmologies requires major changes in the cultural assumptions, social institutions and attitudes which would constitute a new ethics for the environment. However, this development may not be as straight-forward as it appears in the light of the diversity of approaches even within Ecology. In particular, the influence of anthropocentrism, man-centredness, in our 'cultural filter' needs to be considered.

Section No. 5:

Anthropocentricism in our cultural filter:-

White(1990) argues that ecological action depends on what people think about themselves in relation to the world around them, and places the blame for negative ideas about the relationship between Man and Nature on Christianity as the most anthropocentric (human-centred) religion. White contrasts Western and Eastern views, claiming that Western Christianity tries to understand the mind of God by learning how his creation operates. Whereas in the East nature is seen as a symbolic system through which God speaks to men.

> *".What did Christianity tell people about their relations with the environment? ... .Man named all the animals, thus establishing his dominance over them....Especially in its Western form Christianity is the most anthropocentric religion the world has seen..... In Antiquity every tree, every spring, every stream, every hill has its own ...guardian spirit. ...Before one cut a tree, mined a mountain, or dammed a brook, it was important to placate the spirit in charge of that particular situation.....Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects.....hence we shall continue to have a worsening ecological crisis until we reject the Christian axiom that nature has no reason for existence save to serve man. We must re-think and re-feel our nature and destiny."[White,L.(1990)in Fox,W.(1990)p.24]*

Fox(1990) seeks to identify the major difficulties stemming from anthropocentrism, quoting five general arguments against anthropocentrism.

Firstly, when the ideas can be checked empirically they have been found to be incorrect. We do not live at the centre of the universe and we are not biologically unrelated to other creatures. We are not even psychologically, socially or culturally different in kind from all other animals.

Secondly, these ideas have proved disastrous in practice.

Thirdly they are not logically consistent since it is not possible to specify any morally relevant characteristics which include all humans but exclude all non humans.

Fourthly it is morally objectionable to accept criteria which would exclude non humans even if this were possible.

Fifthly: it is not in line with a genuinely open approach to experience, and may prevent us from developing our understanding of the world.

> *"The first lesson of trees and rocks is to draw us inside the narrow and presumptuous horizons of our humanism." [Fox,W.(1990)p.17]*

Anthropocentrism can take many different forms, for example, the transference of human characteristics onto non-humans can be seen as one form of anthropocentrism. Taking human perspectives as the starting point, and depicting all other creatures from this viewpoint assumes a dominance which denies other creatures their particular perspective and differentness from humans.

Anthropocentrism in Children's Literature:-

The centrality of anthropocentrism is graphically illustrated by consideration of the ways in which animals are portrayed in the literature and stories created for children.

Many stories for children portray animals with human-like characteristics, personalities and lifestyles. Illustrations depict animals dressed in clothes, living in houses, forming families and behaving in ways similar to humans.

This aspect of children's literature is by no means a recent phenomenon, many traditional fairy stories include animals talking and behaving like humans, and even humans being turned into animals as a result of wrong-doing. The Prince turned into a frog waiting to be kissed by the Princess, to be turned back into a handsome Prince, in the Princess and the Frog. The wolf in Little Red Riding Hood dresses in Grandmother's clothes and entices the heroine into the cottage to be eaten. In Goldilocks and the Three Bears, the family of bears live in a cottage, have human furniture of different sizes, and eat porridge. They return from their walk to ask questions such as 'Who's been sitting in my chair?' and so on.

Many of these traditional stories have been adapted into Pantomimes, cartoons and animated feature films which continue to portray talking and dancing animals such as the ubiquitous Pantomime horse, as well as cats, such as Puss in Boots , Tom and Jerry, Mickey Mouse, and, of course, not forgetting Bambi. The fantasy animal world of Beatrix Potter has provided a common motif for crockery, cutlery linen and even

clothes for children presenting pictures of cute rabbit families in Victorian attire.

Many of the classic stories for children such as 'The Wind in the Willows', Grahame(1959), were intended to provide moral guidance for future generations.

> *"Within the story a loving father's guidance to his son is revealed, showing an anxiety for the boy to know the world as it is and to accept it that way and yet find, among the pleasures and wonders it affords, the simple solid virtues in good friends, good manners, good behaviour, good food, the joys of living, care and concern for others.."[Grahame,K.(1959)p.7-8]*

This guidance, however, is contained within a story in which the animals of the river bank live in houses, wear clothes. travel in boats, caravans and cars, tell stories, and put on plays.

> *"Whilst Kenneth Grahame made his animals extremely clear and solid characters, and deliberately makes it clear that they are animals throughout,...Their size varies from human scale - Toad drives a car and goes to a pub - through half human, half animal, to animal size.....Happily the endearing personalities of the characters are so strong that their physical size variations...matter little, for it is their innate qualities that* are memorable."*[Grahame,K.(1959)p.9]*

Alice in Wonderland by Lewis Carroll clearly signposts the fantasy aspect of the story in which Alice follows a white rabbit dressed in a waistcoat and carrying a watch, drinks a potion which shrinks her, and then engages in a series of adventures. The underlying message is that the world of the mind can be very different from the physical world, and animals are one element of those worlds.

In a similar way, Winnie the Pooh' by Milne (1926) establishes that this is a story told by an adult to a child and a teddy bear, although the introduction incorporates an enigmatic quality linking visits to the Zoo with the character of Winnie the Pooh. Aspects of the story are left unexplained and things are 'forgotten' or unknown. The child is incorporated within the stories, and asked questions by Winnie the Pooh who is portrayed as lacking intelligence, indeed Christopher Robin actually states:

> *"Pooh couldn't 'because he hasn't any brain."*
> *[Milne,A.A.(1926)p.17]*

and Pooh acknowledges:-

> *"I have been Foolish and Deluded.' said he, 'and I am a Bear of No Brain at All.'"[Milne,A.A.(1926)p.38]*

Different species are sometimes treated in different ways developing almost stereotypical characteristics for certain animals, and the same species will often be portrayed with very different characteristics, for example, owls are invariably the wisest character in a story, snakes are usually portrayed as devious, but bears have been vested with a full gamut of characteristics.

Indeed bears seem to have a particular fascination, and have featured as regular characters in several series.

Paddington Bear was given a vivid past, coming from Peru, wearing human clothes and even eating marmalade sandwiches. Winnie the Pooh was cognitively challenged, but Rupert Bear presented a much more 'intelligent' image of a bear who made plans, worked out solutions to problem, and instigated exciting adventures. Once again,

though, the character is shown to wear clothes, live in a house, and behave in a human way.

In contrast, Charlotte's Web, White(1963) raises issues of life and death, and the 'truth' of animals being able to talk. The farmer's daughter, who rears Wilbur, hears the animals talking by keeping very quiet herself, but when she tells her parents what she has heard, her mother immediately consults the family doctor. The story focuses on the friendship of a spider, who can write, has an extensive vocabulary and a large dose of altruism, and a pig who suffers from loneliness, and who does not wish to die. Humans enter the story as beings of lesser intelligence, as Charlotte states:

> *"The way to save Wilbur's life is to play a trick on Zuckerman. If I can fool a bug,' thought Charlotte, 'I can surely fool a man. People are not as smart as bugs."[White,E.B.(1963)p.64]*

When Charlotte herself dies Wilbur takes care of her egg sac until they hatch, and the farmer continues to take care of Wilbur without threatening his life. The story ends with the pig happy with his lot:-

> *"Wilbur never forgot Charlotte. Although he loved her children and grandchildren dearly, none of the new spiders ever quite took her place in his heart. She was in a class by herself. It is not often that someone comes along who is a true friend and a good writer. Charlotte was both." [White,E.B.(1963)p.169-170]*

Watership Down by Adams(1973) approaches the world of rabbits in what could be interpreted as a less anthropocentric way. He provides graphic descriptions of the rabbit's habitat and behaviour, which was developed from material by R.M.Lockley in 'The Private Life of the Rabbit'.

Although the rabbits are given human-like characteristics and are attributed with feelings of fear, foreboding, and even boredom, they are not engaged in human-like activities, such as in the introduction to Wind in the Willows when Mole is found spring cleaning. The rabbits do talk to each other but even this involves the use of a rabbit language. the narrator translates many of these words for the reader.

However, anthropocentricism is evident in many aspects of the story, as, for example, when myths and story-telling are said to play an important part in Rabbit society:-

> *"What Robin Hood is to the English and John Henry is to the American Negroes, Elil-Hrair-Rah, or El-ahrairah - The Prince with a Thousand Enemies - is to rabbits."[Adams,R.(1973)p.35]*

Indeed the range of stories told is one of the ways in which the group of 'wild' rabbits recognise their differences from the rabbits in the warren maintained by a farmer.

Some of the differences between humans and rabbits are mentioned,

> *"Rabbits have their own conventions and formalities, but these are few and short by human standards...In the great burrow, however, things happened differently. The rabbits mingled naturally. They did not talk for talking's sake, in the artificial manner that human beings - and sometimes even their dogs and cats - do.. But this does not mean that they were not communicating; merely they were not communicating by talking."[Adams,R.(1973) p.84]*

> *"The phenomenon of laughter is unknown to animals; though it is possible that dogs and elephants may have some inkling of it. "[Adams,R.(1973) p.88]*

"The kind of ideas that have become natural to many male human beings when thinking about females - ideas of protection, fidelity, romantic love and so on - are, of course, unknown to rabbits, although rabbits certainly do form exclusive attachments much more frequently than most people realise. However, they are not romantic ."[Adams,R.(1973) p.256]

Sometimes, however, the differences are seen as having once been part of human behaviour in earlier times:-

"Rabbits, of course, have no idea of precise time or punctuality. In this respect they are much the same as primitive people, who often take several days over assembling for some purpose and then several days more to get started. Before such people can act together a kind of telepathic feeling has to flow through them....anyone who has seen the martins and swallows in September, assembling on the telephone wires...has seen at work the current that flows (among creatures who think of themselves as primarily part of a group and only secondarily, if at all, as individuals) to fuse them together and impel them into action without conscious thought or will, has seen at work the angel which drove the First Crusade into Antioch and drives the lemmings into the sea."[Adams,R.(1973) p.28]

Although rabbits are credited with some special skills which humans do not possess, such as their knowledge of darkness:-

"No human beings, except the courageous and the experienced blind, are able to sense much in a strange place where they cannot see , but with rabbits it is otherwise. They spend half their lives underground in darkness or near-darkness and touch, smell and hearing convey as much or more to them as sight."[Adams,R.(1973) p.83]

Throughout the story men are just one of the many enemies which the rabbits face, and are sometimes seen as by no means the worst danger, as Hazel the Chief Rabbit states:-

"Who knows why men do anything? They may drive cows or sheep in the fields, or cut wood in the copses. What does it matter? I'd rather dodge a man than a stoat or a fox."[Adams,R.(1973) p.84]

The whole premise of the story is the devastating effects which Man's claiming of the countryside has on the lives of other animals.

"There's terrible evil in the world. It comes from men (said Holly). All other elil (enemies) do what they have to do and Frith (God) moves them as he moves us. They live on the earth and they need food. Men will never rest till they've spoiled the earth and destroyed the animals."[Adams,R.(1973) p.159]

It seems, yet again, that anthropocentrism underlies an ostensibly ecocentric message. Significantly, though, it is the human-like characteristics which are emphasised in the advertising and marketing of the story, the cuteness of the rabbits and the theme song 'Bright Eyes' could almost be a romantic love song rather than a rabbit's near death experience!

However, in terms of impact on the social world of children, though, the Walt Disney Organisation is undoubtedly in a class alone. A huge business empire has been built on anthropocentrism.

Originally Walt Disney's productions were based on cartoon characters such as Mickey Mouse, Donald Duck, Tom and Jerry, Bambi. Animated feature films such as The Lady and the Tramp, 1001 Dalmations, The Fox and Hound have captured the imagination of children and parents with the portrayal of cartoon animals facing human dilemmas of life and death, love and rejection.

The influence of these images of animals on children and adults may, however, have far less positive consequences than at first imagined. The dominance of these images may preclude alternative ways of understanding the relationship between humans and other animals or at least ensure that they have less prominence.

In a recent block busting feature film from Disney, The Lion King, the theme song presents a distinctly non anthropocentric perspective as the underlying philosophy of the film, in which the Chain of Being is described as The Circle of Life, the words of which are set out below:-

The Circle of Life

From the day we arrive on the planet ,
and blinking step into the sun,
There's more to see than can ever be seen,
more to do than can ever be done.
There's far too much to take in here,
Or to find than can ever be found
The sun rolling high in the sapphire sky
keeps great and small on the endless round
In the circle of life ,
and it moves us all.
Through this faith and hope,
through faith and love
till we find our place in the pattern winding in the circle
the circle of life

However, this underlying philosophy and the absence of humans from the film does not remove the influence of a human perspective. The opening sequence shows all the animals in the forest bowing before the new born lion cub, successor to the title of King. The animals have names, they talk, sing and dance, have families and human characteristics. A clear hierarchy is portrayed in which the Divine

Rights of Kings is translated into an animal equivalence. The King's first born son has automatic right of succession, the unfortunate younger brother being portrayed as jealous of the newcomer.

The food chain is an underlying theme through the film, for example, Scar, the King's younger brother points out to a captured mouse he is about to eat that 'Life is not fair. I shall never be King and you shall never see the light of day'.

The lions relationships are presented as if they form families which are similar to human families. The father teaches the son his responsibilities and hunting skills, and the son reacts by breaking the rules and needing to be saved. The lion cubs are told of their need to marry to continue the dynasty.

The dilemma of animals needing to eat each other is explained by the Lion King as part of the cycle in which all are connected. Death is an inevitable part of this connection, since the lions eat the antelope who eat the grass, when the lion dies their bodies nourish the grass which the antelopes eat. Respect for all creatures and the need to keep all of nature in balance are the central features of this natural cycle. The hyenas are shown to be outside this circle, however, labelled as poachers and chased from the lions kingdom, they become the 'bad guys' of the film joining with the younger brother to kill the King and usurp the throne.

The consequences of wrong-doing and selfish use of natural resources by the hyenas and evil usurper are shown in terms of the devastation of the land, which can only be restored by the return of Simba, the rightful

heir to the throne. Having been reinstated. the marriage of Simba in turn produces the next generation of Lion King to be presented to the genuflecting animals.

It is questionable which will be most influential on children's perceptions, the non-anthropocentric philosophy or the many human-like characteristics imposed on the rest of the animal world.

Feature films of this sort are, however, merely one part of a massive global industry which includes theme parks, merchandise such as videos, clothing, toys, games, books with logos and images of the Disney characters. The vast amount of income generated by these theme parks and memorabilia linked to these characters and the feature films testify to their immense popularity and influence. It may be that these developments are merely one illustration of the increasing domination of the environment by technology, and the loss of wilderness.

In the light of these changes, Fox(1990) argues for the need to reorientate our thinking towards a non anthropocentric position, an ecocentric way of living in the world.

However, it must be recognised that there is a fundamental difference in the value systems represented within these two positions, A similar point is made by Attfield(1983) :

> *"Agreement is less than universal about the identification of ecological problems...The significant disagreement concerns how to solve the problems, and also more basically, what makes them problems....different views of what makes a problem reflect not only different estimates of possibilities,*

likelihoods and the limits of tolerance, but also disagreements about moral principles and about what is of value itself."[Attfield,R.(1983)p.1/2]

Pepper(1989) believes that only an examination of the history and philosophy of environmental ideas will enable an understanding of these differences to be developed. Using the views of Bertrand Russell as support, he advocates that

"When an intelligent man expresses a view which seems to us obviously absurd, we should not attempt to prove that it is somehow not true, but should try to understand how it ever came to seem true....In other words, we should listen to what others say and reflect not necessarily upon the 'truth' of their arguments, but on why they make them and believe in them.."[Pepper,D.(1989)p.2]

Within this study, therefore, the focus will be on listening to what children say about ecological issues in order to understand children's perceptions of their world. By placing their statements within the context of 'cultural filters' it may be possible to identify the structure of values which underpin their perceptions.

By seeking to understand the values underlying children's views on the relationship between Man and Nature, it may be possible to learn more about the effects which these values have on their attitudes and behaviours towards ecological issues.

It should be noted that these values, and our understanding of them will be elements in an interactive, dynamic relationship. The values which others hold can only be interpreted in the light of the value system held by the individual doing the interpreting. There is, in effect, no neutral

ground from which belief systems can be understood. We need to bear in mind that even the very process of investigation can influence the values themselves.

As stated in Section 1, at the heart of this value structure are beliefs about fundamental human dilemmas such as:-

- how to judge what is right and wrong
- how to determine what is true and what is false
- how to ensure basic survival
- what and how to teach the next generation

Each of these issues are also of central concern within the area of moral development, and provide further evidence of analysis related to ideas of cultural filtering.

Summary No.4

In summary, within this fifth section of the review of the literature it has been argued that ecological action depends on beliefs about the Man-Nature relationship. White(1967) blames Western Christianity for the dominance of anthropocentrism, which, he argues, has provided moral justification for the exploitation of the natural world. Anthropocentrism can be seen as an important aspect of the cultural filter which has contributed to our ecological crisis. Examining some of the ways in which animals are portrayed in literature for children confirms the centrality of anthropocentrism. Anthropocentrism takes many different forms such as:

- the imposition of human-like behaviour on animals such as wearing clothes, talking, living in houses.
- using animals to provide moral guidance for humans
- portraying animals as less intelligent than humans
- stereotyping different species as portraying different human qualities or weaknesses

Some stories do question the human-non-human relationship but this is always from a human perspective. Indeed even when humans are not included within a story these are often set in a social context which is clearly human-like. Anthropocentrism and the popularity of creations such as theme parks and similar 'artificial' environments can be seen as indications of our separation from nature which will contribute to negative views of the relationship between humans and the natural world.

However, rather than seeing these views as 'wrong' or 'untrue' Bertrand Russell advises that it would be more useful to examine why and how anyone has come to accept these beliefs.

Section No.6: Moral Development - Environmental ethics and Ecological morality

In examining the structure of values which underpin children's perceptions of the environment, it will be essential to consider a core element of any such value system, namely, beliefs about morality. The ways in which judgements are made about what is seen to be right or wrong is central to understanding belief systems.

Although concern with moral development in recent years may have been prompted more by issues such as rising crime rates and phenomena such as vandalism and juvenile delinquency, rather than for more positive motives, nevertheless, frameworks developed in this area could be applied to studying the development of ecological morality.

Environmental ethics has been mentioned within section 3 of this review summarising the views of Barbour(1973) who sees the development of positive values towards our environment as an essential feature of our survival.

An ethical system beginning with the aim of the survival of man, laudable as this may be, could be seen as inherently anthropocentric. The term ecological morality, however, would focus on a broader sphere of values of which humans would be one part of the moral system rather than the determining feature.

One of the principal theorists in moral development is undoubtedly Piaget(1977). He maintains that moral judgement develops through a series of cognitive re-organisations or stages. Each stage having an identifiable shape, pattern and organisation. Piaget studied children's attitudes to game rules, clumsiness, stealing, lying and justice, finding there to be two broad stages involved in moral development, which are summarised by Duska & Whelan(1977) as being:-

> *"1. **Heteronomy** when rules are seen as external laws which are taken to be sacred because they are described by adults.*
> *2. **Autonomy** when rules are seen as the outcome of free decisions and are worthy of respect if they have mutual consent. Rules are not obeyed because they are handed down by someone in authority, but are seen as a requirement for group functioning."*
> *[Duska,R.& Whelan,M.(1977)p.7]*

Piaget(1977) examined two aspects of morality, children's consciousness of respect for the rules, notably the extent to which rules act as a restraint, and actual practice of the rules. Focusing on children's understanding of the rules of the game of marbles, he found there to be four main stages of moral development as follows:-

*"**Stage 1: up to 2 years***
when children just play, no rules govern their activity and they have no consciousness of the rules.

Stage 2: 2 years to 6 years
observes older children playing the game and imitates the rituals, although conscious of the rules, their knowledge is rudimentary yet they regard the rules as sacred and untouchable. At this stage the child does not understand the game as a social activity, so has assimilated some parts of the social reality called marbles, but is not yet capable of relating to others. The game may be played with companions but each is playing their own game.

Stage 3 and Stage 4: Abstract reasoning
It is through co-operative activity that the child develops an understanding of the purpose and origin of rules. The social environment is vital in the development of that understanding, particularly peer relationships."[Duska,R.& Whelan,M.(1977)p.191]

In exploring and implementing the frameworks established by Piaget, Kohlberg(1968) sees the pattern of development as being universal in character and sees moral development as a process involving cognitive re-organisation, dependent on cognitive development and the stimulation of the social environment. Kohlberg presented children with moral dilemmas and asked question to uncover the reasons for the answers given, focusing on the reasons for decisions not on actual behaviour. Reasons are the indicators of levels or stages of moral maturity, as outlined below:-.

TABLE NO.1.3

"THE STAGE SEQUENCE OF KOHLBERG'S SYSTEM

Stage 0	*The good is what I want and like*
Stage 1	*Obedience and Punishment Orientation Egocentric deference to superior power or prestige or a trouble-avoiding set. Objective responsibility*
Stage 2	*Naive egoistic orientation. Right action is that instrumentally satisfying the self's needs, and occasionally others'. Awareness of relativism of value to each actor's needs and perspective. Naive egalitarianism and orientation to exchange and reciprocity.*
Stage 3	*Good Boy Orientation. Orientation to approval and to pleasing and helping others. Conformity to stereotypical images of majority or natural role behaviour, and judgement by intentions.*
Stage 4	*Authority and social order maintaining orientation. Orientation to 'doing duty' and to showing respect for authority and maintaining the given social order for its own sake. Regard for earned expectations of others.*
Stage 5	*Contractual legalistic Orientation. Recognition of an arbitrary element or starting point in rules or expectations for the sake of agreement. Duty defined in terms of contract, general avoidance of violation of the will or rights of others, and majority will and welfare.*
Stage 6	*Conscience or principle orientation. Orientation not only to actually ordained social rules, but to principles of choice involving appeal to logical universality and consistency. Orientation to conscience as a directing agent and to mutual respect and trust" [OU Course D305 Block 6 Unit 10-11 Moral Development A Cognitive Approach p.41]*

Kohlberg regards stage development as invariant, arguing that it is necessary to pass through these stages in one order. Subjects are cognitively attracted to reasoning one level above their own. Movement between the stages is effected when cognitive disequilibrium is created.

From this perspective, therefore, a teacher wishing to encourage moral development would develop strategies to encourage this cognitive disequilibrium, and would expose children to reasoning which is one stage ahead of their present level of moral development.

It may be helpful for teachers to adopt what Shweder(1991) describes as a social communication approach to moral socialisation which begins from the premise:

> *"that children's emerging moral understandings are the product of continuous participation in social practices (the mundane rituals of everyday life), and those socially produced and reproduced understandings are the grounding for later attempts reflectively or self-consciously to reconstruct their own moral code. "[Shweder,R.(1991)p.191]*

Shweder(1991) argues that the boundaries of a normative reality are set very powerfully for children by a range of adults who try to assist the children in stepping into this moral frame,

> *".Everyday conversation and social interaction between adults and children involve a relentless process of representation and rationalisation making salient certain powerful belief conclusions about the nature of experience. At home and at school young children are (to borrow an apt metaphor from Judith Dunn)continually "bathed" in verbal evaluations and discourse-based representations of a moral universe. The discourse indexes or points in the direction of, a conception of a moral world that has been worked on over many generations. That collectively evolved conception of a moral universe is a complex network of ideals, supposed facts, maxims, presuppositions, and much more, which not only specifies the kinds of persons and events that exist in that moral world but also places limits on what is going to count as a sensible argument in defence of the rationality, objectivity, and hence legitimacy of that moral world. "[Shweder,R.(1991)p.192-3]*

The appropriate aim of research from this perspective should, therefore, be to make explicit that network of objectifying knowledge, in order to understand how meaning is constructed.

However, in this particular study the focus will be specifically on exploring the role of cultural filters in the creation of this moral frame.

It should be borne in mind that teachers are not charged merely with the transmission of an agreed moral code which they can endeavour to develop, but rather some will actually be in a position of trying to encourage children to develop an alternative moral code. A moral code which would be more in keeping with ecological imperatives.

The translation of particular philosophies of this kind into a pedagogical axiom, however, poses particular difficulties since this could be perceived as the imposition of values upon the young.

Barrow(1975) examines the implications of such an imposition within a chapter on Indoctrination and Moral Values he argues that Philosophers are themselves undecided about precisely what constitutes indoctrination. However, he is convinced that:-

> *"What is surely true is that the essence of being indoctrinated lies not in the fact that one has certain beliefs (whatever they are)nor in the fact that one came by them without basing them on rational evidence, but in the fact that one holds them in a certain way, namely in an unquestioning way or with a closed mind....For the whole point about morality, is that it differs from spheres such as science, because there is not even agreement on what reasons count as moral reasons or as evidence for a moral claim. An open mind in the moral sphere involves recognising*

this problem. And to undertake an inquiry into this problem is to do moral philosophy. Therefore a necessary antidote to moral indoctrination is an introduction to moral philosophy."
[Barrow,R.(1975)p.211]

An attempt has been made to introduce children to moral philosophy in a programme developed at Monclair State College in New Jersey following the establishment of the Institute for the Advancement of Philosophy for Children. Johnson(1984) identifies the principal aim of the programme as being the enhancement of children's natural reasoning abilities, assisting them in the discovery of the rules of reason and their application, and trying to transform thinking into thinking well. In order to think well he points out that children need to become self-reflective, and this is encouraged through dialogue within a community of peers who are looking for solutions to common problems. Philosophical learning is thought to develop within an atmosphere which fosters interaction with peers, teachers and other adults.

Johnson(1984) highlights the importance of teacher attitudes, and describes the epistemological stance which lies at the heart of this approach.

"If philosophy is to be meaningful, the teacher must join students in seeking more meaningful explanations than they now possess to problems that interest them all. Such a teacher must recognise that knowledge is continually being created and expanded by humans in their never-ending quest for greater understanding. The philosophy for children program is significantly teacher dependent., If the model of an educated individual offered by the teacher is of a person who is all-knowing, students are not likely to engage in or value philosophical inquiry...The philosophy for children program assumes that commitment to open,

honest inquiry, governed only by the rules of reason, should prevail in the classroom."[Johnson, (1984)p.15]

Johnson(1984) places this approach within the ancient dialogue tradition of the sixth century B.C., when philosophers systematically engaged in thinking about thinking, and the Socratic traditions presented in the dialogues of Plato provided a model of how discovery and understanding can be enhanced.

However, Johnson(1984) points out the although the establishment of a community of inquiry within the classroom is a necessary condition for enhancing thinking, it is not a sufficient condition. Suitable classroom materials are required providing a model for thinking, and children need to be encouraged to move from discussion of the material to volunteering pertinent personal experiences, offering different interpretations or perspectives.

In addition, teachers need to be firmly committed to the establishment of a community of inquiry, and to possess the skills need to engage in the philosophical processes.

"Guiding a philosophical discussion is an art that few teachers have mastered. It requires an understanding of when and when not to intervene in the discussion. It requires skill in eliciting views and opinions from students and in helping them to discover the logical implications of their views. Orchestrating a philosophical discussion involves returning to thoughts and points of view volunteered by students, weaving the threads together, and assisting students to understand that their ideas make a difference...Teachers committed to philosophical inquiry can, with practice, develop the skills needed to conduct a philosophical dialogue. But first, they must have retained some of their childlike wonder. They must be intellectually open and honest, curious about

as well as critical of the world, knowledgeable but not all-knowing.[Johnson, (1984)p.25]

Johnson(1984) outlines the empirical evidence suggesting that the program significantly enhances the thinking skills of children, but also sets out some of the problems and difficulties with the initiative. In particular, teaching training is required in order to convert their classrooms into communities of inquiry. although it is pointed out that this will only be successful if teachers have retained their own sense of wonder about the world. The second major difficulty identified is that of funding since the programme is not inexpensive.

In many ways this conclusion can be seen as a sad indictment of our system of education, highlighting the structure of values in our society which places cost at the centre of educational decisions, and in which individuals who have lost their own sense of wonder and curiosity about the world can be given responsibility for guiding the young.

There is a paradox in the programme's concentration of teacher input on the learning process, which undermines the value of children's potential for taking charge of their own learning. The underlying assumption seems to be that learning is synonymous with teaching, and indeed that only teachers who have completed the Philosophy for Children training can teach Philosophy to Children.

Many theorists, such as, for example, Illich(1971), Friere(1972), and Holt(1977) would cast serious doubt on the premise, and indeed Holt (1977) points out that,

"Education is something a person gets for himself, not that which someone else gives or does to him" [Holt,J.(19 77)p.7]]

At this point it would be useful to re-consider the perspectives identified by Pearson(1984) outlined in section 3 of this review, in which she notes that Women's visions of Utopia have called in question many of our taken-for-granted assumptions about the nature of time.

In evaluating the Philosophy for Children programme, the researcher experienced a clear example of the non-lineal nature of time. Socrates propounded precisely the same condemnation of the Sophists in Ancient Greece, as outlined in relation to this evaluation of the Philosophy for Children Programme. Socrates attacked the Sophists for selling their 'knowledge', teaching for money, and creating a false dependence rather than engaging in an 'educational' process

'The more the world changes, the more it stays the same.'

However, this does not necessarily mean that all educational initiatives are doomed to failure.

Gaarder(1995) presents an alternative vision of the place of Philosophy in Education in the form of an award winning novel 'Sophie's World'. He condemns schooling which concentrates on transmission of 'facts' which few of it's recipients perceive as relevant or interesting. Through the eyes of the heroine Sophie, an entirely different personality from the character of the same name created by Rousseau(1911) as a partner for Emile, Gaarder introduces the reader to many of the great

philosophers of the past, raising the central philosophical questions of each era and outlined the ways in which they tackled these questions. Sophie receives a series of postcards containing single questions which are at the heart of philosophical inquiry, beginning with the classics 'Who are you?', 'Is there life after death?'

The essence of Gaarder's vision is retaining a sense of wonder about the world and one's self, imagining things which cannot happen in order to prevent things becoming a habit by looking at things with new eyes. Sophie is reminded of the way in which many people get caught up in everyday life and so lose their astonishment. She is encouraged to ask questions and is helped in this questioning by the receipt of the postcards which lead her through the concerns upon which each school of philosophy has focused.

Gaarder provides a blueprint for philosophical inquiry, beginning with the Greek Natural Philosophers with their focus on nature, and the origins of substance exploring whether something can come from nothing, searching for the basic substance at the root of all change. Gaarder explains how they thought rather than what they thought, seeing their work as the first step in scientific reasoning by examining change in nature.

Gaarder places the heroine, Sophie, at the heart of the process, ensuring that she recognises the value of her existence, repeating the statements that she is an extraordinary being - a mysterious creature.

Sophie is then introduced to Rationalist approaches in which she is invited to question the picture of the world provided by her senses,

reason is seen as the prime source of our knowledge of the world. The ever-changing nature of the world is stressed, and the impossibility of stepping into the same river twice.

She is then taken forward in time when Socrates appears in a dream which transports Sophie to a virtual reality on the steps of the Pantheon in order to consider the place of the individual in Society, and to examine the concept of Democracy as originally developed. Here Sophie is introduced to the Sophists who sell their rhetoric, and add little to their pupils' understanding of the world. In contrast Socratic teaching encourages her to ask questions and to reach inside herself to use what is there. The development of Philosophy becomes a framework within which different issues and concerns are raised, highlighting the origin of the word Philosophy meaning 'One who loves wisdom', an essential element of which is the recognition of the limitations of their own knowledge linked to a striving to find out.

Gaarder outlines the Myth of the Cave in order to present the Plato's view that all natural phenomenon are merely shadows of the eternal forces or ideas. What we see is not 'reality' but we see only the shadow cast on the wall of our cave, and as such we need to treat our knowledge as limited and imperfect reflections.

The ideas of Aristotle develop this notion of our limited understanding by concentrating on what we can learn via our senses. Arguing that the human soul is a reflection of nature, and that Nature is the real world. Only by understanding the processes and purposes of Nature can we understand the world. Aristotle identifies different forms of happiness, describing three ways in which life can be lived, firstly, a life of pleasure

and enjoyment; secondly, a life of a free and responsible citizen; and thirdly, a life as a thinker and philosopher. Each gives different forms of happiness and need to be balanced in order to live a truly happy life.

Descartes presents Sophie with a very different view of the world. He focuses on what we can know, on the relationship between the mind and the body. Arguing that one should accept nothing to be true, at first one should doubt everything. The only thing to be certain about was one's own existence as a thinking being, contained in the famous notion that 'I think, therefore I am'

Within the novel format Gaarder argues that the role of Philosophy and Philosophers is to help people to see life in a new perspective, the perspective of eternity, but that children can develop their own definition of what is right and wrong, and can find knowledge for themselves. Reality is manipulated within the story and the reader is forced to juxtapose different levels of truth. The original characters of Sophie and a Philosophy Teacher begin as a usual part of a fiction, yet develop an awareness of their status as features of an author's imagination and even try to overcome their predicament drawing the reader into their dilemma.

This dilemma is precisely that at the heart of Deep Ecology outlined earlier posing questions which have a timeless quality, recognising the ways individuals and societies have been affected by change yet pointing out the impossibility of turning back the clock to an earlier stage. Although we cannot become 'primitive' people in some senses, if we can recognise the cultural basis of many of our perceived needs, it

is possible to recapture something of the 'primitive' since that is inside ourselves.

The implications of this view on research methodology need careful attention, focusing on processes which take place within the person has never been an easy matter.

The difficulties are magnified when the person is a child. It may be helpful, however, in attempting to understand the social worlds of children to regard this world as representing a culture which is qualitatively different from adult culture.

These points are noted by Pepper(1989) who states,

> *"we argue and perceive the arguments of others, not in an objective and unbiased way. We have presuppositions, or even vested interest positions that colour our perceptions of the facts....These will be socially or culturally derived and imparted to us via education and socialisation. Anyone who wants to influence us or change our minds will have to understand these presuppositions." [Pepper,D.(1989)p.35]*

Pepper identifies three analytical frameworks which could help to classify the presuppositions underlying the different beliefs about the relationships between human beings and their environment.

The first approach classifies **ideological themes** or 'lines of thought' in terms of an ecocentric/technocentric dimension.

The second approach classifies **explanations of how society works and how decisions are made** on environmental issues,

distinguishing between groups who adopt a Functionalist/Pluralist or a Marxist approach.

The third approach focuses on the **fundamental philosophical positions** underlying the ideas using a determinist/free will framework. Pepper sees these ideas and values as belief systems and arguing positions, and as such form the basis for ecological understandings.

Dealing firstly with the Ecocentric/Technocentric dimensions, Ecocentrism involves a respect for nature for its own sake, rather than merely for its usefulness for man. This relationship involves a type of moral obligation of man towards nature. Nature is seen as being essential for the survival of man, whereas the reverse is not equally true since there would still be purpose and meaning in the continuance of life on the planet even if man did not exist. Man is seen as subject to biological laws which make him part of a biotic relationship with nature.

In contrast the technocentric approach lacks a clear philosophical base, but is described by Pepper(1989) as

> *"a complicated animal...in any conflict between the demands of economic man and environment, ...economic man would win the day...there is no bioethical sense of nature's rights." [Pepper,D.(1989)p.29]*

The second approach distinguishes between groups who adopt a Functionalist/Pluralist or a Marxist explanation of how society works and how decisions are made on environmental issues. This classification was outlined by Sandbach(1980), and described by Pepper(1989) as distinguishing between those who place emphasis on the role of continuous reform of the present system for achieving

social change, and those who argue for the need to overturn the system in order to effect change.

The Functionalist approach sees social problems as

> *"a result of systems imbalance or malfunction. As a result of this, stresses occur and social change takes place in response to them. The stresses arise from the activities and pressures exerted by a plurality of pressure groups, many pursuing their own vested interests. Because society is essentially democratic, each group has opportunities to articulate its position and the resultant socio-economic change will be such as to take account of and perhaps mediate between different positions."*
> *[Pepper,D.(1989)p.30]*

In contrast the Marxist perspective

> *".emphasises the importance of conflict between vested class interests....Marxists see that the ruling classes (capital owners) have the power and means to distort the argument by constraining the influence of the minority who argue against the dominant paradigm, and by curtailing the opportunities of the majority to learn that there is a feasible alternative to the dominant paradigm...in Western economics, dominated by the interests of private capital, more indirect means are relied upon, such as capitalist ownership and control of the press, radio and TV or influence through government on the educational curriculum.....Thus, in the Marxist view, it is pointless to have faith in the power of argument, or to believe ....that if only people knew 'the facts' about man's abuse of nature, then such abuse would stop. For the only people who will listen to the argument are those whose class interests the arguments will serve."[Pepper,D.(1989)p.32]*

This position must also be seen as representing a radically different philosophical position from that of Hegel, mentioned earlier, which stressed the primacy of the realm of ideas.

Marxist philosophers, argue that behaviour determines belief, or more particularly Marx considered that the material processes of production were fundamental in determining individual consciousness. Marx emphasised the importance of praxis, or action, as the only way in which social change could be affected.

> *"Changes in society cannot therefore come merely by appeal to people to change their ideas and values....Changes can come only after changes in the way in which we organise ourselves in economic activity - through changes in the mode of production....What people have to do to keep alive, determines their relationship to nature and each other..."[Pepper,D.(1989)p.35]*

Indeed a central element of Marxist social analysis was the notion that

> *"the ruling ideas in every epoch are the ideas of the ruling class".*

The mechanisms for control of the ideological base of capitalist society form the major thrust of Marx's writings. Describing the ways in which 'false consciousness' is maintained within capitalism, Marx argues that control of the generation and legitimation of beliefs and ideas, limitations on possible world views are imposed. The result is that some perspectives cannot even be imagined.

The third approach focuses on the fundamental philosophical positions underlying the ideas which can be considered using the determinist-free will framework. The determinist end of the spectrum stressing the view that the relationship between man and nature is one in which the environment controls the course of human action

> *"The modern ecological version of the philosophy clearly places man within nature, and as a part of it,*

being dependent on it and subordinate to its laws" [Pepper,D.(1989)p.35]

By contrast a free will philosophy such as the existentialism developed by Husserl, is described by Pepper(1989) as a system of beliefs which emphasised the importance of human intentionality towards the natural world.

> *"If we wish to understand the latter, we can do so only through studying man's intentions towards it and his consciousness of it, rather than by trying to study it as some kind of external set of mechanical objects. If man is not conscious of some parts of the natural environment, then to all intents and purposes those parts do not exist - at least they do not exist for man, and any other order of existence is relatively unimportant. Nature, then, has no value (or 'rights') of its own, without reference to man. Indeed it has no existence without him."[Pepper,D.(1989)p.35]*

These philosophical frameworks can inform the debate about how to shape different eclectic meanings which children construct about their world. In order to make research progress, these concepts and ideas can be used in the construction of appropriate research instruments for use with children.

Summary No.5

In summary, within this sixth section of the review of the literature it has been argued that beliefs about what is right and wrong lies at the centre of any system of values, and that research into children's moral development can help to understand ecological morality. Piaget outlines the stages through which children develop their understanding of rules. Kohlberg extended this framework providing a sequence within which children's moral reasoning can be classified. Shweder identifies the role which adults play in children's moral development through discourse-based representations of a moral universe. The appropriate aim of research then is the role of 'cultural filters' in the development of this moral frame.

One danger in the moral socialisation process is that of indoctrination, the imposition of moral values upon the young, which Barrow argues can be avoided through an introduction to moral philosophy. An attempt to teach philosophy to children has been developed by the Institute for the Advancement of Philosophy for Children at Monclair State College in New Jersey. However, a major hurdle in the adoption of the programme is the lack of funds available for training teachers to run the programme, which can be seen to mirror the situation which Socrates himself attacked when Sophists denied pupils access to knowledge. An alternative approach to philosophical inquiry is presented by Gaarder in his novel 'Sophie's World'. Within the story a child receives a series of postcards which contain a philosophical question for the child to try to answer. The role of Philosophy is shown as helping to provide a

new perspective, and enabling children to develop their own definition of what is right and wrong.

The implications of Gaarder's views are far reaching, focusing attention on internal processes. It may be helpful to regard the social worlds of children as representing a qualitatively different culture from that of adults, and as such requires an examination of the presuppositions underlying the beliefs about the relationships between humans and their environment. Pepper provides three analytical frameworks which may help in the classifications of these beliefs. These are:-

- ideological themes in terms of an ecocentric/technocentric dimension.
- explanations of how society works
- fundamental philosophical positions

Chapter 2

Nature and Purpose of the Research

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Nature and Purpose of the Research

Piaget(1970) outlined an approach to the study of human behaviour which he described as **genetic epistemology**. This is far more than a research methodology, it is theoretical perspective, a world view incorporating Piaget's own background as a Biologist and Natural Scientist.

Within this perspective is the fundamental belief that the foundations of adult views of the world are laid in childhood. It is only by understanding the processes by which meanings are developed by children that adult views can be fully explained. This is what Piaget(1970) described as genetic epistemology involving the view that:-

> *"modes of thought are best understood in the light of their genesis, and in the context they originate and depend on."[Piaget,J.(1970)p.15]*

Thus, in order to understand sophisticated levels of thinking, it is necessary to study the 'birth' of such understanding.

Piaget's work has particular relevance to this present study, both in terms of methodology and the issues being investigated. Piaget began with a focus on the development of cognition, identifying the different stages through which conceptual understanding develops.

The framework of ages and stages has generated considerable research which provides descriptions of how children at different stages understand a range of scientific and environmental concepts. Indeed Piaget himself describes the development of children's understanding of time and place. This work has provided teachers and curriculum developers with a framework within which children can be helped to develop their understanding of these ideas.

How can children be studied?

Piaget's work can be broadly included within a 'constructivist' approach to Psychology which recognises the social construction of the environment referred to in Chapter 1. The world we perceive to be 'real' is acknowledged as a product of our mental activity. Indeed much of Piaget's earlier work was criticised because the application of this epistemological framework which did not conform to traditional scientific approaches.

Alternative perspectives such as these do have important implications for research methodology, as Hockey(1990) points out, the traditional separation of observer from object being studied, researcher from respondent, reflect a specifically Western set of assumptions about the nature of reality as we perceive it, stemming from the two myths identified by Lakoff and Johnson(1980) namely the 'objectivist' and the 'subjectivist' myths.

The belief that perceptions can be separated from the perceiver or the phenomena being perceived has formed the basis of 'scientific' methodology, and has been largely unquestioned for many years.

Bruner(1986) supports this view, pointing out that :

> *"Most of what we deal with in the social world, could not exist but for a symbolic system that brings that world into existence. ...The same can be said as well, though in somewhat different form, for the world of 'nature' for our experience of nature is shaped by conceptions of it formed in discourse with others."[Bruner,J.(1986)p.88]*

A similar point is made by Hockey (1990) who states that,

> *"...in the human sciences, the pretence that the observer is divorced from the thing observed does not accord with the fact that human consciousness and social representations are their ultimate subject matter, and the realities they deal with are the products of inter subjective interactions and conventions created in an open-ended historical process."[Hockey,J.(1990)p.10]*

Bateson(1972) argued that this mechanistic approach originated with the notion of body-mind relations that has characterised Western culture since Descartes. This approach is so wrong that any culture built on it is inherently unstable and liable to move on accelerating paths of self-destruction. For Bateson, the whole system was miswired in such a basic way that it is unusable. He saw the need to concentrate our attention on developing an holistic view of the world, focusing, on

> *"the pattern that connects all living beings in formal similarities of growth and adaptation....To see these patterns you may have to ignore a tremendous amount of superficial diversity."*
> *[Bateson,G.(1972)p.11]*

.Within his attempt to develop an 'Ecology of Mind' he asserted that there is always a frame which conveys a metamessage of some sort, a

message about the message. Bateson proposed that there was a particularly lethal structure to the distortions of our perceptions. He argued that consciousness shaped by purpose, distorts perception in a specific way, making us think that the world works in lineal sequences rather than as complex assemblages of interrelated parts. The parts depend on internal feedback loops of communication to maintain certain truths about themselves.

Pearce(1979) suggests that learning from children themselves is a way forward:

> *"A child can teach us an incredible amount if we are willing to learn, and because s/he is biologically geared to take his/her cues from us, s/he learns as we do....Learning to take our cues from the child and make a corresponding response means learning to heed and respond to the primary process within ourselves as well"[Pearce,J.C.(1979)p.25]*

However, Mead(1970) draws a distinction between three different kinds of culture.

- post-figurative in which children learn from their forebears,
- co-figurative, in which both children and adults learn from their peers,
- pre-figurative, in which adults learn also from their children.

These three cultures require very different ways of thinking.

> *"As I see it children today face a future that is deeply unknown that it cannot be handled as we are currently attempting to do, as a generational change ...I believe that we can, and would do better to apply to our present situation the pioneer model - the model of first-generation immigrants into an unexplored and uninhabited land. But for the figure of migration in*

space (geographical migration) I think we must substitute a new figure, migration in time. Within two decades 1940-60 events occurred that have irrevocably altered man's relationship to other men and to the natural world. ...Today, suddenly...young people everywhere share a kind of experience that none of the elders every have had or will have....Today's children have grown up in a world their elders never knew. "[Mead,M.(1970)p.60]

However, it is also necessary to recognise the needs of the developing child if this reciprocal learning is to take place.

Most importantly LaChapelle(1988) points out that children need to develop basic trust. She argues that the narrowly human (anthropocentric) outlook of our culture make this task very difficult, so we need to ensure that children are included in what she refers to as 'the story'.

Reflections on Research Methodology

In focusing on the culture of childhood a suitable framework for understanding the differences in these different cultural groups, may be provided within what Shweder(1991) describes as Cultural Psychology. This begins with the assumption that when people live in the world differently, it may be that they live in different worlds, and that we have no neutral place in which to stand in order to study these worlds. This approach presents an epistemological stance which is in line with the spirit of Deep Ecology and Existentialism both of which lead to fundamental questioning of the nature of knowledge and of truth. This questioning in turn suggests the need for radically different research methodology.

Support for such changes of paradigm which would focus concern on everyday social interaction, and the ways in which social reality is constructed within social discourse can be found in the theoretical approach outlined by Berger and Luckmann(1980), who state that:

> *"the sociology of knowledge is concerned with the social construction of reality...The sociology of knowledge must concern itself with everything that passes for 'knowledge' in society...the sociology of knowledge must first or all concern itself with what people 'know' as 'reality' in their everyday non or pre-theoretical lives...The phenomenological analysis of everyday life, or rather of the subjective experience of everyday life refrains from any causal or genetic hypotheses, as well as from assertions about the ontological status of the phenomenon analysed."[Berger & Luckmann(1980)p.4]*

This leads to adopting a very different methodology to traditional social science research, in line with the notion of a **'cultural filter'** Jeans(1974) referred to in Chapter 1.

For instance, as Hockey(1990) describes how the traditional means of ensuring 'objectivity' is to eradicate the link between researcher and researched. This can be achieved through the use of pre-determined sets of questions or the use of extensive sampling by large groups of assistants. Instead of which Hockey(1990) suggests that the researcher begins developing their own awareness of their cultural context, so that the significance and the implications of their personal responses can be understood and used in subsequent interpretations. Advocating that researchers pay attention to the traditional, structured and creative metaphoric concepts through which human beings think and act, so as to understand their experiences. Without such an awareness, the fluidity of the social world which is created and re-created through the participation of its individual members can be lost in the static depersonalising categories of the power holders who seek to control and to create order in politically and economically competitive Western societies.

Hockey(1990) argues that these categories take the form of myths within which thought and language is seen as a fixed response to the world. These myths disguise the effects of our inherited culturally-specific constructs through which we think and act .

> ."*Time, for example, although now understood to be amenable to measurement and therefore to have fixed qualities, is nonetheless open to a whole range of alternative metaphoric frames. This, of course, is reflected in the very different ways in which individuals may experience time. ...that experience stems from the*

particular, systematic metaphors which inform the thought of that individual." [Hockey,J.(1990)p.9]

The potency of metaphoric concepts for giving shape to what we experience as 'reality' is supported by Lakoff and Johnson(1980) who see this as one of the ways in which people in power impose their version of 'reality on those in a weaker position. One useful indicator of this imposition is the jokes which are told, and which reveal something of the relationships of power.

Hockey(1990) suggest that the language used unthinkingly by researchers or other participants may take on a whole new set of meanings to the ears of those who appear to share the same world, yet whose experienced reality is significantly different. The meanings are not fixed, but are embedded within and arise from different lived contexts.

"for example "I'm sick to death of this wet weather", "I'd better run along now". " I see what you mean" - the elderly, the blind or criminal person may be acutely aware of the literal rather than figurative meaning of such a turn of phrase.. Similarly, for those whose life within a specific context is dwindling rapidly the meaning of a hitherto 'shared' language such as in the phrase ."Never say die" can be dramatically transformed." [Hockey,J.(1990)p.16]

In order to overcome these difficulties Hockey(1990) suggests that the researcher should adopt what she terms 'learned ignorance" or lack of awareness in order to develop an account of a group's metaphoric system, the processes and sources from which their cultural style derives. This involves questioning and exploring the pre-conceptions of familiar social categories, engaging in a 'learning process'

> *"...human experience and the ways in which that experience is made meaningful, arise out of the constructs or metaphors which are particular to the individual's own society or social context. This point has crucial implications for the methods of social research, in that the fieldworker too can experience and interpret what she observes only through recourse to her own set of metaphors....an underlying metaphoric system can be approached only as it manifests itself in action, event or utterance in the here-and-now. As a result, fieldwork requires the conscious immersion of the researcher within the unfolding daily lives and deaths of informants. " [Hockey, J.(1990)p.26]*

This present study begins with the acknowledgement of the issues raised within these varying approaches which can be seen as providing a research framework for studying children's cultural filters. The main features of this framework are summarised below.

- Concentrating attention on children, as suggested by Piaget.
- Adopting a constructivist framework.
- Recognising the importance of the patterns of interconnections which link all living beings.
- Highlighting the lack of a neutral vantage point from which to study these patterns.
- Considering the metaphoric concepts which shape our reality

In line with this approach It has to be recognised that studies within this framework do not apply the traditional criteria for reliability and validity. As Pollard(1985) points out:-

> *"Knowledge about school and classroom processes based on this type of research develops mainly through the accumulation of case studies. It thus has an inherently weak claim to generalisability, but a strong claim to a type of internal validity which comes*

from the detailed, holistic study of particular social situations. By its very nature it is also largely dependent on subjective and qualitative sources of data rather than on objective and quantitative ones. For these reasons it is not appropriate to suggest that such work produced verified accounts; more realistically and positively the emphasis should be placed on the capacity of this type of work to generate theoretical models." [Pollard,A.(1985)p.xi]

In the present study the children involved in the investigation are in no way 'representative' of British children of their age. Indeed, in many ways they could be classified as decidedly unrepresentative.

Even within the more traditional approaches concerns with representativeness pose particular problems for educational research especially in this era of the local management of schools. The increased autonomy of schools effectively reduces their commitment to involvement in County-wide research access.

Prior to these changes it was possible to obtain a blanket authority from the Local Education Authority to conduct research within their boundaries. It is now necessary to approach individual Head teachers, who are the sole arbiters of the decision to allow research within their school. This is bound to make access to children in schools for research much more difficult and places severe practical difficulties on researchers who would wish to adopt traditional research approaches. This was certainly the experience with the present study. It must be recognised that there will be many different reasons why many schools will be unable or unwilling to co-operate with research activities. Once again, it does seem that the effects of the implementation of the National Curriculum cannot be underestimated.

This present study will adopt a 'cascade' or snow-ball' approach to data collection. This approach involves a series of data collection exercises in which each stage builds on the findings of the earlier stage.

A major advantage of this approach for the present study is that the traditional need for large 'representative' samples becomes less important. The major focus becomes a concentration on the opportunities for triangulation. Triangulation is described by Cohen & Manion (1989) as,

> *"the use of two or more methods of data collection in the study of some aspect of human behaviour...in an attempt to map out or explain more fully, the richness and complextity of human behaviour by studying it from more than one standpoint."(Cohen,L. & Manion,L.(1989)p.269).*

They identify two of the main advantages of triangulation as, firstly; the avoidance of 'method-boundness' in which researchers become over-committed to one research methodology, and secondly;

> *"research methods act as filters through which the environment is selectively experienced, they are never atheoretical or neutral in representing the world of experience. Exclusive reliance on one method, therefore, may bias or distort the researcher's picture of the particular slice of reality he is investigating."(Cohen,L. & Manion,L.(1989)p.269)*

Since the focus of the present study is the cultural filters of chidren, it is especially important that due attention be given to the effects of such filters on the researcher. The use of triangulation will be one of the ways in which these filters can be taken into account, and further

details on the precise ways in which this has been applied will be outlined in Chapter 3.

It is evident that data cannot be collected without the influence of existing presuppositions stemming either from the individual researcher's perspective, or from established theory. The dangers of abstract empiricism are well accepted, and indeed implicitly recognised by Glaser and Strauss(1967) who state that the source of certain ideas may come from sources other than the data.

In the present case the review of the literature contained in the earlier chapter has established a range of issues which have been identified as important and relevant areas for investigation. This can be seen as the frame of reference from which the process of research begins, and as such provides a clear indication of the presuppositions which are often hidden within more traditional research methodology.

What issues are to be investigated?

As stated in Chapter 1, this study will examine elements in children's **cultural filter** in order to understand some of the ways in which children perceive their environment, which, in turn, influence their choices and behaviour.

Within this study, therefore, the starting point will be on listening to what children say about ecological issues in order to understand why they say and believe those things. By uncovering these different beliefs it might be possible to identify the structure of values which underpin those belief systems.

The following issues have been taken from those raised within the earlier review of the literature to be important aspects within the value structure underlying children's perceived environment, and therefore influencing what children understand about ecological issues.

These issues will be taken as the starting point of the investigation:-

- how to judge what is right and wrong
- how to determine what is true and what is false
- how to ensure basic survival
- what and how to teach the next generation.

As well as ideas about :

- the relationship between human beings and nature
- an ideal world - Utopia
- the nature of reality

Chapter 3

Research Methodology

Chapter 3

Research Methodology

The recommendations of Cohen & Manion(1989) with regard to triangulation provided a framework for the empirical investigation of the cultural filters used by the children studied. They outline six principle types of triangulation which can help researchers to explore some of the complexities of human behaviour. These are:-

1 *Time triangulation: this type attempts to take into consideration the factors of change and process by utilising cross-sectional and longitudinal designs.*
2 *Space triangulation: this type attempts to overcome the parochialism of studies conducted in the same country or within the same subculture by making use of cross-cultural techniques.*
3 *Combined levels of triangulation: this types uses more than one level of analysis from the three principal levels used in the social sciences, namely, the individual level, the interactive level (groups), and the level of collectivities (organisational, cultural or societal).*
4 *Theoretical triangulation: this type draws upon alternative or competing theories in preference to utilising one viewpoint only.*
5 *Investigator triangulation: this type engages more than one observer.*
6 *Methodological triangulation: this type uses either (a)the same method on different occasions, or (b)different methods on the same object of study.*

[Cohen,L.& Manion,L.(1989)p.272]

Four of these types of triangulation were adopted within the present study, details of which are identified in Table 3.2.

Five stages of data collection were completed and these are outlined in Table No.3.1 below. The children's responses to these activities are included in Chapter 4 of this study.

In each stage of data collection the focus was on some of the issues raised within the review of the literature in Chapter 1. These issues were identified as important aspects within the value structure underlying children's perceived environment, and therefore influencing what children understand about ecological issues.

TABLE NO.3.1

SUMMARY OF DATA COLLECTION ACTIVITIES

Stage No.	Activity No.	Type of Activity	Data Collector	Respondents	Context
1	1.1	Written questions following reading of a fairy story.	Student Teachers	Children aged 6 to 10	Classrooms - 3 schools in Nottinghamshire.
1	1.2	Written questions following reading a story about Hartley Bear.	Student Teachers	Children aged 6 to 10	Classrooms - 3 schools in Nottinghamshire.
1	1.3	Written account of what they think is wrong with the world.	Student Teachers	Children aged 6 to 10	Classrooms - 3 schools in Nottinghamshire.
2	2.1	Non-participant observation of classroom activities	Researcher	30 children aged 10-11	Classroom in Nottingham
2	2.2	Participant observation of orienteering tasks	Researcher	30 children aged 10-11	Outdoor Pursuits Centre,Nottingh amshire
3	3.1a	Interviews	Researcher	6 children aged 10-11	Staff Room in School
3	3.1b	Interviews	Class Teacher	6 children aged 10-11	Class room at lunch time
3	3.2a	Interviews	3 teams of 2 children	fellow pupils in their class	Various locations around school - Nottingham
3	3.2b	Interviews	3 teams of 2 children	fellow pupils in their class	Classroom at lunchtime - school in Sussex
4	4.1a	Individual written accounts of 'My Ideal World"	Researcher	30 children aged 10-11	Staff room - school in Nottingham
4	4.1b	Individual written accounts of 'My Perfect World'	Class Teacher	30 children aged 10-11	Classroom - school in Sussex
4	4.2	Group account of 'Our Ideal World'	Researcher	30 children aged 10-11 in groups of 6	Staff room - school in Nottingham
4	4.3	Whole class account of 'Our Class Ideal World'	Researcher	30 children aged 10-11	Classroom - Nottingham
4	4.4	Group account of things which have to change to enable our Ideal World to happen	Researcher	4 groups of 6 children	Staffroom in Nottinghamshire
5	5	Individual responses to a pill which stops you dying	University Students	30 children aged 10-11	Seminar room - University Campus

Table 3.2Triangulation

No.	Description of Activity	Type of Triangulation	Explanation
	Written questions following the reading of :	**Space triangulation**	Each of these activities was carried out in a different school, with children from a variety of sub-cultural backgrounds.
1.1	a fairy story		
1.2	Hartley Bear Story		
1.3	stimulus 'what's wrong with the world'		
2.1	Non-participant obs.		
3.1b	Interviews		
	Written questions following the reading of:	**Combined levels of triangulation**:-	Each of these activities was carried out with varying numbers of respondents.
1.1	a fairy story	Individual response	
1.2	Hartley Bear Story		
1.3	stimulus 'what's wrong with the world'		
3.1a	Interviews		
3.1b	Interviews		
3.2a	Interviews		
3.2b	Interviews		
	Individual written accounts		
4.1a	"My Ideal World		
4.1b	'My Perfect World'		
5	A Pill to Stop Dying		
4.2	Group Ideal World	Small group response	
4.4	What will have to change for Ideal World		
4.3	Class Ideal World	Large group response	
	Written questions following the reading of	**Investigator triangulation**	Each of the following activities was completed by different investigators, including 6 pairs or children, 3 in Nottinghamshire and 3 in Sussex.
1.1	a fairy story	Student teachers	
1.2	of Hartley Bear Story		
1.3	of stimulus 'what's wrong with the world'		
2.1	Non-partipant observation	Researcher	
2.2	Participant observation		
3.1a	Interviews		
	Individual written accounts		
4.1a	"My Ideal World		
4.2	Group Ideal World		
4.3	Class Ideal World		
4.4	What will have to change for Ideal World		
3.1b	Interviews	Class Teacher	
4.1b	'My Perfect World'		
3.2a	Interviews	Child Interviewers	
3.2b	Interviews		
5	A Pill to Stop Dying	Unversity Students	

1.1 1.2 1.3 5 2.1 2.2 3.1a 3.1b 3.2a 3.2b 4.1a 4.1b 4.2 4.4 4.3	**Methodological triangulation** Written responses, following a story/questions/ stimulus Non-participant observation Participant observation Interviews Story writing Production of a small group account following discussion Production of a large group account following voting	The following activities involves the use of different methods on different occasions, and different methods on the same respondents.

Stage 1 - Data Collection

Stage 1 of the data collection activities focused upon the issue of how to determine what is true and what is false As well as Ideas about :

- the relationship between human beings and nature
- the nature of reality

This stage of the data collection involved the provision of a research pack to one cohort of B.Ed students for use in their teaching practice schools (**Appendix A**). Students were requested to read two stories to the children, followed by a series of questions, and to ask the children to write a story about what is wrong with the world and how to put it right.

The first of the stories was an extract from 'The Nightingale' by Hans Christian Andersen, in which a clockwork Nightingale is compared with a real bird. The story raises issues of morality in terms of the captivity of a bird, and values since the clockwork bird is made of gold and may be thought to be worth more than a live bird. Attitudes to technology are also involved since the clockwork bird represents an attempt to produce a mechanical singing bird.

The second story was written by the researcher and involved the adventures of a Teddy Bear, chosen in order to take account of the studies reported by Donaldson(1978 p.64) in which the intervention of

respond in human-like ways. The story raises many issues such as those of truth and falsity, the nature of reality, the differences between animals and humans.

The third activity involved children responding to the stimulus starting point of a story about 'What's wrong with the world, and how to put it right'. The intention with this task was to collect data on children's perceptions of the type of problems facing the world, and ways in which these can be dealt with. These activities are summarised in Table No.3.3 below.

TABLE NO.3.3

STAGE 1: DATA COLLECTION ACTIVITIES

Activity No	
1.1	reading an extract from the fairy story by Hans Christian Anderson, The Nightingale, to the children, followed by questions Intended to explore children's views on the differences between real and clockwork animals, and to consider some of the children's attitudes towards technology.
1.2	reading a story about Hartley Bear, a Teddy Bear who flies to Africa, to the children, followed by questions Intended to explore children's perceptions of reality and fantasy.
1.3	required the children to write about what they think is wrong with the world. Intended to explore children's concerns and their perceptions of the need for social change.

Stage 2 - Data Collection

Stage 2 of the data collection activities focused on the following issues:-

- how to judge what is right and wrong
- how to determine what is true and what is false

As well as ideas about :

- the relationship between human beings and nature
- the nature of reality

The introduction of a Post-Graduate Course leading to an M.Ed in Environmental Education, within the researcher's Institution, provided access to a Primary School in the north of Nottinghamshire. The class teacher enrolled on the course was able to provide permission for the children in her class to be involved in research principally because of her own commitment to Environmental Education. However, this commitment in itself could be seen to have an influence on the responses which the children from her class are likely to make.

The researcher was thus permitted to become involved in the activities of a class of Year 5 and 6 children, aged between 10 and 11 years old in a small Primary School on the northern boundary of Nottinghamshire.

Initial contacts took the form of non-participant observation; the researcher adopted a 'fly on the wall' approach, recording behaviour within the classroom, focusing particularly on the issues and ideas

identified above, and becoming familiar with the routines and culture of the group.

However, children do not permit any adult to remain a non-participant for very long, and the researcher was inevitably called upon to increase participation as the children became familiar with her presence. This increased involvement took the form of several outdoor activities linked to Environmental Education issues during which the researcher worked with groups of children as part of the Nottinghamshire Trail Blazer Scheme some of which are described in more detail in Chapter 4. These activities included developing orienteering skills at an Outdoor Centre, and participating in a nature walk through the local countryside

Table No.3.4

Stage 2: Data Collection Activities

Activity 2.1	Non-participant observation of classroom activities
Activity 2.2	Participant observation of Environmental Education activities

Stage 3 - Data Collection

In Stage 3 of the data collection activities the focus was on ideas about the relationship between human beings and nature, and the nature of reality The main issue explored was how to judge what is right and wrong.

The categories identified by Pepper(1989), outlined in Chapter 1 provided the starting point for the questions used to investigate whether children's thinking could be classified into the two broad categories , that is,

- technocentric in which man is seen as apart from nature, the aim of which is to control nature via technology which will ultimately enable man to overcome the environmental dilemmas which have been created.

- ecocentric in which man is seen as part of nature.

In order to minimise the effects of an adult questioner, two groups of children were asked a series of questions, and these children then asked their class mates the same questions.

A similar method to that adopted by Pollard(1985) was used. Pollard was also concerned to understand the children's perspectives, and recognised that this required the use of a way of collecting data which minimised the possible distorting effect of being seen as a teacher. As Pollard explains:

"the key procedure which I adopted of working with a team of child interviewers. .After a period in which confidence and trust developed I became more involved and worked alongside the child interviewers. Interviews were recorded on cassettes and later transcribed. The children also discussed many elements of my analysis with me as it emerged."[Pollard,A.(1985)p.57]

In this study two different schools were used. In the first school in a small semi-rural village in Nottinghamshire, the children worked with the researcher on the production of an Environmental Newspaper which enabled them to develop interviewing skills, and to learn how to use tape recorders effectively. The group met in the Staff Room each week.

After completing work on the newspaper, the meetings continued. The purpose of the meeting was for the children to help in finding out what they and other children think about the world. The children's work.then focused on interviewing other children about their views on the environment

The second group of children, in a suburban school in Surrey, worked with their class teacher in lunch breaks in a similar pattern.

In the first school 6 children aged 10 years old were interviewed by the researcher In the Staff Room of their school, and their responses were recorded on a tape recorder and then transcribed. In the second school

the class teacher interviewed 3 children aged 10 years old in their classroom, once again the responses were recorded and then transcribed.

Each interview began with the following words:

> " I want to ask you about some of your views to help me in my work at the University. There are no right or wrong answers. I want to know what you really think. No-one else will know what you have said, just you and me. You don't have to answer if you don't want to do it. I'd like to begin by talking about animals."

The questions focused upon the following relationships:-:

- between human beings and animals - questions 1-13
- between human beings and trees and plants - question 14 - 15
- between children - question 25
- between children and parents - questions 16 -19, 26 & 28
- between children and teacher - question 20 & 27
- whether there was anyone exempt from rules - question 21

Four moral dilemmas were posed

Kohlberg's 'Heinz' dilemma - question 29

two pollution dilemmas - questions 22 & 23

a dilemma focusing on litter - question 24

A hypothetical situation was posed in which a large amount of money was won in a competition. - question 30

The full interview schedule is set out in Table No.3.5 (copy included also in **Appendix B**)

TABLE NO.3.5

1.	Do you think it's all right to eat animals? Can you tell me why?
2.	Do you think it's all right to kill animals? Can you tell me why?
3.	Do you think that hunting is all right? Can you tell me why?
4.	What if someone wanted to try out a new medicine on an animal to see if it was safe before they tried it on a person, is that all right? Can you tell me why? What if they thought that the medicine might hurt the animal cause it pain - is that all right?
5.	What if they were making a new sort of soap from a dangerous chemical, they think it is not harmful but want to try it out on animal - should they? Can you tell me why?
6.	Lots of chickens are kept in battery farms, in a very small space, not allowed to go outside or to see the daylight is that all right? Can you tell me why?
7.	Have you heard about people who break into farms where they think hens are kept in batteries, and other animals are kept in bad conditions - is it all right for them to do this? Can you tell me why?
8.	Can you think of some ways in which animals are like humans?
9.	Can you think of some ways in which animals are different from humans?
10	Are some animals more like humans than other animals? which?
11.	Are some animals not like humans at all?
12	Can animals think? How do you know?
13	Can animals feel emotions, can they feel happy, sad, angry and so on? How do you know?
14.	Can trees and plants think? How do you know?
15.	Can trees and plants feel happy, sad, angry and so on? How do you know?
16	Are there any rules you have to keep at home, are there some things which you are NOT allowed to do? Can you tell me what they are? Can you tell me why you are not allowed to do that?
17	Would you ever do anything you were not allowed to do? Can you tell me what? Can you tell me why? What should happen if you were caught?
18	Are there any things which you think it is wrong to do even if you are allowed to do it? Can you tell me what? Why?
19	Are there any things your parents are not allowed to do? What? Why? What should happen if they were caught?
20	Are there any things your teachers are not allowed to do? What? Why? What should happen if they were caught?
21	Is there anyone who is allowed to do anything they want? Who? Why?
22	A little while ago there was a story on the news about a large ship - a tanker filled with oil which was caught in a storm he was taking great care so it wasn't his fault, but the ship sank and all the oil spilled out onto the sea and was carried onto the beaches. It cost a lot of money to clean up all the oil from the sea - who should pay for it? Why
23	A factory making computer games is polluting the river with chemicals it uses to make the games, but if they stop putting

the chemicals in the river they will have to charge more for the game. Children won't be able to afford them - What should they do? Why?

24. Two children both drop litter in the street
The first child did it by accident - the wind caught the crisp packet before she had a chance to put it in the bin. The second child did it on purpose, she didn't agree that litter should go in bins. There is a fine of £10 for anyone caught dropping litter. Should both children be fined? Why?

25 If one of your friends does something wrong, can you do anything about it? What?

26 If one of your parents does something wrong can you do anything about that? What?

27 If one of your teachers does something wrong, can you do anything about that? What?

28. A ten year old child wanted to go camping with the school very much. The family couldn't afford it but said she could go if she saved up the money. So the child worked really hard, did any odd jobs she could get to save up the money. Just before the holiday the parents changed their minds. they told the child to give them the money she had saved so that they could take a trip themselves . The child didn't want to miss the camping trip so she thought about saying no to her parents and not giving them the money. Should she give the parents the money? Why?

29. A child was very ill. There was only one medicine the doctors thought would stop her from dying, but it was very expensive to make so the parents would have to pay for it themselves. They told the chemist that their child was dying and they had no money to pay for the medicine, they asked him to sell the medicine cheaper, or to let them pay for it later. The chemist said no, The parents were desperate and broke into the shop and stole the medicine for their child. Should they have done that? Why?

30. Imagine you have won a lot of money in a competition like the National Lottery, what would you spend it on? What would you do with it?
You've done all that, but still have some money left. You decide to give it away to do some good. Which ONE of these charities would you give your money to?
a charity which helps children
a charity which helps animals
a charity which helps old people
a charity which feeds people who have no food and are starving
Why?

Following the interviews, the children who had been interviewed by the researcher in Nottingham or the teacher in Surrey, worked in pairs asking the same questions of the other children in their own class and one other class of children aged between 8 years old and 9 years old. All the replies were tape recorded, and then transcribed. This provided a total of 62 individual responses. Table No.3.6 outlines the age and sex composition of the total sample.

TABLE NO.3.6

AGE AND GENDER COMPOSITION OF THE RESPONDENTS

BOYS	GIRLS	AGE	TOTAL
9	1	8	10
6	6	9	12
11	20	10	31
2	7	11	9
28	34		62

TABLE NO.3.7

STAGE 3: Data Collection Activities

Activity	
3.1a	Interviews by Researcher of 6 children in Nottinghamshire
3.1b	Interviews by Class Teacher of 6 children in Sussex
3.2a	Interviews by 6 children in Nottinghamshire of their classmates
3.2b	Interviews by 6 children in Sussex of their classmates

Stage 4 - Data collection

Stage 4 of the data collection activities used the framework of the Utopian tradition referred to in Chapter 1, in order to obtain the children's ideas about what they regarded as an ideal society. This research activity represents another attempt to minimise the distorting effect of adults collecting data from children by providing as open a context as possible.

Children in the school in Surrey were asked to write whatever they wanted under the title 'My Perfect World'. The title was written on the blackboard and the children were given no further instructions. They were told that their writing would be posted to the researcher for whom they had answered the interview questions earlier.

It had been intended that both groups of children would complete the same task, but the title of the activity became changed slightly in the gap between planning and execution. This does create a certain ambiguity, and raises the issue of comparability. Whether the title 'My Perfect World' leads to similar accounts to the title 'My Ideal World' can be an additional consideration in the analysis of the children's responses.

The task was completely voluntary, yet each child in the class, 25 in all, did complete it.

The children in the Nottingham school completed a series of activities within a Utopian framework. These are summarised below.

Activity No 4.1:

In the staff room of their school 5 groups of 6 children, totalling 30 of the children who participated in the interviews, were asked by the researcher to imagine that they could make the world any way they wanted it to be, it could be their own ideal world, and they were asked to share this with the researcher. They were told to write this in any way they wished, and they could make the world just whatever they wanted it to be. They could write this in the staff room or in the classroom, but they were asked not to talk about their ideas just to write them down, as we would talk about it later.

All of the children decided to write their accounts in the staff room.

Activity No.4.2

In the staff room of their school each of the 5 groups of children were asked to produce a group account of their Ideal World. The researcher suggested that they begin by discussing their individual accounts of their ideal world, and then decide which ideas they wanted to include in their group's Ideal World. Each group used voting to decide which items they agreed upon, and all accepted unanimity as being the fairest system of decision-making. Even when one member of a group continuously disagreed with the rest of the group, no group would accept majority voting as being fair or just.

Activity No.4.3

The whole class was involved in the next stage of the research activity in their own classroom. Each group was given a copy of the ideal world produced by all the other groups. The research introduced the task by explaining that they had to produce a Class Ideal World, and could decide how they would do this. The children decided to continue with the unanimous voting system used in activity number two. Each group voted on each item. The researcher recorded only the items which received everyone's vote.

Activity No.4.4

The next stage required children to place their ideal world within a realistic context by considering how the actual world would have to change in order to achieve their wishes.

TABLE NO.3.8

Stage 4: Data Collection Activities

Activity	
4.1a	Children's individual accounts of 'My Ideal World' (Nottinghamshire)
4.1b	Children's individual accounts of 'My Perfect World' (Sussex)
Activity 4.2	Groups of children producing a group account of 'Our Ideal World'
Activity 4.3	Whole class producing 'Our Class Ideal World'
Activity 4.4	Small groups producing a list of things which have to change to enable 'Our Ideal World' to happen

Stage 5 - Data collection

Stage 5 of the data collection activities focused on the issues concerned with basic survival, and what to teach the next generation, as well as ideas about the relationship between human beings and nature.

Following over a year of weekly visits to the same school in Nottingham, in which the children had been the most co-operative of participants in the research process, it seemed appropriate to end the investigation with an activity which they would see as a reward for their help. The children knew that their work was for the University, and I invited them to visit the campus.

The Faculty of Education funded the visit as part of an undergraduate module on Social Understanding. The day was divided into two elements. In the morning the children were asked to share their experiences of Environmental Education with the students, as visiting experts five groups of six children formed groups to teach the students about each environmental area within the school. The five groups were:-

TABLE NO.3.9

ENVIRONMENTAL GROUPS

Area of responsibility	Task involved
Infant Courtyard	Maintenance of goldfish pond
	Feeding 'Goldie' the goldfish and her offspring
	Weeding the garden next to the pond
	Pruning the tree when necessary
	Sweeping the courtyard
Greenhouse	Watering plants
	Feeding plants
	Planting and watering seeds
	Re-potting plants as necessary
	Tidying and cleaning greenhouse as necessary
Patio Herb Garden	Weeding the garden
	Watering the herbs
	Sweeping the patio
Wildlife pond	Checking the water level of pond, reporting any leakage
	Weeding and maintenance as necessary
Classroom plants	Watering plants kept in the classroom
	Feeding the plants as necessary
	Re-potting when required

The children had prepared activities for the students to complete in order to 'test' their understanding, and evaluated each student group in terms of their behaviour and understanding. Both students and children participated in the activities wholeheartedly, and the University

seminar rooms came alive with the buzz of questions and answers, laughter and interest.

At lunch time the students took responsibility for the children providing a guided tour of the campus, including visits to the library, a lecture theatre, the gym, and culminating in a game of football.

In the afternoon the roles were reversed and the children became the 'subjects' for the students to investigate. The module Social Understanding included an introduction to the theories of Piaget, Bruner and Kohlberg, but the implications of these theories for understanding children's behaviour presented the students with enormous difficulties. Although the activities were carried out in a spirit of good humour the level of preparation and understanding displayed by the children was not matched by the students.

Each group of students had been asked to plan a series of tasks which would enable them to assess the levels of development reached by each child in line with Piagetian and/or Kohlberg's framework, and to leave a ten minute slot at the end of their activities to complete a separate task for my own research.

In fact students were unable to devise suitable tasks for the children, finding the move from description of a theory to verification a larger step than anticipated. All the students used only the research task prepared for this present study. The task investigated whether the views expressed by Mary Catherine Bateson(1984) outlined earlier, namely that:-

"We will live at cybernetic peace with our environment only when we can acknowledge our own death...Western individualism breaks up the circuits - the circuits of birth and death."[Bateson,M.C.(1984)p.54]

actually applied to children.

The children were asked to imagine that a pill had been invented which could stop them from dying. They were asked if they would take this pill, and how things would be different as a result of the invention.

TABLE NO.3.10

Stage 5: Data Collection Activities

Activity 5	Individual responses to a pill which would stop them from dying.

Chapter 4

Children's Responses to the Data Collection Activities

Chapter 4

Children's Responses to the Data Collection Activities

This section will present an account of the children's responses to the five stages of data collection activities. It will be appreciated that it has been necessary to summarise these responses but, for the interested reader, full outlines of the data are contained in **Appendix D.**

Research Activity No.1.1

This involved student teachers in firstly reading an extract from the fairy story by Hans Christian Andersen 'The Nightingale' (see **Appendix A**) to children in the classes in which they were conducting their teaching practice. The students then asked the children the following questions:-

1. which bird was better?
2. why was it better?
3. was it right to keep the bird?
4. why?

The children's responses indicate that the majority thought the real bird was better than the clockwork bird, only two chose the bird made of gold.

Reasons for these choices focus on the limitations of the clockwork bird, although the two respondents who chose the gold bird did so because it was clockwork.

None of the children thought it was right for the bird to be kept in the Palace. However, perhaps of more significance in this case were the reasons given for this belief. A wide range of complex issues were cited, such as that of fairness, the need for freedom, the cruelty in denying freedom, and the bird's need for flight as reasons for their belief.

Two children used the concept of a 'wild' bird, indicating awareness of some of the difference between 'tame' animals and 'wild' ones.

Seven of the children identified the rights of the bird for freedom and one child linked the bird's rights with human rights.

Details of the pupil responses to this activity are set out in Table No.4.1

TABLE NO.4.1

PUPIL RESPONSES TO ACTIVITY NO.1.1

Pupil	which bird was better?	why was it better	was it right to keep the bird?	why?
1	real one	better voice	no	shouldn't be in a cage
2	real one	more realistic	no	alive like us should be free
3	real one	real and could fly	no	birds have to be free
4	real one	didn't break down	no	didn't have proper life
5	real one	didn't break down		not allowed d to fly
6	real one		no	it's a wild bird
7	real one		no	
8	real one	not real		it's a wild bird
9	real one	sounded better	no	needs its freedom
10	real one	sounded better		needs its freedom
11	real one			not fair
12	real one			not fair
13	real one	the other one broke down	no	should be able to fly
14	real one	the other one broke down		
15	real one	it's the truth	no	birds like to be outside
16	real one	it's the truth		birds like to be outside
17	real one			it was artificial
18	real one			
19	gold one	it was clockwork		
20	gold one	it was clockwork		
21	real one	other one not real		it had no room
22	real one	other one not real		it had no room
23	real one	robot couldn't sing	no	cruel
24	real one	robot couldn't sing	no	cruel

Research Activity No.1.2

This involved student teachers in reading the story of 'Hartley Bear' (see **Appendix A**), and asking the following questions:-

1. Is the story true?
2. How do you know that?
3. How can Hartley Bear prove his story is true?

Only seven of the children thought that the story was true, the other children clearly recognising that the story was not true.

The reasons for the answers, however, do reveal differences in the children's thinking, several children clearly point out that stories are 'made up', and others chose aspects of the story which indicated it was false, such as the fact that statues cannot talk, lions can't fly and bears can't talk or fly.

Child number 5, however, reveals an acceptance of the truth of the story and an identification of the character of Hartley as truthful, and child number 27 believes the story to be false because of the bear's untruthfulness!

With regards to ways in which Hartley could prove his story to be true seven children believed that there was no way in which this could be done, even though two of these same children thought the story was true. Most of the children stated that Hartley should show Little Ted the statues and/or take him on a similar trip in order to prove the truth of the

story. One child suggested the use of a camera to provide evidence. However one child revealed some misconceptions about the ways in which truth can be established by suggesting that a vote could be used. Details of the children's responses are set out in Table No.4.2.

TABLE NO.4.2

PUPIL RESPONSES TO ACTIVITY NO.1.2

Pupil	Story true? yes	Story true? no	How do your know?	How prove the story true
1		no	statues can't talk	go see if statues there
2	yes		don't know	show him how he got there
3		no	someone made it up	
4		no	sounds like he made it up	carry a camera
5	yes		he wouldn't lie	take them show them
6		no	lions can't fly	he went to Kenya
7		no	lions can' t fly	toys can't talk
8	yes		it's true	show them
9	yes		because it is	he can't
10		no		he can't
11		no		he can't
12	yes			
13		no	because they can't talk or fly	
14		no	lions can't fly bears can't talk	he can't
15		no	lions can't fly	he can't
16		no	they can't talk or fly	
17	yes			he can't
18		no	they can't talk or fly	
19	yes		because it's true	have a vote
20		no	lions don't fly	
21		no		
22		no	I've been to Clifton Hall	show them
23		no	bears can't fly	take them to Kenya
24		no	bears can't fly,read or write	take them to Kenya
25		no	animals don't fly	take them to Kenya
26		no	I've been to Clifton Hall	show them
27		no	he always lies to him	take them there
28		no	Ive been to Clifton Hall	show them
Total	7	21		

Research Activity No.1.3

This involved student teachers in asking the children in their class to complete a story about "What's wrong with the world, and how to put it right."

The list of issues outlined in Table No.16 below illustrates that the children were aware of a wide range of environmental issues. They were less clear about how these issues could be put right, and many children did not suggest any solutions.

The following are examples of the few responses which did address this issue:-

"We could help if we didn't kill and poison the world."
"I ask Mum to throw bread out to the birds."
"When I eat meat I shudder because it's a dead animal. I almost say to Mum that I want to be a vegetarian. I am very lucky to be me."
"Throw guns away and stop people polluting the world."

Perhaps the most poignant was the following response:

"I want to do something about it but I can't until I'm grown up, but then it will be too late."

TABLE NO.4.3

RESPONSES TO DATA COLLECTION ACTIVITY NO.1.3
WHAT'S WRONG WITH THE WORLD

Pollution
Killing animals
Killing plants and trees
People not getting enough food
Selfish government shooting down the food sent to feed the hungry
Stop cutting down the rain forest
Stop hunting
People who call other people names who are not like them
Stop throwing litter
Stop taking drugs
Stop killing elephants just for their tusks
People who buy pets and don't take care of them
Stop people being cruel
Ban cigarettes
Stop wars
Ban drugs
Reduce taxes
Stop governments buying weapons
Stop pouring oil into the sea
Stop using hair sprays

Research Activity 2.1

This involved non-participant observation of classroom activities, and posed particular difficulties of recording and sharing the myriad of perceptions from extensive involvement with the children.

It was found that this needed a clearer focus on the theoretical frameworks outlined earlier. In particular attention needed to be given to the processes of negotiation of meanings which the children were engaging in.

As Hockey(1990) states:

> *"The meaning and coherence of any stretch of conversation are dependent upon processes of inference that tie the utterance to features of the context in which it is embedded, and to various unstated background propositions. ... In drawing inferences from what was said to what was unsaid, participants need to be informed, and in fact become informed, about things that were never mentioned.."[Hockey,J.(1990)p.16/17]*

However, Hockey(1990) notes that although we recognise expressions of belief and desire through voice and action cues in context, determining the meaning of a stretch of discourse is not a formal or mechanical matter,

> *"If we are to use ordinary language to investigate moral reasoning or moral understanding, we must have some way of taking account of the implicit meanings of utterances. ...Ordinary conversations not only carry in condensed form a vision of the moral order, they are also the vehicles by which we reproduce the moral order by describing and evaluating events. "[Hockey,J.(1990)p.18]*

Something of this moral order was revealed when the class teacher introduced an activity in which the children were asked to write an account of their village in the year 2000. The children were not just required to think about likely changes in the infrastructure but to think about what they would like to be doing themselves in the year 2000. The teacher completed the instructions with the statement:

> *"Everyone needs a dream."*

In this phrase the teacher gave encouragement to the imagining of alternative futures. The accounts produced by the children did not have to be limited by criteria of feasibility. Dreams present very different images for creative thought, and a particular approach to Environmental Education as involving the creation of dreams, hopes

and possibilities rather than the transmission of knowledge of environmental 'facts'.

This can be seen as one element in the cultural filter of the classroom being observed.

The implications of this perspective for classroom practice were illustrated on later visits to the classroom when children explained their different responsibilities for their school environment. Children volunteered for tasks which required them to work with a group of other children who looked after environmental areas within the school. The children were eager to explain to any and all visitors what their jobs were. Groups of children regularly left the classroom to complete their jobs, and there was fierce competition for any vacant place within the groups which occurred when children participated in, for example, orchestra practice, or sports teams.

At regular intervals throughout the year other environmental tasks were created as hen's eggs were hatched in the classroom using an incubator, and requiring the regular turning of eggs, recording of growth and maintenance of the incubator. When the eggs hatched the chicks were fed and reared for approximately two weeks before being donated to a local Public House which opened an area of the garden for animals. Groups of children took responsibility for each of these stages, including the delivery of the chicks to their new 'home'.

Traditional classroom activities in Environmental Education were based around the Nottinghamshire County Council 'Trail Blazers' Scheme which aimed to provide teachers with a structured approach to

this area. The classroom teacher had spent a period of time on secondment with the scheme, working principally on the Infant activities. On return to the school, she had taken responsibility for work on the scheme throughout the school, working on a rota system which ensured that each class throughout the Infant and Junior School had one session per week on Trail Blazer activities.

The basic pattern of the scheme focused on a learning cycle of **plan, do, review**, requiring children to consider appropriate ways to gather information about aspects of their environment prior to engaging in data collection or hypothesis testing activities, and then evaluating their learning.

In addition to the classroom activities the scheme included a range of field centres offering a range of outdoor pursuits and opportunities to explore environments beyond the school, for example, a centre within a local wood provided orienteering, as well as nature trails and walking tracks with support staff and materials.

Research Activity No.2.2

This involved participant observation of Environmental Education activities. Familiarisation with the children seemed to inevitably preclude non-participation.

Another aspect of the cultural filter identifies adults as facilitators, and sources of help and most certainly does not include roles as observers.

Despite determined attempts to stay outside the interactions, the children made even more determined, and successful attempts to include the researcher in the on-going action.

An expedition to one of the outdoor centres operated by the Trail Blazer Scheme to develop orienteering skills provided a rich insight into some aspects of the social worlds of the children, and revealed three aspects of their moral order.

Firstly, on the coach journey two different children told jokes linked to the environment, which are reproduced below

> "1.What does the lion call two hunters in a jeep?
> Meals on wheels.
>
> 2.If Dolphins were so intelligent they'd be able to get out of those nets."

In both cases the irony involved indicates an awareness of the potentially dangerous nature of the relationship between humans and animals. It is clear that the children understood that lions would actually regard humans as food. The 'rightness' of the relationship between predator and prey is accepted from the lions perspective. The hunters position is presented as the funny element in the situation since they view themselves as predators but are not accepted as such by their prey. The linking of a caring service provided for older people to hunting adds another paradox and humorous dimension to the image created.

Similarly with the second joke, awareness of the thinking skills of dolphins is clear, and this is allied to knowledge of the dangers of fishing for other species which entraps dolphins. The humour lies in the linking of these two pieces of information.

Once again, this can be seen as another element in the cultural filter of the classroom being observed

Secondly; three children became separated from the rest of the class and did not return to the meeting point. The activity was part of the Nottinghamshire County Council Trail Blazers scheme which involves seconded teachers and advisory teachers, and as such provided four adults familiar with the woods to search for the missing children. The researcher was left on the bus with the other children whilst the search took place. Many of the children were distressed and concerned for the welfare of the three children, but one child pointed out that:

> *"They're not lost, they're missing. You're lost if you don't know where you are. You're missing if you're not where others expect you to be."*

This is a wonderful example of a philosophical analysis of the concepts 'lost' and 'missing' which many theorists would be happy to have outlined. This definition indicates a clear distinction being made between the psychological and sociological elements of the situation. For this child 'lost' is something which occurs in an individual's thoughts, whereas 'missing' is something which occurs in the thoughts of other people whose expectations are not met.

This is clear evidence of a sophisticated understanding of a Theory of Mind.

In this instance some of the processes of negotiation of meaning and the establishment of a moral frame among children themselves was revealed to the researcher. The other children in the bus listened to the analysis and accepted the ideas from their classmate. The atmosphere in the bus was changed by the statement since this provided a common viewpoint, and a perspective which enabled the children to re-frame their anxieties about the fate of the 'lost' group who were now seen as 'not being where they were expected to be', rather than 'in danger'.

Joining the children on an eight mile walk around the countryside surrounding the school provided another insight into the social worlds of the children. Three main topics provided the focus of the children's conversations; the spacing of rest breaks, the timing of the lunch break, and the distance from the stopping point at a local Public House. The researcher was using a camcorder to record the walk, allowing the children to operate the machine throughout the day. On return to school the two children who had been using the camcorder in the final stages of the walk clearly outlined two very different moral positions. They had realised that the eye piece of the camcorder had been lost. One child was afraid to report the loss because she would get into trouble. The second child convinced her that it was better to tell of the loss because it might be possible to find the lost eye piece. The adult's reactions confirmed the 'rightness' of the second child's response. No anger was expressed and the two children joined in the search for the missing piece. It is clear that one moral stance was reinforced and

another was rejected. **This is clearly another aspect of the cultural filter.**

Research Activity No.3.1 - INTERVIEW QUESTIONS

The questions focused upon the following relationships:-:

- between human beings and animals - questions 1- 13
- between human beings and trees and plants - question 14 - 15
- between children - question 25
- between children and parents - questions 16 -19, 26 & 28
- between children and teacher - question 20 & 27
- if anyone was completely free - question 21

four moral dilemmas were posed

Kohlberg's 'Heinz' dilemma - question 29

two pollution dilemmas - questions 22 & 23

a dilemma focusing on litter - question 24

A hypothetical situation was posed in which a large amount of money was won in a competition. - question 30.

Full details of the children's responses is contained in Table No.4.4 overleaf and in Appendix E.

However, it may be useful to consider each of the sections of the questionnaire in order to identify some of the children's different perceptions which are elements of the cultural filter.

TABLE NO.4.4

SUMMARY OF CHILDREN'S RESPONSES TO INTERVIEW QUESTIONS REQUESTING A YES/NO ANSWER

RESEARCH ACTIVITY NO.3.1

Question No.	Total No. Yes	Total No. No	Total No. Don't know
1	9	41	12
2	4	53	5
3	6	45	10
4	7	41	14
5	4	50	8
6	7	50	6
7	8	47	7
12	45	6	10
13	44	4	12
14	11	41	11
15	16	31	15

Questions Nos.1-13:

The Relationship between Human Beings and Animals

The majority of the children interviewed, 41 of the 62 respondents, did not agree with eating or killing animals. Only 9 children thought it acceptable to eat and to kill animals.

13 of the children gave no specific reasons for these views, those who gave reasons focused on issues of fairness, cruelty and identified the risk of extinction. The full list of reasons given for responses to questions number 1, 2 and 3 are contained in the Tables on pages 142, 143 and 144.

The responses relating to hunting indicated a general disagreement with this activity. Only 6 children saw hunting as acceptable, although in this case most respondents mentioned the morality of the activity as being their reason for disagreeing with it, and the danger of extinction of some species.

However, it should be noted that all of these children regularly eat meat. There would appear, therefore, to be a gap between attitudes and behaviour. Despite their expressed views the children were not vegetarian, although one did say she would like to be, if she were allowed to be so by her parents

In relation to the use of animals for testing, the majority of respondents did not see this as acceptable. Indeed 34 of the respondents saw testing as morally wrong, even when this was linked to medical research.

The replies to the question of using animals to test soap were more varied than when the testing could be seen as being linked to a more important goal, that is, in the development of a new medicine. Morality was given as a reason against testing by only 8 of the respondents. 23

responses stating that testing should not be allowed because of the danger of harming or killing an animal.

Attitudes toward battery farming were predominantly unfavourable 49 of the respondents disagreeing with this method of farming. 14 of these respondents cited moral objections to the treatment of animals in ways which they saw as unacceptable, linking these objections to notions of the rights of animals to humane treatment. When questioned about whether it was acceptable for animals to be freed from battery farms by breaking in to the farm, only 8 of the respondents thought this was appropriate behaviour.

Suggestions of alternative responses to the perceived unfairness of battery farming were talking to the farmers, buying the animals from the farmer and then freeing them, and reporting the situation to the authorities. 3 of the respondents commented on their own doubts about the morality involved, stating that they could understand why people did see it as right to break into such farms, but also recognised that they were breaking the law if they did this.

Views about the similarities and differences between humans and other animals were particularly varied. 21 of the respondents could not identify any ways in which animals were like humans. 30 respondents could identify similarities, most of these identified features such as the need for food, water, and shelter. In terms of differences between humans and animals 46 respondents identified humans as being different from animals, focusing on features such as ways of walking, eating and types of food eaten. When questioned about particular animals who were similar to humans most of the 37 positive

respondents identified monkeys and apes as being the closest to humans in terms of physical appearance and behaviour.

50 respondents believed that animals can think, only 6 arguing that they were unable to do so. 47 respondent also thought that animals could feel emotions. Many responses used examples of the behaviour of their pets as support for their views, stating that dogs can show happiness by tail wagging and sadness with the drooping of their ears and expression of their face.

It is difficult to know which of these views form the basis of anthropocentrism. One aspect of such an approach would seem to include the transposing of human like characteristics onto other animals, yet the recognition of thought and feeling processes in other animals need not necessarily lead to anthropocentrism and may be a crucial aspect in the understanding of species differences. However, responses to the questions on trees and plants may be somewhat easier to interpret.

TABLE NO. 4.5

REASONS GIVEN FOR RESPONSES TO QUESTION NO.1
Is it allright to eat animals? Can you tell me why?

Reason	Total
No reasons given for answer	13
Non-specific reason eg.it's horrible',it's not nice'	5
Fairness	2
Cruelty	14
Some animals bred to eat / others protected	7
Possibility of extinction	11
Morality - seen as wrong	2

TABLE NO.4.6

REASONS GIVEN FOR RESPONSES TO QUESTION NO.2

Is it allright to kill animals? Can you tell me why?

Reason	Total
No reasons given for answer	13
Non-specific reasons eg.it's horrible','it's not nice'	5
Fairness	2
Cruelty	17
Some animals bred to eat /others protected	5
Effects on babies	2
Possibility of extinction	7
Morality - seen as wrong	4

TABLE NO.4.7

REASONS FOR RESPONSES TO QUESTION NO.3

Do you think hunting is allright? Can you tell me why?

Reason	No.
No reasons given for answer	15
Non-specific reasons eg.it's horrible','it's not nice'	3
Fairness	2
Cruelty	6
Some animals /others protected	4
Possibility of extinction	10
Morality - seen as wrong	12

TABLE NO.4.8

REASONS FOR RESPONSES TO QUESTION NO.4

Is it alright to test a new medicine on an animal? Can you tell me why?

Reason	No.
No reasons given for answer	9
Fairness	2
Cruelty	1
Some animals can be used for testing/others protected	4
Morality - seen as right	6
Morality - seen as wrong	34

TABLE NO.4.9

REASONS FOR RESPONSES TO QUESTION NO.5
Is it alright to test a new soap on animals?

Reasons	No.
No reasons given for answer	17
Might stop return to wild	2
Danger of harm / death	23
Need to ensure do not hurt humans	2
Should try it on humans	2
Morality - seen as wrong	8

TABLE NO.4.10

REASONS GIVEN FOR RESPONSES TO QUESTION NO.6
Is it allright to keep chickens in battery farms?

Reasons	No.
No reasons given for answer	18
Description of lack of space and exercise	4
Danger of harm / death	3
Fairness	2
Cruelty	4
Effects on eggs	2
Morality - seen as wrong linked to animal rights	14

TABLE NO.4.11

REASONS GIVEN FOR RESPONSES TO
QUESTION NO.7
Is it allright to break in to battery farms to free animals?

Reasons	No.
No reasons given for answer	27
Breaking the law, criminal, trespassing	4
Bad effects on farmer	2
Bad effects on the animals	7
Unsure - see both sides	3

Question Nos.14 and 15

The Relationship with Trees and Plants

Only 12 children thought that trees and plants could think, whilst 41 believed that they could not.

Many respondents were unable to support their beliefs, stating that they were guessing or that they did not really know whether this was the case.

In relation to whether trees and plants could feel one of the children interviewed in the first phase of interviews pointed out an ambiguity in this question. The word 'feel' could be interpreted as referring to the sense of touch. The children interviewers therefore extended the question to indicate that the word feel referred to emotions - angry, sad etc..

Children's perceptions of the similarities and differences between human and other animals, and between animals and trees and plants varied considerably. This could be seen as mirroring the differences in the adult population, since there are groups who perceive humans as significantly different from other animals, and groups who emphasise the similarities of all animal species including humans. It could also be argued that this is the case in terms of perceptions of the relationship between plant and trees and animals, since some groups argue for the 'rights' of trees and plants to life, and others regard them as being non-sentient beings

It would seem that these responses can be classified most clearly in terms of the categories identified by Pepper(1990) that is of 'Man apart from nature' and 'Man a part of nature'.

Thus, 12 of the respondents could be placed within the category viewing Man as part of nature a clearly 'ecocentric' view, whilst 41 children saw Man as being apart from Nature, although this second category seemed to include a wider continuum of views and reasons for those views than the first category.

It also seemed that the children's views did **not** encompass a technocentric view in which the power to control nature via technology is emphasised.

Question Nos.17-21, 30-31

Issues of power

The issue of power was explored in the questions about rules and restraints on individual behaviour.

Only 3 of the children stated that they had no rules at home, 54 of the children quoted a range of prohibitions on their behaviour, and 35 respondents stated that they would not consider breaking these rules.

It may well be that the 21 respondents who admitted that they would consider breaking the rules were the more truthful, but rather than considering the validity of the responses it would perhaps be more appropriate to interpret these responses as differentiating those who saw rule breaking as theoretically acceptable and those who did not,

rather than treating their replies as necessarily reflecting their actual behaviour.

When questioned about whether there were things which they thought to be wrong to do even if they were allowed to do it, 27 children identified a range of behaviours which they saw as unacceptable, for example, smoking, swearing, physical violence.

12 of the children believed that there was nothing their parents were not allowed to do, perhaps illustrating the impression of power which parents are perceived to have by their children. However, 24 of the children were aware of the constraints on their parents.

When questioned about the limits on teacher's behaviour, the most popular response of the 36 who identified things teachers were not allowed to do was that they were not allowed to hit pupils.

18 of the respondents thought that there were some individuals who were allowed to do anything they wanted. Several of these respondents thought the Queen was in such a position because of her wealth, others quoted particular parents and relatives, although in some cases this was qualified by the statement that at least these individuals thought that they could do anything, or behaved as if they were allowed to do anything.

34 of the respondents, however, recognised the constraints which affect everyone's behaviour.

Perceptions of the amount of influence the respondents felt they have on the behaviour of their friends indicated that 37 thought they could do something to affect that behaviour, although 18 thought they could not do so. This pattern was reversed in relation to influence over their parents' behaviour, 36 children stating that they could do nothing to change that behaviour, and only 18 believing that they could influence their parents. In relation to the behaviour of their teacher, respondents were almost equally split, 24 children believing that they could affect their teacher, and 28 children believing that they had no influence whatsoever.

TABLE NO.4.12

RESPONSES TO **QUESTION NO.17**

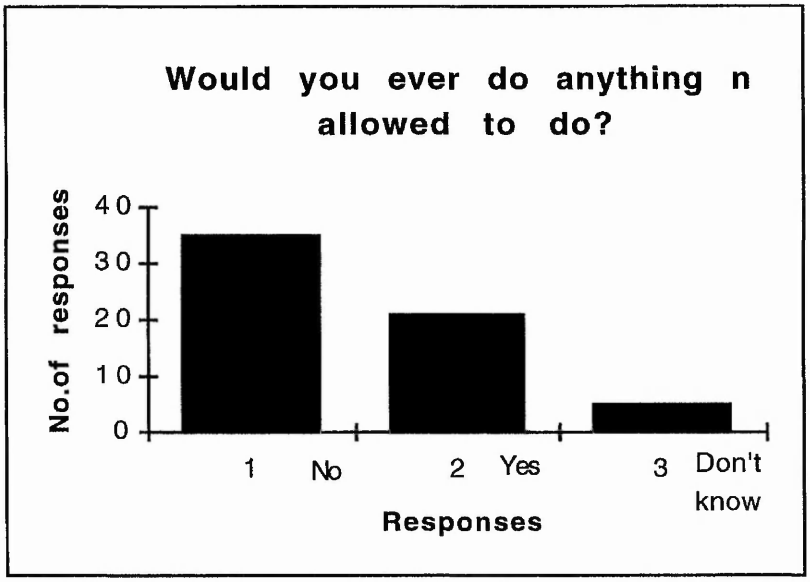


TABLE NO.4.13

RESPONSES TO **QUESTION NO.18**

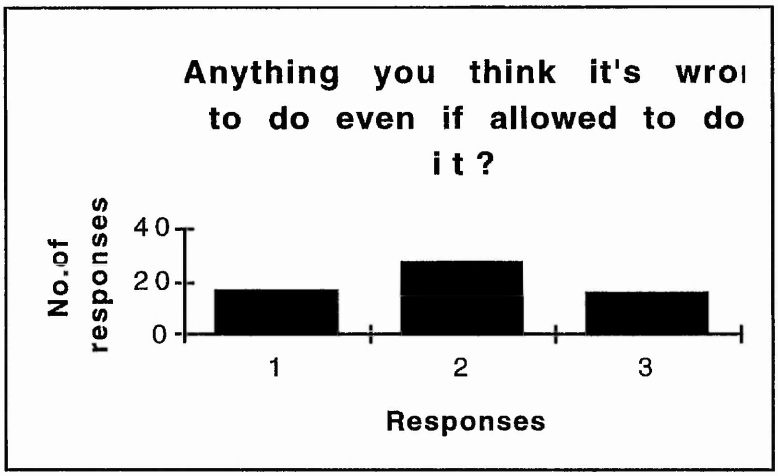


TABLE NO.4.14

RESPONSES TO **QUESTION NO.19**

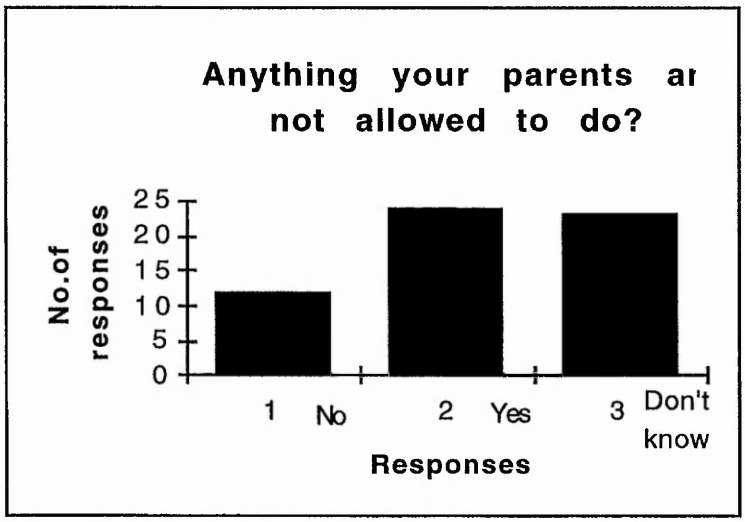


TABLE NO.4.15

RESPONSES TO **QUESTION NO.20**

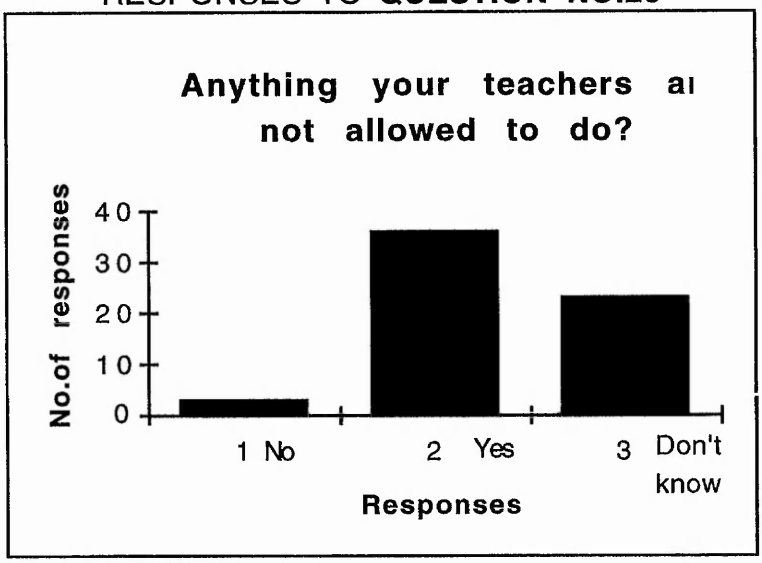


TABLE NO.4.16

RESPONSES TO **QUESTION NO.21**

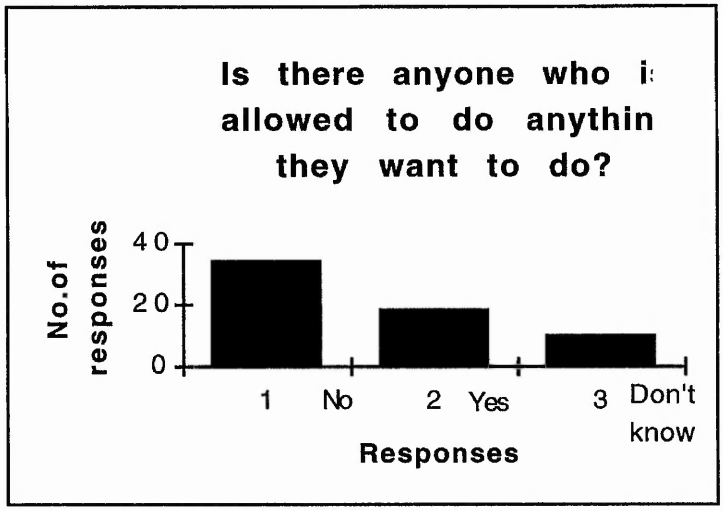


TABLE NO.4.17

Influence with friends/parents/teachers

Q.		Yes	No	Don't know
25	Friends	37	18	3
26	Parents	18	36	7
27	Teachers	24	28	7

Moral Dilemmas

Question No.22 - Oil Spillage

The most popular response to the dilemma on oil pollution was that the government should finance the clean up cost, although the reasons for this answer indicated confusion about who the government are, and what their role might be. Some children thought the government had money available to pay for the clean up, others thought the government owned the sea and the beach. 9 children considered the captain of the ship was in some way responsible even though the scenario presented indicated that it was not his fault.

TABLE NO.4.18

RESPONSES TO **QUESTION NO.22**

SUMMARY	Total
No reason given	7
The captain of the ship/the driver	9
The government	11
The owner of the ship	7
The people who did it	7
The people who made the boat	5
Split - Captain/Gov./Owners	3
The people who own the beach	3
No-one	3
The Queen/the Queen of Scotland	2
The Council	2
The people who put the oil in	2

Question No.23 - Pollution by Computer Factory

Responses to this question seemed to pose the greatest difficulty for the children, 24 children were unable to answer or gave a confusing reply which could not be classified. Of the respondents who did understand the question all of the children believed that the pollution should be stopped, although views were equally split in terms of how this should be done; 8 children stating that the company should charge more for the games so that they did not pollute the river; 8 children stated that the company should stop making the games altogether; and 8 children stated that pollution should stop but prices should not be raised.

It is interesting to speculate whether these responses reflect the recognition that a decision to increase the prices might affect them personally.

TABLE NO.4.19
RESPONSES TO **QUESTION NO.23**

SUMMARY	Total
No reason given	20
Charge more for the games	8
Do not pollute the river	8
Confusing reply eg.ask them to buy one	4
Stop making the games	8

Question No.24 - Litter

Responses to the question of fining for littering indicate that 11 of the children thought that anyone who litters should be fined regardless of whether they intended to do this or not. However, 44 of the children saw intention as an important element in punishment, stating that only the child who have dropped litter on purpose should be fined. One child indicated that the punishment should fit the crime, by suggesting a lower find for the child who dropped the litter by accident.

TABLE NO.4.20

Responsibility for Litter. Should both girls be fined?

	Y	N	?	Total
Don't know			3	3
No-one should drop litter	11			11
Only the one who dropped it on purpose		44		44
Lower fine for the one who dropped litter by accident		1		1

Question No.28 - Camping Trip Dilemma

In contrast to the perceived lack of power over the behaviour of others, the majority of the respondents to this question were prepared to override parental claims to money earned by a child. Only 7 of the children indicated that children had responsibilities towards their parents citing the 'debt' owed for parental care throughout their lives.

TABLE NO.4.21

Camping Trip

	Y	N	?
Don't know			4
Keep money		49	
Give money to parents	7		

Question No.29 - Kohlberg's 'Heinz' Dilemma

It would seem that the majority of the responses from the children questioned could be classified as being stage 3, 4 or 5 on Kohlberg's classification, as outlined on page 19. The highest number of responses being classified as Stage 4 which involve an orientation to duty and to showing respect for authority and maintaining the given social order for its own sake. Only one respondent had reached Stage 6 in which reasons were liked to a conscience or principle orientation. However, in view of the age of the children it is perhaps surprising that any response had reached this stage of moral development.

TABLE NO.4.22

Kohlberg's 'Heinz Dilemma

Kohlberg's Stage No.	Total
No reason given	14
Stage No.1	3
Stage No.2	0
Stage No.3	10
Stage No.4	17
Stage No.5	13
Stage No.6	1

Question No.30 - Competition Winnings

A very wide range of choices were made when the children were asked how they would use money won in a competition. 23 responses could be classified as ego-centric, involving direct benefit to themselves such as in the purchase of clothes, cars, computers and so on. 11 responses involved benefit to others such as giving to their family, buying birthday and Christmas present, giving to poor countries and charities, and 1 response focused directly on environment issues of clearing up the Earth.

The second element of this question asked the children to choose between a range of charities, and the majority recognised the priority of starvation as needing to be addressed first. Children were seen as needing more attention than animals and old people were seen as the lowest priority

TABLE NO.4.23

USES OF MONEY WON IN COMPETITION	Total
Don't know	14
Save in Bank	9
Buy a horse/animals	6
Buy clothes	4
Buy a house	1
Give to family	4
Buy a car/motorbike	4
Holiday	4
Computer/computer games/toys	3
Birthday/Christmas presents	2
Something useful	1
Give to poor countries/charity	3
Clearing up the earth	1
CHARITY CHOSEN	
Helps children	8
Helps animals	4
Helps old people	2
Helps people who are starving	14

.Research Activity NO.4.1b - My Pefect World

This activity involved the children in the school in Sussex writing a story with no other stimulus than the title "My Perfect World'. Analysis of the stories indicated that the children included 57 items which they would see as involved in their 'Perfect World'.

They identified a very wide range of issues ranging from the abolition of crime, poverty, starvation, racism, school and even death, as well as the establishment of a Republic, equality, money trees and nicer dinners.

However, the most popular item included within their 'Perfect World' was peace. 19 of the children stated that the abolition of war was vital. There were many differences in the visions of a perfect world outlined. However, these features can be summarised under seven main headings:-

1. The number of variables identified
2. The identification of environmental issues.
3. The focus on altruism and idealism.
4. The political orientation.
5. The use of power.
6. The mixing of altruism and egotism, liberalism and illiberalism.
7. Realism.

Each of these characteristics will be considered individually overleaf.

1. Number of variables identified:

Clearly some of the children identified a large number of variables, indeed three children included eleven separate responses, whilst three other children included only two variables in their accounts.

However, the total numbers of variables included can be somewhat misleading, as illustrated by the two responses reproduced below, in which the nature of the variables identified are of a very different type :-

Pupil No.30

My Perfect World

is a world with peace and love, no war, no hatred.

Pupil No.27

My Perfect World

In my perfect world is like it is at the moment but sports and games are more important.

2. Identification of Environmental issues:

A very wide range of environmental issues were identified by many of the children as being things which they would wish to deal with in their 'Perfect World', for example:

Pupil No.37

My Perfect World

In my perfect world there would be laws not to cut down the forests and habitats where the wild animals live. Also trees and countryside would not be ruined by new houses and roads. Deforestation would be changed.

Testing new products on animals would not be allowed if it had any dangerous chemicals in it, it could not be sold as all these chemicals build up in streams and kill good and kind animals.

People would not have to pay as much tax and things sold in shops would be cheaper. I would like my perfect world to be peaceful with all of the countries at peace.

Pupil No.45

My Perfect World

In my perfect world there would be no poor people, there would be no war and no smoking. In my perfect world there would be enough water for everybody. Nobody would cut down rain forests for paper. Everybody recycles everything they could.

3. Focus on Idealism and altruism:

Many of the children presented extremely pleasant pictures of a caring, pleasant world. Fears about the increasing violence in society, and the impact of video-nasties upon children were not supported by many of the responses, which indicated high levels of altruism and idealism, for example

Pupil No.48

My Perfect World

In My perfect world
No fighting
No starvation
No mistreating one another
No greediness (in money)
No wars
No cruelty to people, animals, environment, anything
No vandalism
There would be a few wrongs, general mistakes, arguments, naughtiness.
There would be happiness
Everybody would get a job
Everybody would be treated as equal. Nobody would have to live in the streets. Orphanages would find jobs for the orphans once they are old enough.

Pupil No.42

My Perfect World

In my perfect world I would like the world with more peace and more people being kind and gentle. Better weather, more Christians and no more crimes.

4. Political Orientation

Many of the children adopted very definite political philosophies. Indeed some of the children recommended radical political changes, revealing socialist tendencies which few will have heard in their homes, schools or even in the media, for example:

Pupil No.38

My Perfect World

In my perfect world

1)all the money in the world would be taken in and distributed equally among all the people in the world.

2)Everybody would live on a farm being self-supporting and building their homes of wood and riding horses.

3)For there to be no great arguments and for everybody to be appreciative and grateful.

4)for nobody to feel left out and for everyone to feel wanted.

5)for there to be no war and no killing for everyone to die naturally.

Pupil No.46

My Perfect World

In my perfect world there would be no war, no money, no school because those people with no money can't pay for food so they would get it for free so would everyone else. Schools would not be needed because if things are for free you wouldn't need a job to earn money. Everything would have to be environmentally friendly.

5. Use of Power:

Responses also varied in terms of the way in which the power of the situation was used.

Some of the children took the opportunity to place themselves in positions of responsibility, and imposed rules upon their 'Perfect World', for example:-

Pupil No.35

My Perfect World

In My perfect world I would ban blood sports and make a law so that everyone had to recycle paper and everything was 10 p. I would ban wars.

Pupil No.26

My Perfect World

In my perfect world, I would be the queen or someone who is very important and everyone obeyed me. I would make new rules. There is to be no more fighting

Most things in the world are free. Everybody had £1,000 a day Everyone is treated exactly the same We have 2 days of work and 5 days rest.

In my perfect world, I could control the weather, and fast forward/rewind the programmes I don't like. I would want everyone to be happy, not to steal let everyone share their things, not to steal or burgle. and I would try to give everyone a fair chance and let people say what they think is right. There would be some changes to schools: no tests or exams!

6. Mixtures of altruism and egotism, liberalism and illiberalism

Many of the children presented a range of issues including altruistic concerns alongside a more personal focus, and liberal perspectives alongside less forgiving approaches. Some of the responses revealed distinctive perceptions on ways to deal with people in need which would seem to indicate limited understanding of political processes, and some pupils revealed some intimate personal issues, for example;

Pupil No.36

My Perfect World

In my perfect world. Everyone would have a wealthy amount of money, a nice car, a nice house. I'd have poaching police anyone caught poaching would receive the death penalty and be hung.
If anyone killed someone they would receive the death penalty and NO war.

Pupil No.49

My Perfect World

In my perfect world there would be no fighting or wars anywhere. Or there would not be any live exports to other countries. The people who live on the streets in London would be given a home.
The people who are dying in Africa will be helped by nurses.
People would build homes for them.
I would live in a bigger house with more money so that I had a bigger bedroom than I have now.
The government would give more money to people who needed it.
Nobody would die and everybody would be friendly to each other.

Pupil No.39

My Perfect World

In my perfect world.
If I wanted to change the world I would stop all the wars that are happening and try and give money to the people who really need it.
Then I would stop people killing animals. Not just because I'm a vegetarian but because I don't like people killing animals. I would stop peple eating animals.
I would go back to the past and see my baby brother, because I miss him a lot.
I would change my house and buy a mansion, where we wouldn't have to pay the bills.
I would buy my Mum a nice big red car.
I would buy myself a dog, and my brother whatever he wants, same with my family. I would collect pigs.

7. Realism

It does seem, however, that some children are aware of the limitations of visions of Paradise. Although these responses were certainly in the minority.

Pupil No.28

My Perfect World

In my perfect world there would be no war, no greediness, everything like medicine would be free.
Everyone would have a home, a job and a nice family.
There would be no racism, no murdering or killing.
But you have to have some evil in the world because then people would know what evil is so they can try to conquer it, and no smoking.

Individual responses to this activity are extremely difficult to analyse for several reasons. There can be no 'right' or 'wrong' answers since

views about an ideal world are based on values and beliefs which, some would argue, cannot be compared with each other, in line with a culturally relative perspective. The scenario clearly places the children within the political sphere, it is extremely unlikely that anyone would fail to suggest changes to the world which, perhaps, given an alternative scenario they would not have considered.

The influence of the task is, therefore, of crucial significance in interpreting the children's responses.

This seemed to be particularly clear in comparing the responses to the title 'My Perfect World' with those to the title 'My Ideal World'.

Research Activity No.4.1a - My Ideal World

This activity involved the children in the school in Nottinghamshire being asked to write a story with the title 'My Ideal World'.

Similarities in the responses to 'My Perfect World' and 'My Ideal World'.

In the 'Ideal World, as might have been predicted, the largest number of items included were concrete things for themselves such as cars, motor cycles etc.. However, focusing on the total number of items ignores the fact that these items were identified by only seven of the respondents. Indeed pupil number 6 identified 6 items and pupil number 7 identified 9 items for themselves, and 15 of the respondents did not identify any items which they would wish to have for themselves.

The large numbers of items identified by just two pupils tended to distort the final picture of types of items included in the response. In the 'Perfect World' only 5 items were concrete things for themselves, and once again only four pupils actually included this type of item.

The issue of pollution was identified by 11 of the 'Ideal World' pupils as being something which they would wish to eliminate in their ideal world, and closely connected issues such as the removal of litter was mentioned by 9 pupils. In the 'Perfect World' responses the main focus was on the ending of war, 19 pupils mentioning this issue.

In general, it does seem that the seven headings found to differentiate the responses to 'My Perfect World' were equally applicable to the responses to 'My Ideal World'. These headings are:

1. The number of variables identified
2. The identification of environmental issues.
3. The focus on altruism and idealism.
4. The political orientation.
5. The use of power.
6. The mixing of altruism and egotism, liberalism and illiberalism.
7. Realism.

Differences in the responses to 'My Ideal World'

8. Narrative Responses:

Several pupils wrote the account in the form of a story. Although this was done in slightly different ways, including varying elements of wish fulfilment within the narrative, for example;

Pupil No.5

When My Wish Came True

One day I had to get up for school early to have a shower, I said "I wish there was no school".

That day when I was walking to school I saw a police car zoom by, all the exhaust fumes were coming out, I said "I wish there were no bad people, all the people were nice and I wish there was no pollution."

I got to school and we went swimming, then we did Maths, then Science, then we went home and I said "I wish I lived at Alton Towers."
I woke up the next morning and got ready for school. Oh, I wish we have lots of money. I went to school but there was no school, so I walked home and I saw Fred, the police man and he looked very happy.
"Why are you so happy?" I said.
"Because there's no criminals and no prison everyone's nice and good." he said.
When I got home there wasn't any ordinary home there instead it was Alton Towers. I went in and my parent said,
"We've got one million pounds"
That's how my wishes come true.

Pupil No.6

My Ideal World

One day I had a dream, of course, I was in a day dream at School. I dreamt of a world of my own. I could have anything I wanted. I would have more chocolate than the chocolate factories. I would have more things than anybody, more toys, more pets, more everything.
After school I went home and I went to bed, and I have another dream. I was in a world of my own again. I was a King, a God, the best of the best. I had tons of servants and slaves working for me. I was great. I was the best and when I went into town the people would kneel before me, Matthew.
My Mum had spoilt my dream, oh well, back to the drawing board.

Pupil No.9

My Ideal World.

Hi! I'm Seraphine and I'd like to tell you about my Ideal World."
"Everything would be bright and colourful and there would be no more wars and no-one starving. Pollution and litter will be stopped and people would have horse drawn carriages instead of cars.
People wouldn't have to pay tax and bills, and every family would have a swimming pool in their garden and a tree house with a diving board coming from it to the swimming pool and a water flume.
For money people would just have a purse with a permanent note pad inside and would just write the price on the paper. When you are sixteen you can do what you want and go where you like, as long as somebody knows where you are and what you will be doing.
If you wanted to watch a film you would go to video library and ask for the film, and if no-one was renting it you would get out your pen and paper, pay for it, and then go. The films would just come out on video instead of going through the cinemas first
Bikes will have better motors that did not pollute and could have automatic steering and brakes."
Well that was My Ideal World - I hope you agree.

9.Negative Responses to School

Several of the accounts expressed less than positive attitudes towards compulsory attendance at school, although, once again this was approached in a range of different ways, for example;

Pupil No.4 My Ideal World

In my ideal world children would be off school almost every day, but I still want to learn. I would go on holiday in the Caribbean for a month because I like the hot weather and would enjoy meeting different people. In my ideal world I would like to get £10 a week for pocket money. I would be able to have my music louder than full blast. I would be able to go to the Isle of Wight for another week with the school. I would be able to use my Dad's switch card to spend money on clothes, put a couple of hundred pounds in the Bank and other bits and bobs. I would pass my Kawasaki driving test very easily. There would be no pollution and no murdering. If everyone stopped murdering and there was no pollution the world would be a much better place.

Pupil No.12

My Ideal World

My ideal world would be if people would stop cutting down rain forests.

It would also be good if they had car auctions and motor bike auctions every day. Mind you, it would be better if they ran on electric, so there would be no smoke.

It would be even better if everyone had heated swimming pools, and if we only had to be to school three days a week.

That would be my perfect world.

Three individual accounts seem to warrant particular attention because of their individuality and the specific issues identified.

The first account appears to be the only one using the scenario to achieve immortality,

Pupil No.14 My Ideal World

In my ideal world it would never rain or snow.
There would be no litter or pollution. No one would be bad or murder anyone, and there would be lots of trees and flowers.
You would live forever and never get as old as you want to. There would be a swimming pool in everyone's garden, and everyone would be rich.
Nobody would ever get hurt or die, and you could choose any animal you want for a pet, even ones that live in the jungle, or places like Africa and India.

The second individual account is one within which the wishes to be fulfilled were rather more controversial, and the least environmentally friendly of the responses:

Pupil No.7

My Ideal World

In my ideal world I would own lots of cars because I like them.
I am very interested in guns. I would like to own a gun store.
There would be no school because II don't like school, it's boring. I would like to do whatever I want.
I would be able to do whatever I like, for instance, going to night clubs and stuff. I would like to own a plane so that I could go anywhere. I would like to own one hundred acres of land because I would like to have a big back yard. I would like to own one hundred million pounds so that I could buy what I liked such as a car park for my cars and motor bikes. I would like to own my own oil rig to use it for my boilers. I would like to own a sky scraper so that I could have my own office.
I could own as many computers as I liked so that I could play as many computer games as I liked.

The third individual account can be seen as qualitatively different from many of the other responses from a number of perspectives. In particular the breadth of issues included. This pupil considers education as one aspect within a much wider range of environmental, political and social issues. Whilst recognising some lack of knowledge and misconceptions, this responses present a clear insight into the cultural filter through which this child perceives the environment.

Pupil No.25

My Ideal World

Cars would run on batteries so that they don't pollute the atmosphere. There would be special car batteries which you would be able to get from Supermarkets. Motor bikes would run on water so that they wouldn't pollute the atmosphere. Aeroplanes could run on water or special sorts of batteries. There would be special planes to help a plane which was going to crash. It would be able to save the people and stop the other plane from crashing.

People in supermarkets would cut their prices, making them lower. Everyone in the world would use pounds and pence, not francs or other money. There would be a special collection to take in all the other sorts of money.

Everyone would have a job. If people were stupid like stealing cars, they would have more punishment than prison. They would get a year in prison for the first crime, they would have to go to the people and apologise. The next time they stole anything they would have to fix everything then have three years in prison. If they had stolen something they would have to retire at 52.

If anyone wanted to move house they would have to ask permission from the government. They'd send permission to the Council then go through the courts and every Police Station. So that the Police would have a record of where everyone lives.

People who dump cats and dogs would have more punishment, make them take the animals to the RSPCA. If they were moving they would have to ask permission from the Council

People would have to stop shoplifting and stop throwing bricks at windows.

Schools like X--- could continue but not schools like Y---, children would go from X--- to University. They could turn Y----into an Old People's Home

When people take cars to the scrap yard it would have to be checked to make sure it wasn't stolen.

Roads would be made wider so there would be no jams.

Before people go out in cars they would have to carry at least six people before they would be allowed to drive. When rockets take off there would have to be at least four people in it at a time. They would have to make one hole through the ozone layer for the rocket to go through so that there would only be one hole.

Before trains could set off they would have to be full before another could take off. Trains would have special batteries, railway lines would be made wider so they wouldn't crash.

Pubs would have to be full before anyone else could go in. If anyone was fighting they would have to walk to the Police Station, or make the police fetch them and walk them back and arrest them.

This pupil suggests solutions to many environmental problems. Several of these suggestions have been the focus of actual research in the development of battery operated cars, alternative fuels, and compulsory car pools.

The imposition of a single currency is an issue presently part of the agenda of the European Union, although the globalisation of this currency has yet to be considered!

The account presents a concern with issues of control, and adopts an authoritarian approach. It is clear from the account that this child has had contact with the legal system and is aware of the role of courts, the Police and prisons. Punishment is seen as needing to be directly linked to the nature of the crime. A form of legal control over house removal and registration with the Police is seen as a way of tracing criminals and reducing crime. Treatment of animals seems to be given as much importance as that of humans.

The suggestions on changes in the education system centre around the abolition of Secondary Schools, children moving directly from Primary School to University, so that Secondary Schools could be used to house the elderly.

The account does indicate some misunderstandings, for example, retirement seems to be regarded as a punishment since thieves would be required to retire at 52. The link between rockets and holes in the ozone layer indicates a misconception about the effects of space exploration and the causes of ozone depletion. The widening of railway lines to reduce accidents also indicates a fundamental lack of understanding of the operation of rail transport.

The practicalities of the final paragraph are extremely problematic, filling Public Houses with people before anyone else can enter and expecting people involved in fights to voluntarily walk to the Police Station are highly unlikely suggestions.

In this response in particular, as stated earlier, the response provided many insights into the cultural filter through which the child perceived the environment.

In summary; the two main features of both sets of responses seem to be :

firstly; the very wide range of issues which were included, covering almost the full gamut of environmental concerns from damaging the countryside, protecting animals and abolishing war,

and **secondly**; the altruistic and non-egocentric nature of the concerns.

Research Activity No 4.2 - Group Ideal Worlds

The following weeks each group of children shared their ideal worlds by reading out their indicvidual account to the other members of their own group, in the staff room. They were then asked to agree upon a group ideal world.

Each group began the task by discussing how they would form the group account, they all decided that a unanimous vote on each item was the way to ensure agreement. Each item of each individual account was voted upon and only those accepted by all members of the group were included in the group ideal world.

All these discussions took place in the staff room, with no adult intervention, and the results are reproduced below.

OUR IDEAL WORLD by GROUP No.1

In our ideal world there would be no vandalism.
Everyone would give money and clothes to the poor.
Fox hunting would be banned, and there would be no pollution or litter,
The world would be a peaceful place, with no drugs and lots of houses for the homeless.
All dogs would be kept on a leash so that they don't cause any accidents.
We would stop using all the world's resources, and no oil would be dropped in the sea again.
Everyone in our world would be rich, so there would be no starvation.
No-one would be allowed to transport live animals, and we would plant much more trees.

OUR IDEAL WORLD by GROUP NO.2

In our ideal world there would be no more wars, and no-one would starve or pollute the world.
We would have lots of excitement with all kinds of adventures such as at Alton Towers which would be free so that everyone could go there whenever they wanted.
In our world no-one would be allowed to swear or to murder anyone.
There would be no crime so that you could leave things unlocked and they wouldn't be damaged or stolen.
We would plant many more trees and plants.
Everybody would have enough crops to eat.
Open cast mining would not be allowed because it is dangerous and spoils the countryside.
If we damage nature we won't be able to survive ourselves.
We would abolish money, using a permanent note pad and pencil to make a note of things we buy.
We would stop wasting resources, and would use only renewable products.
No drugs would be allowed, and there would be no smoking in our world because this would damage your own and your children's health. It is dirty and polluting, and ruins your lungs.
Everyone in our world would be kind and co-operative towards each other and to animals which would not be shipped abroad for food, particularly not to those countries which use veal crates. These crates are cruel to the animals.

OUR IDEAL WORLD by GROUP NO.3

In our ideal world there would be no illnesses or diseases.
Old people would die peacefully in their sleep.
There would be no litter and no murderers.
No-one would be poor, everyone would have money and their own home.
Everyone would be helpful and pleasant in our world, and there would be no crime.
Cutting down the rain forest would not be allowed because this is cruel to the animals who live there.

Comparing the responses to Activity No.4.1a with those from Activity No.4.2 the major difference seems to be in the absence of any mention of items linked to concrete things for themselves or activities which they could engage in.

The process of group discussion and the adoption of unanimous voting has resulted in lack of acceptance of purely personal elements in the Group Utopia.

The focus is entirely on environmental issues with social significance.

Research Activity No 4.3: Our Class Ideal World

Each group's Ideal World was photocopied so that all the children had access to all the accounts. All the children were together in their classroom with the researcher. They were asked how they could decide upon a Class Ideal World, options given were:-

- by unanimous vote as in the group accounts
- by majority vote
- any other method of decision-making they wished to suggest.

All the children wished the decisions to be made by a unanimous vote, but that no group could vote for their own suggestions since one child pointed out that groups were of different sizes and this would therefore affect the final choices.

The result of Activity no.4.3 was Lapwing's Ideal World, reproduced below.

OUR IDEAL WORLD by Lapwing Class

In our ideal world no-one would be rich and no-one would be poor.
There would be jobs for everyone.
No-one would be mean, and there would be no robberies.
Old people would die peacefully in their sleep.
There would be no litter, and no murderers.
Everyone would be helpful and pleasant in our world.
There would be no crime.
Cutting down the rain forest would not be allowed because this is cruel to the animals who live there.
Fox hunting would be banned.
The world would be a peaceful place.
We would stop using up all the world's resources.
No oil would be dropped into the sea again.
We would plant many more trees and plants.
Everyone would have enough crops to eat.

Comparing this account with the group and individual accounts, it appears that the exclusion of individual, personal gain, and the focus on environmental and social concerns is extenuated. The nature of the environmental issues are perhaps less controversial or specific than in some of the group accounts, since differences in focus and concern became clear in the voting pattern.

The clear political orientation, clear acceptance of an extreme socialist Utopia is perhaps one of the more surprising elements from some of the children of Thatcher's children!

Research Activity No 4.4: What needs to happen to create 'Our Ideal World'

In this activity the same groups who had produced their Group Ideal World earlier were asked to use their Class Ideal World to answer the question **'What needs to happen to create our 'Ideal World?'**

Using the Lapwing Class version of their Ideal World. The children discussed each item within the 'Ideal World' and as a group agreed on the following changes which would have to be made by dictating their views to the researcher for recording on their class computer:-

GROUP NO.1 -

Things which would have to happen to create our 'Ideal World'

1.In our ideal world no-one would be rich and no-one would be poor.

People would have to change, they would have to share, they would have to learn not to be nasty or greedy, and would have to change their bad behaviour and bad attitude.

2.In our ideal world there would be jobs for everyone.

People would not have to be greedy by having two jobs, we would need to make more buildings for people to work in. We would need to share jobs and create more sorts of jobs. We could pay everyone the same no matter what job they did there would need to be more variety of selection of jobs for everyone if everyone was rich no-one would need to have a job.

3.In our ideal world no-one would be mean and there would be no robberies.

Everyone would have to stop their bad behaviour. Everyone would have to realise they are wrong and try to change. People would have to respect each other and their property. If anyone is mean we would have to talk to them and lock up anyone who commits a crime until they change their attitude. Shops could fit more alarms. We could have more Police patrolling the streets, and people could fit better burglar alarms.

4.In our ideal world old people would die peacefully in their sleep.

We would need to get rid of illness. We could all try to help the elderly more. No-one would be allowed to kill old people on purpose. Everyone would have to leave old people in peace. We would build more homes for old people. We would develop more medicines for every illness. We could make homes safer for old people so that they won't fall and hurt themselves. We could make life easier for old people making electric wheelchairs and lifts so they could get around their homes. We could make sure that old people do not have to live on their own, everyone would have someone to take care of them.

5.In our ideal world there would be no litter and no murderers.

Everyone could pick up their litter. We would make more litter bins and put them all around the shops. We would cut down on packaging and destroy all weapons. Everyone would have to care about the environment. We could all carry personal alarms to be safer.

6.In our ideal world everyone would be helpful and pleasant.

We would have to stop all bad behaviour. Everyone would have to be good, they would need to be brought up to be kind and helpful, so they would be kind not cruel. Everyone would have to respect each other.

7.In our ideal world there would be no crime.

People would have to think before they committed crime. We would need to get rid of expensive jewels so there wouldn't be anything to steal. We could lock people up for as long as it takes to learn their lesson. If you don't do crime you don't do time.

8.In our ideal world cutting down the rain forests would not be allowed because this is cruel to the animals who live there.
We could stop selling axes and machine axes. We could make it a crime to cut down trees unless you plant another one to replace it. We could stop people going into the forest at night. We could cut down on wood furniture and use only recycled paper. Everyone would need to realise what damage we are doing so that we will all look after rain forests.

GROUP NO.2

Things which would have to happen to create our Ideal World

1.In our ideal world no-one would be rich and no-one would be poor. (a)Rich people could give some of their money to the poor and to charity so that we can begin to share it out
(b)We could stop the National Lottery, so that no-one would get rich by winning.
(c)We could make all wages the same.
2.In our Ideal world there would be jobs for everyone. (a)If no-one was poor, they wouldn't need to work.
(b)We could build larger factories so that there was enough space for everyone to work in.
(c)The government could give money to re-open the pits, so miners could leave the jobs they have now and go back in the pits and other people could do those jobs the miners leave.
(d)We could help to give people confidence so that they would not be afraid when they go for job interviews.
3.In our Ideal world no-one would be mean, and there would be no robberies.(a)We would need clear rules about how people should behave, like who should go through doors first.
(b)We could have cameras in every Bank to catch robbers.
(c)We could punish criminals more.
(d)We could change prisons so that criminals are kept apart from each other so that they don't learn more about crime whilst they are in prison.
(d)We could have a school for thieves to teach them how to be kind.
4.In our Ideal world old people would die peacefully in their sleep.(a)We could stop selling cigarettes so that people wouldn't die of cancer.
(b)We could get rid of guns so people wouldn't be shot
(c)We could stop drinking so that people won't die from drink.
(d)People could use more sun-tan lotion so that they don't get skin cancer.
5 In our Ideal world there would be no litter, and no murderers.
(a)We could get more bins, and larger bins.
(b)We could ban sweets so that we don't have wrappers.
(c)We could use things which can burn so that no litter is left.
6. Everyone would be helpful and pleasant in our world.
(a)We could help mothers to teach their babies how to behave themselves.

GROUP NO.3

Things which have to happen to create our Ideal World

1.In our ideal world no-one would be rich and no-one would be poor.

(a)We could abolish betting and gambling so that no-one would get rich by winning.

(b)All wages could be the same so that no-one would be paid more than anyone else.

(c)Supermarkets could use big containers for things like sugar and salt and people could take their own small containers to buy what they need and save packaging.

(d)We could ban football and save the money which is paid to football players and give that money to the poor.

2.In our ideal world there would be jobs for everyone.

(a)People could take turns to do jobs.

(b)We would invent more jobs.

(c)We could build more factories for people to work in.

3.In our ideal world no-one would be mean, and there would be no robberies.

(a)We would rinse people's mouth out with washing up liquid if they swear.

(b)We would all try to do something kind - like helping an old person across the road.

(c)We could give more punishment to criminals.

(d)We could get more security like metal doors for houses and burglar alarms.

4.In our ideal world old people would die peacefully in their sleep.

No responses were given to this issue by this group.

5.In our ideal world there would be no litter, and no murderers.

(a)We could have people patrols to catch anyone dropping litter.

(b)We could have larger fines for people caught dropping litter.

(c)We could have more bins.

6.In our ideal world everyone would be helpful and pleasant.

(a)We could have special courses to learn how to be nice and polite.

(b)We could build machines to register each time someone swears, and they would have to go to a special centre for punishment.

7.In our ideal world there would be no crime.

(a)We could have more punishment.

(b)We could punish the criminals by doing the same to them as they have done to the victims.

8.In our ideal world cutting down the rain forest would not be allowed because this is cruel to the animals who live there.

(a)We could have a conservation area in each city where trees could not be cut down.

(b)For every tree which is cut down we could plant a tree to replace it.

9.In our ideal world fox hunting would be banned.

(a)We could ban guns and knives.

10.In our ideal world it would be a peaceful place.
(a)We could make deals with countries to supply food if they stop fighting.
(b)We could have one special day when noise would be allowed like parties and discos, but noise wouldn't be allowed on any other day.
11.In our ideal world we would stop using up all the world's resources.
(a)We could use large containers to save packaging.
(b)We could use rationing so that we use less of everything.
(c)We could switch off lights, use candles - learn how to make wax ourselves so that we don't have to buy anything.
(d)We could change everything to solar power.
(e)We could only allow dead trees to be chopped down.
(f)We could make sure that every car was filled with passengers for every journey.
(g)We could change all batteries to be solar powered.
12.In our ideal world no oil would be dropped into the sea again.
(a)We could use rape seed oil
(b)We could transport oil by air not sea.
(c)We could build solar powered cars.
13.In our ideal world we would plant many more trees and plants.
(a)We could ask every house to plant one tree and one plant.
(b)We could ask every house to plant five trees.
14.In our ideal world everyone would have enough crops to eat.
(a)We could send tomato seed to places where they haven't got any.
(b)We could give poor countries money for seeds.
(c)We could give poor countries nets to catch fish.

The breadth and creativity of some of these responses is surprising. It is clear that the groups were aware of the need to change attitudes, values and beliefs, as well as actual behaviour. The lists contain many very practical suggestions, some of which have been included in adult agendas for environmentalist action.

The list is particularly useful as an indication of the children's cultural filter which seems to have a quite distinct character. The rights of the individual seem to have no place in the socialist framework outlined.

Research Activity No.5: A Pill to Stop You Dying

This involved the children visiting the University Campus.

The day was divided into two elements. In the morning the children were asked to share their experiences of Environmental Education with the students, as visiting experts five groups of six children formed groups to teach the students about each environmental area within the school. In the afternoon the roles were reversed and the students provided tasks for the children. Research activity number 5 is the one relevant to this study. The task investigated whether the views expressed by Mary Catherine Bateson(1984) outlined earlier, namely that:-

> *"We will live at cybernetic peace with our environment only when we can acknowledge our own death...Western individualism breaks up the circuits - the circuits of birth and death."[Bateson,M.C.(1984)p.54]*

actually applied to children.

The children were asked to imagine that a pill had been invented which could stop them from dying. They were asked if they would take this pill, and how things would be different as a result of the invention.

24 of the children stated that they would not take the pill, and 9 of the children stated that they would take the pill.

The following are the reasons given by the children for their decisions:-

TABLE NO.4.24

PUPIL RESPONSES TO ACTIVITY NO.5 - THE DEATH PILL

Reasons for NOT taking the pill	Frequency
I would not like to live forever	5
Don't want to be on the planet when the sun explodes	1
I would not have to pay my bills	1
Wouldn't have to worry about taking care of yourself	1
I might get bored	4
Over-population:	
lack of space, world too full, too crowded	18
lack of food and water	4
no room to breathe	1
I want to go to heaven	3
Loneliness,	
left alone when friends die	5
not nice to watch people you love die	2
Become a subject for medical research	1
If you suffer from a disease will suffer all the time	5
Increase in violence if know you won't die	1
You would look really old	1
Everyone has to die	1
No more graveyards or funerals	1
You wouldn't go crinkly	1
no walking sticks	1
No nursing homes	1
No zimmer frames	2
If the world got bad you would live through that	1
World would be horrid because of rubbish	4
No jobs, they would all be full up	2
More crime	1
Not enough police to control crime	1
Too many cars	3
Other people have to live their lives	1

TABLE NO.4.25

PUPIL RESPONSES TO ACTIVITY NO.5 - THE DEATH PILL

Reasons for taking the pill	Frequency of response
I will not want to miss anything	2
I would like to stay with my family and friends.	4
Would see what it's like in the future	2
If you got ill you wouldn't die from the disease	2
If everyone took the pill the world would be full up	2
I want to live for ever	2
Not fair if people die for no reason, or old folk not ready	1
Everyone will go happy and not be sad	1

Interpretation of these responses again presents difficulties. It seems that none of the children considered the possibility of limiting the numbers of new arrivals in order to 'compensate' for the continuing existence of the present population. The majority of responses presumed that over-population would be inevitable.

However, it does seem that death is accepted as part of the cycle of life, in view of the few children who would choose to live forever.

Eternal life does not seem to be attractive to the young.

Indeed curiosity seemed to present something of a two-edged sword. Some children wanted to find out about the future on this planet and others wanted to find out about the after-life. This seemed to make both life and death, or at least heaven, attractive for some of the children.

Chapter 5

Summary/Conclusions

Chapter 5
Summary/Conclusions

The findings of this present study should be placed within the broad perspective outlined in the review of the literature in Chapter 1, which emphasised the importance of understanding children's culture. This concern was placed within the context of 'cultural filtering' which was seen to affect an individual's perception of their environment

This view is supported by Pollard(1985) who concludes his own analysis by highlighting how little adults know about children's culture. He characterises the Primary School as involving the meeting of two separate worlds, those of the adults and those of the children, and emphasises how important it is for teachers to seek to understand the social worlds of the children:-

This may, however, be a rather limited response in the light of the major issues facing us in recent times. It could be argued that rather than merely trying to understand the children's culture in order to devise more appropriate 'coping' strategies we should be learning from that culture and moving towards shared understandings of alternative world views.

It is from this perspective that the present study has been conducted.

It has been found that children's responses to the five stages of research activities could be classified using the analytical frameworks presented by Pepper(1989) outlined on pages 79/80 of this study, along a range of dimensions as summarised below:-

1.Ideological Themes: Eco-centric - Technocentric Dimension

From the responses outlined in Chapter 4, the dominance of ecocentric perspectives is evident. Examples of this ecocentrism were found within each of the Research Activities,

Anthropocentrism was not clearly evident in responses, many respondents believed that animals can think and could feel emotions.

As stated above, the responses could be classified in terms of the ecocentric category but most of the children adopted a view of 'Man apart from nature' rather than 'Man a part of nature'.

Throughout the activities the children identified a wide range of environmental issues. They were less clear about how these issues could be put right, but many responses made clear links between technology and environmental damage.

It also seemed that the children's views did not encompass a technocentric view in which the power to control nature via technology is emphasised. However, there was a distinct separation of humans from the natural world.

.2. Explanations about how society works and how decisions are made: Functionalist/Pluralist - Marxist dimension.

The children showed little understanding about how decisions are made in Society, adopting a view which almost amounted to believing that 'wishing would make it so'.

In terms of the Functionalist - Marxist dimension, the responses indicated a belief in the possibility of continuous reform of the present system for achieving social change. No child recognised the power of vested interests to prevent the types of changes being advocated, believing that changes could come through appeal to people to change their ideas.

3.Fundamental Philosophical Position: determinist - free will dimensions.

Identification of the fundamental philosophical positions within the children's responses shows the dominance of a free will dimension in which human intentionality is central. The limits of environmental constraints on human behaviour were less prevelant. The impact of this philosophical position was a belief in the almost infinite capacity of human beings to overcome environmental problems.

Ecological Morality: Stages of development

The majority of the responses from the children questioned could be classified as being stage 3, 4 or 5 on Kohlberg's classification, as outlined in Chapter 2. The highest number of responses being

classified as Stage 4 which involve an orientation to duty and to showing respect for authority and maintaining the given social order for its own sake. Only one respondent had reached Stage 6 in which reasons were linked to a conscience or principle orientation. However, in view of the age of the children it is perhaps surprising that any response had reached this stage of moral development.

Children's visions of Utopia present a positive and optimistic picture of the way the world could be. High levels of social and environmental awareness were contained in many of the responses. Although many children adopted an ego-centric approach in their initial individual accounts, these became far more ecocentric and altruistic after discussion with their class mates.

Similarly when offered the opportunity of immortality many children rejected this because of the environmental, social and psychological consequences which they saw as outweighing any advantages.

In summary, it would seem that the 'cultural filter' through which the children are perceiving their environment leads many to recognise the connection between humans and animals, and the natural world, but which places themselves more as apart from nature rather than a part of nature.

The need identified within the ecological literature to change the values upon which our society is based would seem to be inappropriate to the social worlds of children. The values portrayed by the children within this study are already clearly ecocentric. It might well be argued,

therefore, that adults could learn much from children about ecologically viable attitudes and values.

The lack of technocentrism could be interpreted as being due to a lack of understanding or knowledge of the role of technology and the possibilities of technology. Once again, if this is so, rather than seeing this as a situation to be remedied it may be more appropriate to re-examine the ways in which children are introduced to both Science and technology which incorporate many of the attitudes and values which have contributed to our ecological crisis.

In line with the writings within the radical 'De-Schooling' framework referred to earlier, it may be that there is a need for fundamental changes in our approaches to 'Education'. As Holt (1977) argued:-

> *"...the trouble with S-chools is not a matter of means but of ends. The change I seek is not at bottom about gerbils or pond water or Cuisenaire rods or better reading programmes. It is about a different view of human beings, and the nature and needs of children.."*
> *[Holt,J.(1977)p212]*

Holt claims that schools have imposed an alternative and destructive definition of 'Education' :

> *"...as something that some people do to others for their own good, moulding and shaping them, and trying to make them learn what they think they ought to know. Today, everywhere in the world this is what 'education' has become and I am wholly against it.."[Holt,J.(1977)p7]*

Indeed he recognised that he had wasted many years working on the assumption that Education could be made more effective, be reformed or humanised, and was now of the opinion that: this cannot be done

because it denies the right to control our own minds and thoughts, which he sees as the most fundamental of all human rights. He claims we should all have the right to decide how to explore the world, and how to find and make meaning of our lives, and this should not be imposed in the name of 'Education'. However, he believes that teachers can do relatively little, and that the onus is primarily on the learner,

> *"The teacher's work, therefore, begins when that other person asks a question. No question, no teaching. But it is important to understand what a teacher can and does with his answers, and what he cannot do. He does not give knowledge. Knowledge cannot be given.. If you ask me a question all I can do in my reply is try to put into words a part of my experience, but you only get the words, not the experience. To make meaning out of my words, you must use your own experience."[Holt,J.(1977)p88].*

Holt hopes that this situation will lead to more people asking more basic questions about 'Education', such as:

> *"Why should it cost so much? Why should all people be taxed to support a system from which the children of the rich and affluent gain the most? What kind of race are the schools running, that poor children always seem to lose and rich children to win? Why don't we share knowledge and skill as widely and freely as possible, instead of so often putting on it the highest price tag?"[Holt,J.(1977)p214]*

But, perhaps even more importantly that children be given the opportunity to ask their own questions. Holt argues that teaching people to give right answers to questions is relatively easy, but it is more difficult to teach anyone how to ask the right questions. However, he does not see this as a major difficulty since he argues that human beings are naturally able to do this, almost from birth. All that teachers

need to do is to answer those questions, or help them to find their own answers.

However, for Holt there is something even more important in relation to the asking of questions, namely that this is the starting point of all intellectual activity which is never shown in school textbooks.

> *" They tell us right answers, but very rarely the questions that first led people to look for those answers. So we learn very little about the kinds of good questions that important thinkers have asked. Someone wrote that Einstein's work on relativity began with two questions he asked himself while quite young. One was, what does it mean to say that two things happen at the same time? The other was, what would it be like to ride through space on the front end of a beam of light, what would we see? Not many Science teachers, I suspect, have heard of these questions. If they did, many would say that these questions were not serious, not 'scientific'...Most children who asked questions like these in school would get more criticism than encouragement. Perhaps Einstein was himself such a child, his teachers thought him dull."[Holt,J.(1977)p99]*

Chopra (1993) points the way towards a more questioning approach to Science, presenting an alternative paradigm, challenging the dominant world view which limits individual perception.

Chopra(1993) identifies the source of this limited world view as conditioning by parents, teachers and society which results in an induced fiction in which he claims we have collectively agreed to participate. In order to move beyond the limitations of this shared perspective Chopra argues for the need to discard ten assumptions about who we are and what the true nature of the mind and body is.

"These assumptions form the bedrock of our shared world view. They are:

1. *There is an objective world independent of the observer and our bodies are an aspect of this objective world.*
2. *The body is composed of clumps of matter separated from one another in time and space.*
3. *Mind and body are separate and independent from each other.*
4. *Materialism is primary, consciousness is secondary. In other words we are physical machines that have learned to think.*
5. *Human awareness can be completely explained as the product of biochemistry.*
6. *As individuals, we are disconnected, self-contained entities.*
7. *Our perception of the world is automatic and gives us an accurate picture of how things really are.*
8. *Time exists as an absolute, and we are captives of that absolute. No-one escapes the ravages of time.*
9. *..Our true nature is totally defined by the body, ego and personality. We are wisps of memories and desires enclosed in packages of flesh and bones.*
10. *Suffering is necessary - it is part of reality. We are inevitable, victims of sickness, ageing and death.."*

[Chopra,D.(1993)p4]

Chopra (1993) argues that these assumptions actually define our world from within a scientific perspective which overlooks important aspects of humanity. He suggests that we need to adopt a completely different world view because these ten assumptions do not accurately describe reality, but are inventions of the human mind. We need to replace the old assumptions with a more complete and expanded version of the truth, whilst recognising that even the new paradigm suggested still

represents creations of our mind, but they allow much more freedom and power. The new assumptions are:-

> *"The physical world, including our bodies, is a response of the observer. We create our bodies and we create our experience of our world....*
> *The mind and body are inseparably one. The unity that is "me" separates into two streams of experience. At a deeper level, however, the two dreams meet at a single creative source. It is from this source that we are meant to live.*
> *The biochemistry of the body is a product of awareness. Beliefs, thoughts and emotions create the chemical reaction that uphold life in every cell.*
> *Perception appears to be automatic, but in fact it is a learned phenomenon. The world you live in, including the experience of your body, is completed dictated by how your learned to perceive it. If you change your perception, you change the experience of your body and your world....*
> *Although each person seems separate and independent, all of us are connected to patterns of intelligence that govern the whole cosmos. ...*
> *Time does not exist as an absolute, but only eternity. ...What we call linear time is a reflection of how we perceive change..."*
>
> *These are vast assumptions, the makings of a new reality...The seeds of this new paradigm were planted by Einstein, Bohr, Heisenberg, and the other pioneers of quantum physics, who realised that the accepted way of viewing the physical world was false. Although things "out there" appear to be real, there is no proof of reality apart from the observer. No two people share exactly the same universe. Every world view creates its own world." [Chopra,D.(1993)p.7]*

Views of this kind could, perhaps, be seen as extreme, even fanciful. However, the worst criticism of all in this age of Science and Technology, would be that they are 'unscientific', and in some senses they are, in that they involve an acknowledgement of the advances in Science which require a re-evaluation of what we understand by that

term. In particular they focus upon the questions raised by Quantum Mechanics.

Richard Feynman(1985) the Nobel Prize winner and a central figure in the changes within Physics underlying the new paradigm explains the essence of Quantum Mechanics, and points towards some of the limitations.:-

> *"The word 'quantum' refers to this peculiar aspect of nature that goes against common sense. I would like to impress you with the vast range of phenomena that the theory of quantum electrodynamics describes. It's easier to say it backwards...the theory describes all the phenomena of the physical world except the gravitational effect...and radioactive phenomena ..While I am describing to you how Nature works, you won't understand why Nature works that way. But, you see, nobody understands that...in showing you that the price of gaining such an accurate theory has been the erosion of our common sense. ...That we must do in order to appreciate what Nature is really doing underneath nearly all the phenomena we see in the world."[Feynman,R.(1985)p.119]*

Penrose(1989) places Feynmann's work within a very broad perspective, linking Physics with Psychology and Philosophy, denying the rejection of an actual reality 'out there', and considering what Physics and Mathematics can tell us about the nature of the mind and consciousness. This has become a matter of particular urgency in these times of modern computer technology when research, for example, into Artificial Intelligence leads to the development of more and more complex machines which raise very fundamental questions; about what it really means to be human, and whether mechanical devices could ever think, experience feelings or be said to have a mind. These questions touch on the very deepest issues of philosophy

"What does it mean to think or to feel? What is a mind? Do minds really exist?...Are minds subject to the laws of physics? What indeed, are the laws of physics?...What is truth? How do we form our judgements as to what is true and what is untrue about the world?..."
[Penrose ,R.(1989)p129]

Whilst recognising the dramatic achievements of science, particularly the remarkable levels of accuracy of physical theories, Penrose (1989) raising questions about the basic assumptions underlying the Classical approaches to Science. He argues that just as many aspects of our physical reality require the theories of quantum physics to explain them, so the phenomenon of consciousness needs this alternative to classical approaches.

" Perhaps our minds are qualities rooted in some strange and wonderful feature of those physical laws which actually govern the world we inhabit...Perhaps, in some sense, this is 'why' we as sentient beings, must live in a quantum world, rather than an entirely classical one.... Might a quantum world be required so that thinking, perceiving creatures, such as ourselves, can be constructed from its substance? Such a question seems appropriate more for a God, intent on building an inhabited universe, than it is for us! ...We must indeed come to terms with quantum theory - that most exact and mysterious of physical theories - if we are to delve deeply into some major questions of philosophy; how does our world behave, and what constitutes the 'minds' that are, indeed 'us'? Yet, some day science may give us a more profound understanding of Nature than quantum theory can provide. It is my personal view that even quantum theory is a stop-gap, inadequate in certain essentials for providing a complete picture of the world in which we actually live. "[Penrose,R .(1989)p.291]

Indeed this view echoes that of Einstein expressed in 1927 when the fifth Solvay conference focused on the new ideas of quantum mechanics, when he stated that,

> *"I don't deny that quantum mechanics is useful, up to a point, but I am convinced there is a deeper theory that will replace the uncertainty at the centre of it. As I told Niels Bohr, God does not play dice with the universe.: [Penrose,R.(1989)p.17]*

These two conflicting perspectives present fundamental dilemmas in terms of the scientific endeavour, **that is the question of what Science is about.**

Einstein devoted his life, after the development of the Theory of Relativity to the search for a single over-arching explanation, or what has come to be called Unified Field Theory, and this task is still being pursued by devoted followers. The belief in there being an underlying order which can provide one answer to all questions is a tempting goal.

However, the inheritors of the quest for understanding of the nature of the Universe have to come to terms with the limitations of order and predictability at the heart of quantum physics, which leads to questioning all notions of a solid reality.

The effects of measurement on the phenomenon being measured have long been central to Social Science, it seems that this same issue is now seen as central to Physics when the stability of mathematics points out the instability of the physical world.

Penrose concludes that understanding will come with a return to the perspective of childhood,

> *"Children sometimes see things clearly that are indeed obscured in later life. We often forget the wonder that we felt as children . Children are not afraid to pose basic questions that may embarrass us, as adults, to ask. What happens to each of our streams of consciousness after we die; where was it before each was born; might we become, or have been, someone else; why do we perceive at all; why are we here; why is there a universe here at all in which we actually be? ... Perhaps I am actually living backwards in time, with my stream of consciousness heading into the past, so my memory really tells me what is going to happen to me rather than what has happened to me....For the answers to such questions to be resolvable in principle, a theory of consciousness, would be needed"*
> *[Penrose ,R.(1989)p.580]*

Perspectives of this type change the whole focus of scientific enquiry, and present a re-definition of science itself. The separation of traditional subject boundaries melt in the quantum world which has so far defied human understanding, but presented fascinating possibilities for re-thinking and re-feeling our pursuit of knowledge.

With this re-definition in mind it would be appropriate to consider the questions raised by the present study, and to outline some suggestions for further research.

Suggestions for further research.

- **processes in the generation of questions**

It is tempting to move into consideration of what a theory of consciousness identified by Penrose(1989) might be, but perhaps it is not necessarily the answers to those questions which need initial attention. **It may be that the processes in the generation of the questions is the crucial issue for exploration.**

- **children's questions about the world**

Having reached this point it is clear that there is a need to investigate the questions which children themselves raise about the world.

However, consider the ways in which those questions could be elicited. The provision of tasks in school, the recording of discourse within schools, the interviewing or investigation of children out of school, even within their own home, all of these methods are in effect subject to the same problems of measurement faced by quantum physics. The social context of the investigation will profoundly affect the questions provided by the children.

The social distance between adult and child, which to some extent can be minimised, as in the present study, by enlisting the help of other children, but this in turn influences responses. The contamination of the data by the processes of measurement cannot be ignored. The operation of relationships of power which are inherent in adult-child

interactions needs to be given serious consideration, not only in the development of research methodology, but in the very ways in which these may limit the posing of questions perhaps relatively unfettered by the restraints of 'scientific' rationality.

- **Comparisons between children's cultures in different societies, and between children's cultures and adult cultures.**

A focus on ways in which a greater understanding of the culture of childhood can be developed poses the question of the similarities between children's cultures in different adult cultures. Pollard(1985) seems to assume that children's cultures do differ from each other, particularly since he deliberately excluded consideration of the children from Asian backgrounds from his own sample because of "time constraints". Whereas Davies(1982) considers that children's cultures are more alike than they are different, in describing a study of children in Australia, she states that:

> *"...there are many parallels in children's culture in Australia, Britain and North America, and that being a child is more significant than belonging to a particular country or a particular age group, or even a particular social class."[Davies,B.(1982)p.33]*

These two conflicting views lead to very different starting points for the development of a pedagogical axiom. In the first case the link between adult and child culture is clear and direct being more alike than different from the adult culture. Whereas in the second case each cultural group will, in effect, have similar cultural material with which to

begin their work of socialisation, and that will be more different from the adult culture than it is like them.

However, in both cases the end result is inclusion into adult culture. Indeed even the seemingly radical exponents of Deep Ecology such as LaChapelle(1988) argue that children need to be included into adult culture, that they need to see themselves as "part of the story", if alienation is to avoided. Admittedly "the story" to which LaChapelle refers is that of appreciation and involvement in Nature through ritual and poetry, which is hardly the mainstream "story" of adult culture in most Western societies at the present time. There is an underlying paternalism in the notion that children need to be included in the world of adults; similar to the theorists who identified linguistic and cultural deprivation among groups who were fully-functioning members of cultural and linguistic group different from those of the researchers.

Recognition of the potentially disastrous ecological implications of some of our dysfunctional adult cultural values must surely require a serious re-evaluation of educational practices intended to transmit those values to the young.

- **effects of globalisation on cultures**

The impact of a global economy upon the development of cultural filters is an area for further investigation. Much has been written about the role of multi-national companies who have dramatically spread manufacturing and marketing into virtually all parts of the world. The

power of such companies to determine the types and numbers of jobs available in different parts of the world is well documented in terms of movement to cash crop economies and dependence upon 'third world' economies on 'developed' economies. It does seem that in some ways this has included some convergence of cultures, few communities have escaped the influence of western consumerist values. It is questionable, however, the extent to which this is leading to the development of a global cultural filter, or whether the needs of multi-national companies to ensure that some 'traditional' cultural values continue to provide a compliant workforce provides a buffer against this process of globalisation.

- **the relationships between values and actions.**

However, it should not be assumed that high ideals, the use of ecologically friendly rhetoric and other such laudable goals will necessarily lead to 'right' action. The actions of the alleged Unabomber in the United States, illustrate this point particularly graphically. A brilliant mathematician seems to have rejected a promising career in research and teaching and advocated a revolution against the industrial system by sending bombs to scientists, researchers and others in fields such as computers and genetics.

In an article in the Boston Sunday Globe April 7, 1996, the suspect is described by his University Professor as follows:

> *"He stood out very quickly because he would ask very penetrating questions. He wanted to understand everything in detail...He wasn't satisfied with any sort of intuitive argument."[Boston Globe April7,1996 p.25]*

However, he chose to resign his post as an Assistant Professor of Mathematics, stating that Maths was a 'surrogate activity' not connected with the real world or real problems. He argued that scientists address non-problems, moving on from one problem to the next. Advocating a society with no government, he can be seen to be merely one part of a long tradition ,

> *"Throughout history there have been idealists, dreamers and utopian thinkers who advocated a state of anarchism,..a few have taken it further than just talk. ..He[the Unabomber] wants to get rid of it all - shopping malls, the 9-to-5 grind, both right and left-wing politics - everything. He wants to halt technology and create a simple society of small villages...While they categorically reject the Unabomber's methods, there are many people who share his scepticism, even his abhorrence of technology...He is echoed in different ways by Stephen Talbott ("The Future does not compute") Clifford Stoll ("Silicon Snake Oil") as well as the durable Jeremy Rifkin and a number of more tender-hearted environmentalists who still want to take society back to Walden Pond."[Yemma,J.The Boston Globe,April 7 1996,p.24]*

Thus, 'right' values need not necessarily lead to 'right' action.

Indeed within this study in Chapter 1 many of the writers whose ideas were used to support the Unabomber's attacks, have already been referred to. However, despite much agreement on the ends of cultural and technological change within environmentalist writings, few would endorse the violent means adopted by the Unabomber.

Indeed it can be argued that the way towards the ends is as important as the ends themselves, since the ends cannot be achieved without the adoption of appropriate means.

It is necessary to recognise the role of culture, particularly when this is not ecologically viable. If we do not learn about the interrelationships between humans and the Universe, we become disconnected from 'Nature' and develop ways of thinking about the world which make the task of understanding what we are, and why we are here much more difficult. This point leads me into the linking of the personal and the public, and to the final suggestion for further research.

- **the effects of the research process upon the researcher.**

Few research studies include any consideration of what could be thought of as the second level of learning which takes place during the process of a research study. The usual pattern is to share with the reader the knowledge developed about the issues being investigated. In the case of this research study that would be the understandings of children's cultural filters.

I recognise that some studies do focus upon the researcher's learning. Indeed wiithin an 'action' research perspective this is the starting and finishing point. The assumptions, values, attitudes and beliefs of the practitioner are an essential element of the investigation. However, this focus is upon one aspect of the researcher as a practitioner, the 'public' person engaging in both research and practices such as teaching, counselling, or other such activities. The account is of the effects of the research process upon the practice of the researcher. There is, however, a deeper level of learning which could be thought of as perhaps more 'private' than 'public'.

Children make less of a distinction between their public and private selves. The children with whom I have worked taught me not only about their cultural filters, but about the fun of our relationship with the world and with each other. The excitement they felt, for example, at watching the chickens they had helped to hatch, the pleasure in visiting a University and sitting in a lecture theatre re-awakened those emotions in myself.

In the process of learning about children's cultural filters I have also been learning about my own cultural filter. In reading about Deep Ecology I have learned to ask deeper and deeper questions of myself. The philosophical questions raised in, for example, Sophie's World, referred to in Chapter 1 required an examination of my own views on the meaning of life and death, and led me to consider the contributions made by Philosophers to answering those questions. I have raised these same questions with student teachers and been greeted with enthusiasm, interest and genuine dialogue. I learned that the timeless and fundamental nature of these questions and issues had not been a central feature of my cultural filter.

However, the exploration of Quantum Physics was perhaps the most enlightening element of the learning process for me. As a female from a working class background I had learned that I was not clever enough to understand certain areas of knowledge. Science, Mathematics and Physics were 'black holes' within my cultural filter. However, in the process of this study I have read and understood some fascinating aspects of Quantum Mechanics. I cannot claim to have become a Physicist and certainly not a Mathematician, but these are no longer 'no

go' areas for me, and have become tools which I can use to begin to ask different sorts of questions and understand myself in different kinds of ways.

At the beginning of this research study I was interested in understanding more about how children saw the world and their place within it. My focus was narrowly upon Ecological concepts. As the research process progressed, however, I found this focus broadening to link Ecology with Science, with Psychology, and with Philosophy. The linking of subject areas was accompanied by a recognition of my own involvement in the learning process, the broadening of my own sense of self. This deeper level of understanding is rarely mentioned by researchers who limit their accounts to the 'public' knowledge and so do not share the second level of learning. I recognise that this sharing is extremely difficult, and that in order to engage in this process the researcher has to be prepared to merge their 'public' and 'private' selves in the way children are willing to do.

Indeed this point, too, had been made by Einstein who disregarded cultural pressures to follow his personal quests. Describing how he achieved this he stated that,

> ***"My secret is I remained a child. I always asked the simplest questions." Einstein***
>
> *[Millson,P. and Jones,P. 1996 Horizon.Einstein Text adaptd from programmes transmitted 17 and 18 March 1996,,British Broadcasting Corporation,London.*

REFERENCES

Adams,R.1973 Watership Down, Puffin,London.

Astington,J.W.,Harris,P. & Olson,D.R.(eds) 1988 Developing Theories of Mind, Cambridge Unversity Press, Cambridge.

Attfield,R. 1983 'Christian Attitudes to Nature; in Journal of the History of Ideas 44(3).

Barbour,I.G.(ed.)1973 Western Man and Environmental Ethics. Attitudes Toward Nature and Technology, Addison-Wesley,London.

Barrow,R. 1975 Moral Philosophy for Education, Allen & Unwin,London.

Barrow,R.& Woods,R.1988 An Introduction to Philosophy of Education, Routledge,London.

Baruch,E.H. 1984 'Introduction' Rohrlich,R.and Baruch,E.H. 1984 Women in Search of Utopia. Mavericks and Mythmakers, Schocken Books, New York.

Bateson,G. 1972 Steps To An Ecology of Mind: collected essays in Anthropology. Psychiatry. Evolution and Epistemology, Intertext,London.

Bateson,M.C. 1984 With a Daughter's Eye, William Morrow & Co.,New York.

Bell,B. & Barker,M. 1982 'Towards a scientific concept of 'animal''. in Journal of Biological Education(1982) 16(30.

Berger,P.L. & Luckmann,T. 1980 The Social Construction of Reality: a Treatise in the Sociology of Knowledge, Irvington Publishers, New York.

Bruner, J. 1966 Man: A Course of Study Curriculum Development Association.

Bruner,J. 1986 Actual Minds,Possible Worlds, Harvard University Press,Boston,Mass.

Bruner, J. 1996 The Culture of Education, Harvard University Press,Cambridge,Mass.

Burris,V.i., 1976 A Child's Conception of Economic Relations: A Genetic Approach to the Sociology of Knowledge, Unpublished doctoral dissertation, Princeton University.

Carson,R.1965 Silent Spring, Penguin, London.

Cherrett,J.M. 1989 'Key Concepts: the results of a survey of our members' opinions on Ecological Concepts' in Hale,M.(ed) 1993 Ecology in Education, Cambridge University Press, Cambridge.

Cohen,L.& Manion,L.1989 Research Methods in Education, Routledge, London.

Davies,B. 1982 Life in Classroom and Playground: the accounts of Primary School Children, Routledge & Kegan Paul, London.

Department for Education 1990 Curriculum Guidance No.7: Environmental Education, Her Majesty's Stationery Office, London,

Department for Education 1995 Programmes of Study for Science, Her Majesty's Stationery Office, London.

Department for Education 1995 Programmes of Study for Geography, Her Majesty's Stationery Office, London

Devall,B.& Sessions,G. 1985 Deep Ecology. Living as if Nature Mattered, Gibbs Smith, Salt Lake City.

Di Chiro,G. 1987 Environmental Education and the question of gender, Deakin University Press,

Donaldson, M. 1978 Children's Minds, Fontana, London.

Duska,R & Whelan,H. 1977 Moral Development: a Guide to Piaget and Kohlberg, Gill & Macmillan, Dublin.

Feynmann,R. 1990 Q.E.D. The Strange Theory of Light and Matter, Penguin,London.

Fox,K.A. 1978 'What Children bring to School: the Beginnings of Economic Education', in Social Education Oct.1978.

Fox,W. 1990 Towards a Transpersonal Ecology. developing new foundations for environmentalism, Shambhala,Boston,Mass.

Friere,P. 1972 Pedagogy of the Oppressed, Penguin,Harmondsworth.

Gaarder,J. 1995 Sophie's World: a novel about the history of philosophy, Phoenix,London.

Glaser,B.G. & Strauss,A.L. 1967 The Discovery of Grounded Thoery: Strategies for Qualitative Research, Atline Publishing, New York.

Grahame,K. 1959 The Wind in the Willows, Methuen, London.

Grange,J. 1977 'On the Way Towards Foundational Ecology; in Soundings 60(1977).

Greenstein,F. 1965 Children and Politics, Yale University Press, Hartford.

Hale,M. 1993 'Ecology and Environmental education in Schools in Britain' in Hale,M.(ed) 1993 Ecology in Education, Cambridge University Press, Cambridge.

Hockey,J. 1990 Experience of Death: An anthropological account, Edinburgh University Press, Edinburgh.

Holt,J. 1977 Instead of Education. Ways to help people do things better, Penguin, Harmondsworth.

Illich,I. 1971 Deschooling Society, Calder and Boyars,London.

Jackson,R. 1971 'The Development of Political Concepts in Young Children', in Educational Review Vol.14(1971)53

Jahoda,G. 1959 'Development of the Perception of Social Differences in Children from 6 to 10' in British Journal of Psychology, Vol.50.

Jeans,D. 1974 'Changing Formulations of the Man-Environment Relationships in Anglo-AmericanGeogaphy' in The Journal of Geography 1974 Vol.73, Part 3.

Johnson,T.W. 1984 Philosophy for Children: An Approach to Critical Thinking. Phi Delta Kappa Educational Foundation, Bloomington, Indiana.

Kohlberg,L. 1968 'The Child as a Moral Philosopher', in Psychology Today, Vol.2.1968

Kumar,K. 1987 Utopia and Anti-Utopia in Modern Times, Blackwell,Oxford

LaChapelle,D. 1988 Sacred Land Sacred Sex. Rapture of the Deep. Concerning Deep Ecology and Celebrating Life, Kivaki,Durango.

Lakoff,G. & Johnson,H. 1980 Metaphors we live by, University of Chicago Press, Chicago.

Luhmann,N. 1985 Ecological Communication, Polity Press, Cambridge.

Marsh,C. 1987 The Devising and Application of a Scale for the Analysis of the use of Social. Economic and Political Concepts by Upper Primary School Pupils, Unpublished M.Phil.thesis.

Mead,M. 1970 Culture and Commitment. a study of the generation gap, Bodley Head,London.

Millson,P. and Jones,P.(eds) 1996 Horizon. Einstein Text adapted from the programmes transmitted 17 and 18 March 1996, British Broadcasting Corporation, London.

Milne,A.A. 1926 Winnie the Pooh, Methuen,London.

Naess,A. 1985 in Devall B. & Sessions,G.Deep Ecology: Living as if Nature Mattered. Gibbs Smith, Salt Lake City

Parker,D. 1990 'Scientism is chokng the primary curriculum' in Primary Science Review No.12 Spring 1990.

Pearce,J.C. 1979 Magical Child: rediscovering nature's plan for our children, Paladin,London.

Pearson,C.S. 1984 'Of Time and Revolution: Theories of Social Change in Contemporary Feminist Science Fiction' in Rohrlich,R. and Baruch,E.H.(eds) 1984 Women in Search of Utopia, Schocken Books, New York.

Penrose,R. 1989 The Emperor's New Mind: Concerning Computers. Minds and the Laws of Physics, Vintage,London.

Pepper,D. 1989 The Roots of Modern Environmentalism. Routledge,London.

Piaget,J. 1970 Genetic Epistemology, Columbia University Press,New York.

Paiget,J. 1977 The Moral Judgement of the Child, Penguin, Harmondsworth.

Pollard,A. 1985 The Social World of the Primary School, Holt,Reinhart & Winston,London.

Rifkin,J. 1983 Algeny. A New Word - A New World, Viking,New York.

Robotham,I. 1993 'The Role of Ecology in Education, an Australian perspective' in Hale,M.(ed) 1993 Ecology in Education, Cambridge University Press, Cambridge.

Rohrlich,R. and Baruch,E.H.(eds) 1984 Women in Search of Utopia, Schocken Books, New York

Rogers,V. 1968 The Social Studies in English Education, Heinemann,

Roszak,T. 1973 Where the Wasteland Ends, Faber and Faber,London.

Rousseau,J.J. 1911 Emile, Dent, London.

Russell,T. & Watt,D. 1990 Primary Science Processes and Concept Exploration Project Research Reports: Growth, Liverpool University Press, Liverpool.

Sandbach,F. 1980 Environment. Ideology and Policy, Blackwell,Oxford.

Shweder,R.A. 1991 Thinking Through Cultures. Expeditions in Cultural Psychology, Harvard University Press, Boston,Mass.

Skolimowski,M. 1989 Eco-Philosophy, Boyers,London.

Stevens,O. 1982 Children Talking Politics, Robertson,

Taba, H. 1962 Curriculum Development. Theory and Practice, Harcourt, Brace and World,

Toulmin,S. 1982 Return to Cosmology, University of Cambridge Press, Cambridge.

White,E.B. 1963 Charlotte's Web, Puffin,Harmondsworth.

White,L. 1967 'The historical roots of our ecological crisis' in Science,Vol.155,No.3767,March 1967.

Worster, 1985 Nature's Economy: The Roots of Ecology, Cambridge University Press, Cambridge

Yemma,J. 1996 'History shows few anarchists convert words into action' in The Boston Globe April 7,1996.

APPENDIX A

STAGE 1 DATA COLLECTION ACTIVITIES

APPENDIX A

STAGE 1 DATA COLLECTION ACTIVITIES

ACTIVITY NO.1 THE NIGHTINGALE

Read the story of "THE NIGHTINGALE" by Hans Christian Anderson Ask the children to write their responses to the following questions - or record their oral responses on a tape. Please can you encourage the children to make their own individual response, first, then you can use the questions as the basis for a discussion session to compare responses and talk about the story.

Extract from

THE NIGHTINGALE.
by Hans Christian Andersen

"Once upon a time, a long, long time ago, there lived an Emperor in China. The Emperor was very rich and loved beautiful things, so he built the most beautiful palace anyone had every seen, and placed this beautiful palace in the middle of magnificent gardens with sweet-smelling flowers of every colour of the rainbow.

Beyond the gardens lay a dense forest with tall trees. Among the branches of the trees lived a tiny little bird, a Nightingale whose song was so sweet that everyone stopped to listen.

Travellers came from all over the world to admire the Emperor's famous palace and his lovely gardens, but when they heard the Nightingale sing they declared that the Nightingale's song was the best thing of all. When they arrived home they wrote books about the palace - but they never forgot to mention the Nightingale.

One day the Emperor saw one of the books. He nodded with pleasure to read so many fine things about his Palace, but he was very puzzled when he came to the words "But the greatest wonder of all is the song of the Nightingale."

"What," said the Emperor, "is a Nightingale? I have never heard of it, and yet everyone seems to know that it lives here in my garden. Why have I never head of it? It must come this evening to sing for me."

"I will go and search for it," said the courtiers.

Everyone began to search in the Palace, through the halls and corridors, in the gardens. The crowd of people searching for the bird became larger and larger as they rushed here and there, gathering people as they went to help them in the search.

At last they met a poor little Kitcnen maid who said, "Oh yes, I know the Nightingale very well. Every evening when I go to visit my mother I hear her lovely song and it brings a tear to my eye!"

Everyone was delighted, and begged the maid to take them to the Nightingale.

So they set off to the wood and on the way they heard the mooing of a cow.

"Oh!" cried the courtiers, "Now we have her, it must be the sound of the Nightingale, but what a large sound for so small a creature!"

"No, no", said the maid "that is a cow you hear, but we shall soon come to the place."

Then they heard a frog croaking in the pond.

"Ah!" said the courtiers, "that must be her, it sounds just like church bells!"

"But those are frogs'" said the maid.

Then the Nightingale began to sing.

"There she is," said the maid pointing to a small grey bird, "Listen as she sings. Little Nightingale, our Emperor wishes you to sing for him tonight. Will you come with us, please?"

"With the greatest of pleasure," said the Nightingale, and she sang so beautifully that the people below gazed up in wonder. "My song sounds best in the green woods." said the Nightingale, "but I shall come and sing for the Emperor".

The Emperor sat on a silken chair, and the Nightingale flew into the branches of the nearest tree and began to sing. As the sweet song swelled in the soft evening air, tears came to the Emperor's eyes and when they ran down his cheeks, the Nightingale's song grew lovelier than before.

The Nightingale was loved by everyone. The Emperor gave the Nightingale a golden cage to live in, and she was allowed to fly about in the gardens twice a day. But twelve servants always went with her, each holding tightly to a silk ribbon which was tied to the poor bird's leg. Everyone was happy except the Nightingale.

One day a parcel arrived for the Emperor. On it was written simply "Nightingale"

Inside the parcel was a casket covered in jewels, and inside the casket was a clockwork Nightingale. It was made of silver and gold with

sapphires, emeralds and rubies. When he turned the key in his jewelled back it sang one of the songs of the real Nightingale, and its silver tail moved up and down.

"It is beautiful," exlaimed the Emperor. "We must have a duet between the real Nightingale and this golden one!"

And so they did. But somehow it did not sound quite right.

The real Nightingale was a drab grey, not half as beautiful as the golden bird. One day, when everyone was listening to the golden Nightingale the door of the gold cage was left open and the real Nightingale flew back to the forest, but no-one even noticed that she had gone.

A year went by and the Emperor and all his courtiers knew every note of the clockwork bird's song by heart. But one evening when the bird was singing at its very best, something inside it went PING, the wheels whirred round one last time, and it stopped. It was broken.

The Emperor called his doctor, who could do nothing. They called the Watch-maker who tinkered with it for hours. At last he declared that the clockwork Nightgale was worn out and none of its parts could be replaced. It was a catastrophe - nothing could be done.

Five more years passed by and the Emperor became ill. He lay pale and weak in his bed. Everyone feared that he would never get better. He was dying. They tried everything they could to make him better, but nothing seemed to work.

All at once the most beautiful song broke the silence. It was the Nightingale sitting on a branch by the Emperor's open window. She had heard of his illness and had come along to bring comfort. As she sang the colour flowed back into the Emperor's pale cheeks.

"Please, little Nightingale, sing on" said the Emperor.

And the Nightingale sang through the night while the Emperor slept. When he woke the sun was shining and the illness had gone.

"You must come always " said the Emperor. "I will ask you to sing only when you wish, and I shall break the mechanical bird into a thousand pieces."

"Don't do that," replied the Nightingale. "The mechanical bird has done its best. I must be free to build my nest in the forest. But I will come to visit you and will sit in the branches of this tree and sing for you. Let no-one know that you have a little bird who comes to visit you and all will be well." And with those words the Nightingale flew away.

The servants came into the room, expecting to find the Emperor dead. How astonished they were when he was awake and smiling at them and said "Good morning."

Source: 'The Fairy Tale Omnibus' retold by Shirley Greenway,Picolo(1983)

WORKSHEET FOR ACTIVITY NO.1

Name: Age:

1.What animals were there in the story?

2.Why did they search for the Nightingale?

3.Which of the two Nightingales in the story was better?

4.Can you explain why you think this?

5.Was it right for the Emperor to keep the little Nightingale in the Palace?

6.Can you explain why you think this?

7.What would happen if a machine could be built which would be just like you?

8.Can you think of anything which is alive which really could be replaced by a machine?

ACTIVITY NO.2 - THE HARTLEY BEAR STORY.

Read the Hartley Bear Story
Ask the children to write their responses to the following questions - or record their oral answers on a tape.

The Hartley Bear Stories
Copyright Anne Bloomfield, 1992, ISBN 0 907032 51 6

Hartley is a bear. He lives in a secret room tucked away at the top of a very old house called Clifton Hall somewhere in the heart of England. If you wanted to find him you would go through the big door with its big brass knob and then follow the sweep boy's footprints left behind one winter's day many moons ago.

You would climb up a very steep staircase that seems to go as high as the stars and somewhere at the top of the house, if you were lucky, you would find the little secret room.

If you peeped around the door you might see Hartley Bear and all the other toys who live in the nursery, I say, might because Hartley is a travelling bear and often he goes away on adventures.

Hartley is a gentle bear and all the toys love him. He is the most important toy in the nursery. He can read and write and paint. He is very polite and loving, and looks after all the other toys who always behave themselves when he is around.

You will see two other bears, Big Ted and Little Ted who are both rather worn and tired. They like to stay behind when Hartley goes away.

Whenever Hartley comes back from his adventures he has such wonderful stories to tell them. They look forward to listening to him Perhaps you would like to hear one Hartley's stories? This is one of them.

Yesterday I went Into the garden of Clifton Hall. I found two huge stone statues of lions. They have grown a little worn sitting in the garden in the rain and snow, their faces look weather-beaten, but they are still beautiful lions. I went up to talk to them and one of them asked if I would like to climb on his back to join him on an adventure.

The lion wanted to go back to where he was born, but he didn't know how to get there. He knew that I have been on lots of adventures, and that I would be able to help him to find Kenya, the country where lots of lion live.

I quickly scrambled up on to the lion's back, held on tightly, closed my eyes and in the swishing of a lion's tail we were off. High in the sky we

soared over the roof of Clifton Hall, over the fields and the towns, then over the sea, further and further away in the twinkling of a bear's eye.

I guided the lion over France, the lion wanted to stop to see what France was like, but I knew that we had a long way to go, and couldn't stop until we got to Kenya.

We travelled over the Mediterranean Sea to Africa. We saw the pyramids in Egypt. The weather was hotter and the sky was blue. We saw deserts of golden sand and beautiful white buildings shining in the sunlight.

Soon it was night time and the lion was getting tired, but we had to keep going. The lion was strong and he was determined to reach Kenya. As the morning light crept over the sky the lion turned his head and shouted "Look, up ahead, that's Kenya. I remember the green grass and hills. We've arrived. I'm home."

The lion gently brought us down to earth under a large tree, shaded from the hot morning sun. Our arrival caused a great stir, lots of animals came to look at us. Giraffes with their long necks bent down to see what kind of creatures used the shade of their tree. Birds with brightly coloured feathers, snakes and an enormous Rhinocerous. All the animals wanted to find out more about the strange bear and the lion made of stone. They asked questions one after the other, raising their voices in excitement,

Who are you?"

"Where do you come from?"

"Why have you come to Kenya?"

The lion waited patiently until they all calmed down. Then he roared in a the largest voice I have ever heard.

"I am a lion, King of the animals. I don't answer any questions"

And with that he swished his tail and we were flying back over the fields, the hills, over the pyramids and the Mediterranean Sea, over France and the English Channel. Over the fields and the towns back to Clifton Hall." Little Ted and Big Ted listened carefully to Hartley's story. Sometimes they wished that they could go on adventures too. But this time little Ted did not enjoy the story of Hartley's adventure. He jumped down from the cushion where he had been sitting next to Big Ted. Stretched himself up as tall as he could go, and said to Hartley, "I don't believe you. I don't think that your story is true. Animals can't talk, stone lions can't fly, and you didn't go to Africa."

Big Ted and Hartley could hardly believe their ears.

"Well," said Hartley. "If that's what you think I'll have to find a way to prove that I am telling the truth"

WORKSHEET - ACTIVITY NO.2

NAME AGE

1. How many animals were there in the story?

2.Why did the lion want to go to Kenya?

3.How did little Ted react to Hartley's story?

4.Do you think Hartley's story is true? Tell me how you know this.

5.How could Hartley prove it if his story is true?

ACTIVITY NO.3 STORY - 'What's wrong with the world and how to put it right'

Read the following paragraph to this children, then ask them to complete the story, on their own written or oral on a tape. You could then follow this up with a discussion of the issues they raise.

"It was a bright day. The sun was shining, the birds were singing and everything seemed to be right. You know that this is not the case. There are a lot of things wrong with the world. A lot of things need to be changed, to be put right. I know that adults don't often listen to children. Many adults think they know more than you. But I want you to think very carefully about anything you think we should be worried about, anything which should be changed.

I want you to write a story telling me exactly what's wrong with the world and how to put it right. It might help you to begin by writing

I'll tell you exactly what's wrong with the world....

then you can continue with your own story."

2.Then ask the children to draw a picture to illustrate this story.

APPENDIX B

STAGE 3 DATA COLLECTION ACTIVITIES

TABLE NO.3.5

1.	Do you think it's all right to eat animals? Can you tell me why?
2.	Do you think it's all right to kill animals? Can you tell me why?
3.	Do you think that hunting is all right? Can you tell me why?
4.	What if someone wanted to try out a new medicine on an animal to see if it was safe before they tried it on a person, is that all right? Can you tell me why? What if they thought that the medicine might hurt the animal cause it pain - is that all right?
5.	What if they were making a new sort of soap from a dangerous chemical, they think it is not harmful but want to try it out on animal - should they? Can you tell me why?
6.	Lots of chickens are kept in battery farms, in a very small space, not allowed to go outside or to see the daylight is that all right? Can you tell me why?
7.	Have you heard about people who break into farms where they think hens are kept in batteries, and other animals are kept in bad conditions - is it all right for them to do this? Can you tell me why?
8.	Can you think of some ways in which animals are like humans?
9.	Can you think of some ways in which animals are different from humans?
10	Are some animals more like humans than other animals? which?
11.	Are some animals not like humans at all?
12	Can animals think? How do you know?
13	Can animals feel emotions, can they feel happy, sad, angry and so on? How do you know?
14.	Can trees and plants think? How do you know?
15.	Can trees and plants feel happy, sad, angry and so on? How do you know?
16	Are there any rules you have to keep at home, are there some things which you are NOT allowed to do? Can you tell me what they are? Can you tell me why you are not allowed to do that?

17	Would you ever do anything you were not allowed to do? Can you tell me what? Can you tell me why? What should happen if you were caught?
18	Are there any things which you think it is wrong to do even if you are allowed to do it? Can you tell me what? Why?
19	Are there any things your parents are not allowed to do? What? Why? What should happen if they were caught?
20	Are there any things your teachers are not allowed to do? What? Why? What should happen if they were caught?
21	Is there anyone who is allowed to do anything they want? Who? Why?
22	A little while ago there was a story on the news about a large ship - a tanker filled with oil which was caught in a storm he was taking great care so it wasn't his fault, but the ship sank and all the oil spilled out onto the sea and was carried onto the beaches. It cost a lot of money to clean up all the oil from the sea - who should pay for it? Why
23	A factory making computer games is polluting the river with chemicals it uses to make the games, but if they stop putting the chemicals in the river they will have to charge more for the game. Children won't be able to afford them - What should they do? Why?
24.	Two children both drop litter in the street The first child did it by accident - the wind caught the crisp packet before she had a chance to put it in the bin. The second child did it on purpose, she didn't agree that litter should go in bins. There is a fine of £10 for anyone caught dropping litter. Should both children be fined? Why?
25	If one of your friends does something wrong, can you do anything about it? What?
26	If one of your parents does something wrong can you do anything about that? What?
27	If one of your teachers does something wrong, can you do anything about that? What?

28. A ten year old child wanted to go camping with the school very much. The family couldn't afford it but said she could go if she saved up the money. So the child worked really hard, did any odd jobs she could get to save up the money. Just before the holiday the parents changed their minds. they told the child to give them the money she had saved so that they could take a trip themselves . The child didn't want to miss the camping trip so she thought about saying no to her parents and not giving them the money. Should she give the parents the money? Why?

29. A child was very ill. There was only one medicine the doctors thought would stop her from dying, but it was very expensive to make so the parents would have to pay for it themselves. They told the chemist that their child was dying and they had no money to pay for the medicine, they asked him to sell the medicine cheaper, or to let them pay for it later. The chemist said no, The parents were desperate and broke into the shop and stole the medicine for their child. Should they have done that? Why?

30. Imagine you have won a lot of money in a competition like the National Lottery, what would you spend it on? What would you do with it?
You've done all that, but still have some money left. You decide to give it away to do some good. Which ONE of these charities would you give your money to?
a charity which helps children
a charity which helps animals
a charity which helps old people
a charity which feeds people who have no food and are starving
Why?

APPENDIX C

DATA COLLECTION ACTIVITIES

APPENDIX C

DATA COLLECTION ACTIVITIES

Stage No.	Activity No.	Type of Activity
1	1.1	reading an extract from the fairy story by Hans Christian Anderson, The Nightingale, to the children, followed by questions
1	1.2	reading a story about Hartley Bear, a Teddy Bear who flies to Africa, to the children, followed by questions
1	1.3	required the children to write about what they think is wrong with the world.
2	2.1	Non-participant observation of classroom activities
2	2.2	Participant observation of orienteering activities
3	3.1a	Interviews by Researcher of 6 children in Nottinghamshire
3	3.1b	Interviews by Class Teacher of 6 children in Sussex
3	3.2a	Interviews by 6 children in Nottinghamshire of their classmates
3	3.2b	Interviews by 6 children in Sussex of their classmates
4	4.1a	Individual accounts of 'My Ideal World"(Nottinghamshire)
4	4.1b	Individual accounts of 'My Perfect World'(Sussex)
4	4.2	Group account of 'Our Ideal World'
4	4.3	Whole class account of 'Our Class Ideal World'
4	4.4	Group account of things which have to change to enable our Ideal World to happen
5	5	Individual responses to a pill which stops you dying

APPENDIX D

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

STAGE 1

APPENDIX D

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

STAGE 1: Data Collection:

PUPIL RESPONSES TO ACTIVITY NO.1.1

Pupil	which bird was better?	why was it better	was it right to keep the bird?	why?
1	real one	better voice	no	shouldn't be in a cage
2	real one	more realistic	no	alive like us should be fre
3	real one	real and could fly	no	birds have to be free
4	real one	didn't break down	no	didn't have proper life
5	real one	didn't break down		not allowed d to fly
6	real one		no	it's a wild bird
7	real one		no	
8	real one	not real		it's a wild bird
9	real one	sounded better	no	needs its freedom
10	real one	sounded better		needs its freedom
11	real one			not fair
12	real one			not fair
13	real one	the other one broke down	no	should be able to fly
14	real one	the other one broke down		
15	real one	it's the truth	no	birds like to be outside
16	real one	it's the truth		birds like to be outside
17	real one			it was artificial
18	real one			
19	gold one	it was clockwork		
20	gold one	it was clockwork		
21	real one	other one not real		it had no room
22	real one	other one not real		it had no room
23	real one	robot couldn't sing	no	cruel
24	real one	robot couldn't sing	no	cruel

TABLE NO.4.2

PUPIL RESPONSES TO ACTIVITY NO.1.2

Pupil	Story true? yes	Story true? no	How do your know?	How prove the story true
1		no	statues can't talk	go see is statues there
2	yes		don't know	show him how he got there
3		no	someone made it up	
4		no	sounds like he made it up	carry a camera
5	yes		he wouldn't lie	take them show them
6		no	lions can't fly	he went to Kenya
7		no	lions can' t fly	toys can't talk
8	yes		it's true	show them
9	yes		because it is	he can't
10		no		he can't
11		no		he can't
12	yes			
13		no	because they can't talk or fly	
14		no	lions can't fly bears can't talk	he can't
15		no	lions can't fly	he can't
16		no	they can't talk or fly	
17	yes			he can't
18		no	they can't talk or fly	
19	yes		because it's true	have a vote
20		no	lions don't fly	
21		no		
22		no	I've been to Clifton Hall	show them
23		no	bears can't fly	take them to Kenya
24		no	bears can't fly,read or write	take them to Kenya
25		no	animals don't fly	take them to Kenya
26		no	I've been to Clifton Hall	show them
27		no	he always lies to him	take them there
28		no	Ive been to Clifton Hall	show them
Total	7	21		

APPENDIX E

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

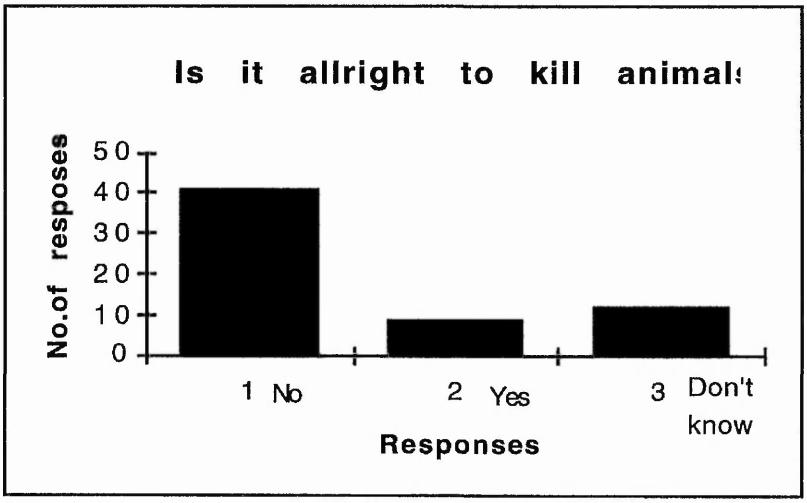
STAGE 2: Data Collection:

APPENDIX E

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

STAGE 2: Data Collection:

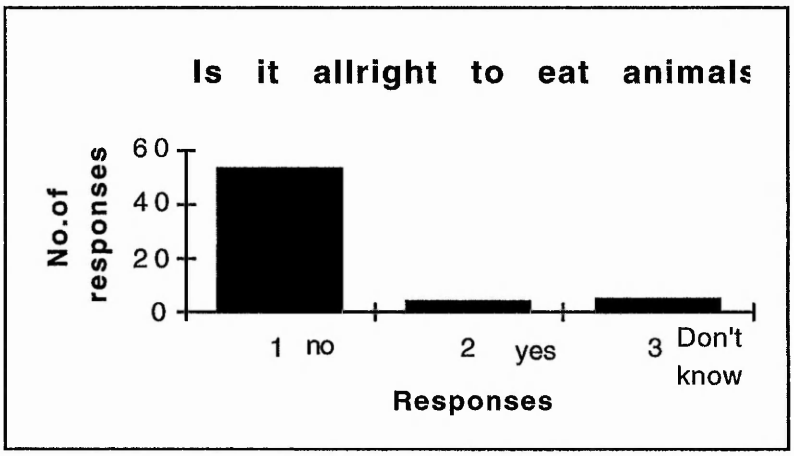
RESPONSES TO **QUESTION NO.1**



REASONS GIVEN FOR RESPONSES TO QUESTION NO.1

Reason	Nos.		
	G.	B.	Total
No reasons given for answer	6	7	13
Non-specific reason eg.it's horrible',it's not nice'	4	1	5
Fairness	1	1	2
Cruelty	5	9	14
Some animals bred to eat / others protected	5	2	7
Possibility of extinction	6	5	11
Morality - seen as wrong	2	0	2

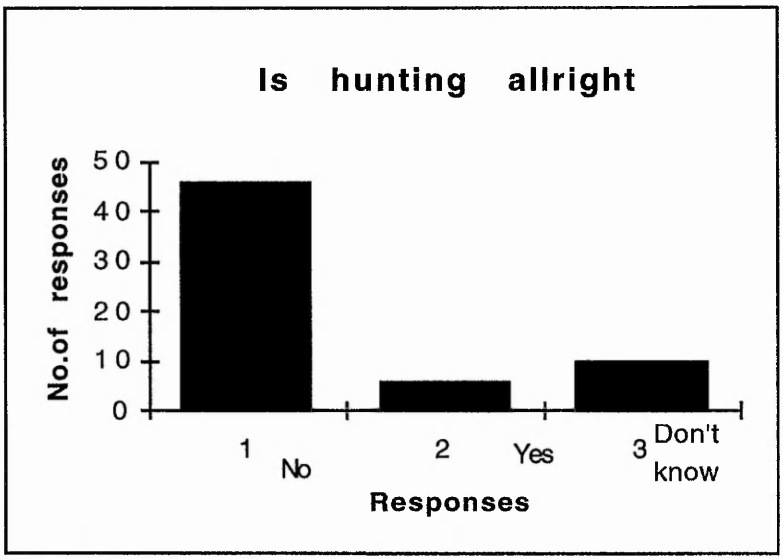
RESPONSES TO **QUESTION NO.2**



REASONS GIVEN FOR RESPONSES TO QUESTION NO.2

Reason	Total
No reasons given for answer	13
Non-specific reasons eg.it's horrible','it's not nice'	5
Fairness	2
Cruelty	17
Some animals bred to eat /others protected	5
Effects on babies	2
Possibility of extinction	7
Morality - seen as wrong	4

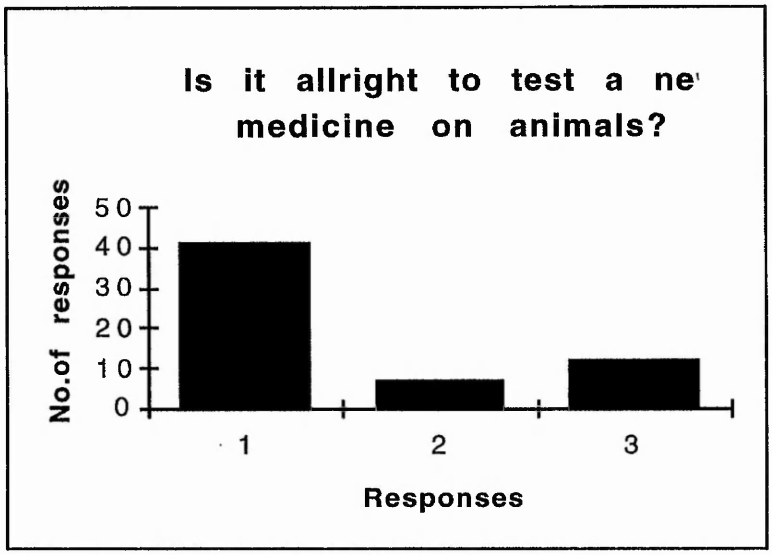
RESPONSES TO **QUESTION NO.3**



REASONS FOR RESPONSES TO QUESTION NO.3

Reason	No.
No reasons given for answer	15
Non-specific reasons eg.it's horrible','it's not nice'	3
Fairness	2
Cruelty	6
Some animals /others protected	4
Possibility of extinction	10
Morality - seen as wrong	12

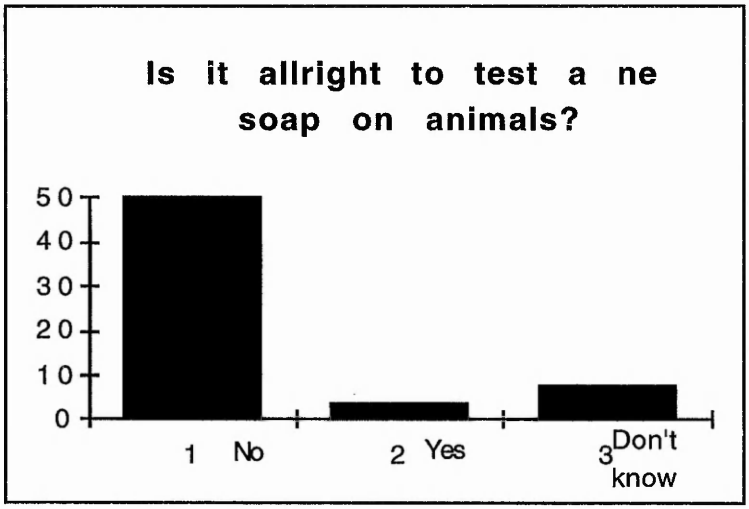
RESPONSES TO QUESTION NO.4



REASONS FOR RESPONSES TO QUESTION NO.4

Reason	No.
No reasons given for answer	9
Fairness	2
Cruelty	1
Some animals can be used for testing/others protected	4
Morality - seen as right	6
Morality - seen as wrong	34

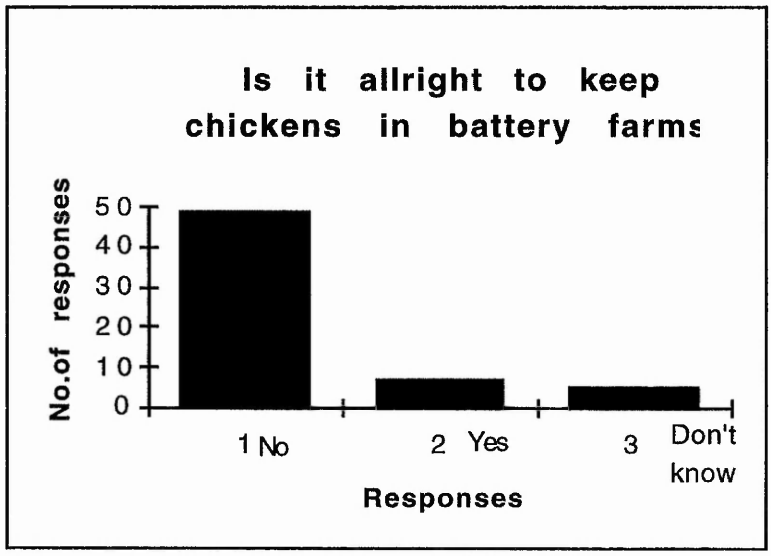
RESPONSES TO **QUESTION NO.5**



REASONS GIVEN FOR RESPONSES TO QUESTION NO.5

Reasons	No.
No reasons given for answer	17
Might stop return to wild	2
Danger of harm / death	23
Need to ensure do not hurt humans	2
Should try it on humans	2
Morality - seen as wrong	8

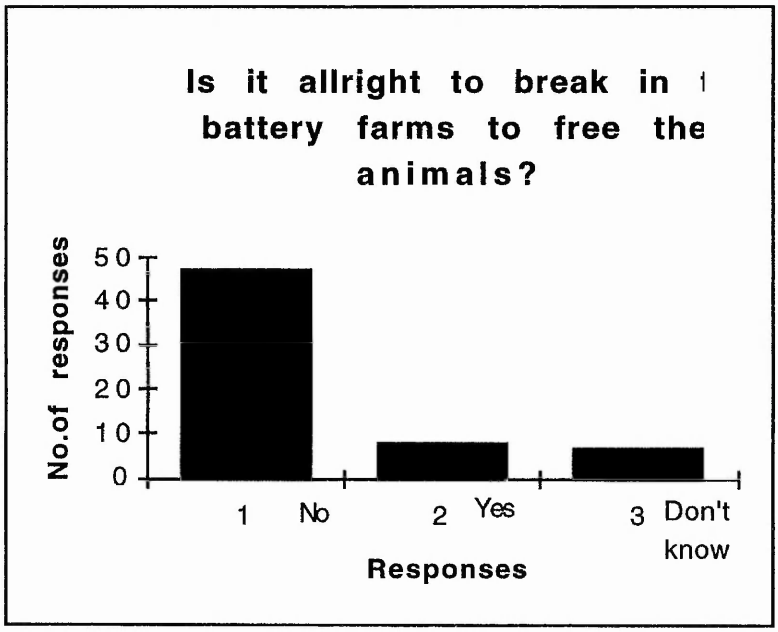
RESPONSES TO **QUESTION NO.6**



REASONS GIVEN FOR RESPONSES TO QUESTION NO.6

Reasons	No.
No reasons given for answer	18
Description of lack of space and exercise	4
Danger of harm / death	3
Fairness	2
Cruelty	4
Effects on eggs	2
Morality - seen as wrong linked to animal rights	14

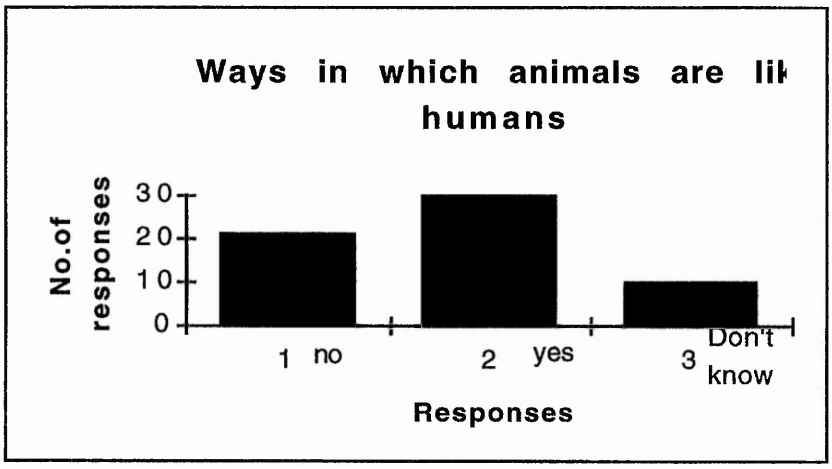
RESPONSES TO **QUESTION NO.7**



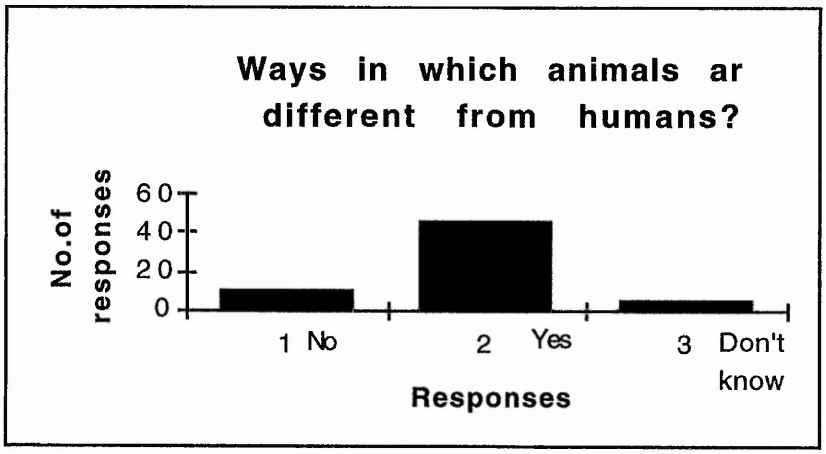
REASONS GIVEN FOR RESPONSES TO QUESTION NO.7

Reasons	No.
No reasons given for answer	27
Breaking the law, criminal, trespassing	4
Bad effects on farmer	2
Bad effects on the animals	7
Unsure - see both sides	3

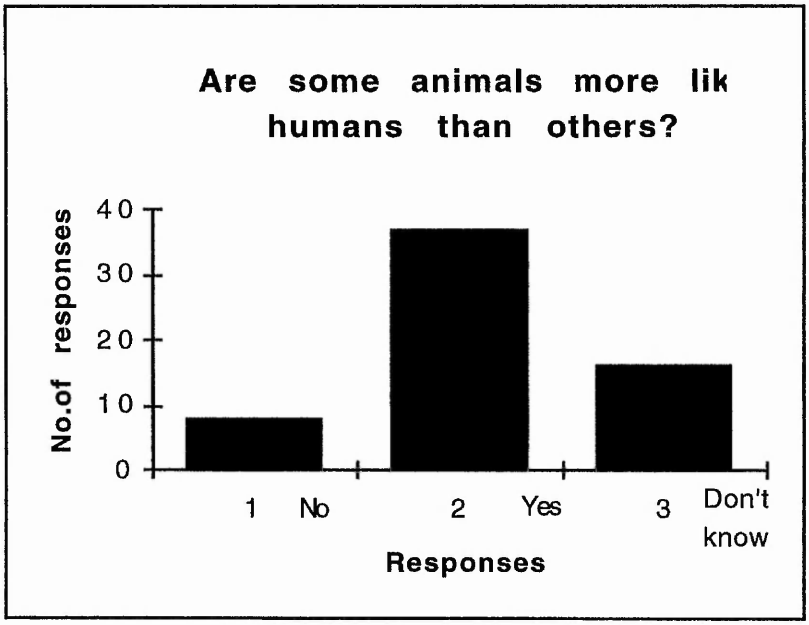
RESPONSES TO **QUESTION NO.8**



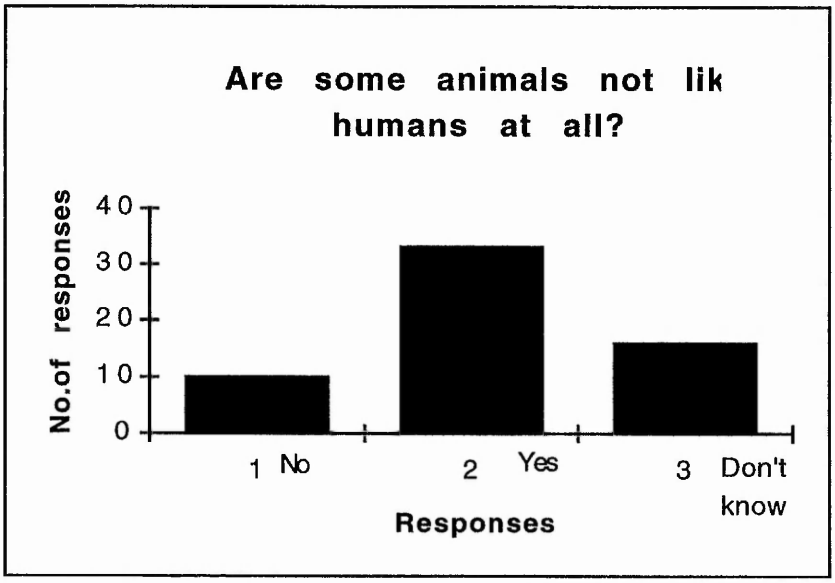
RESPONSES TO **QUESTION NO.9**



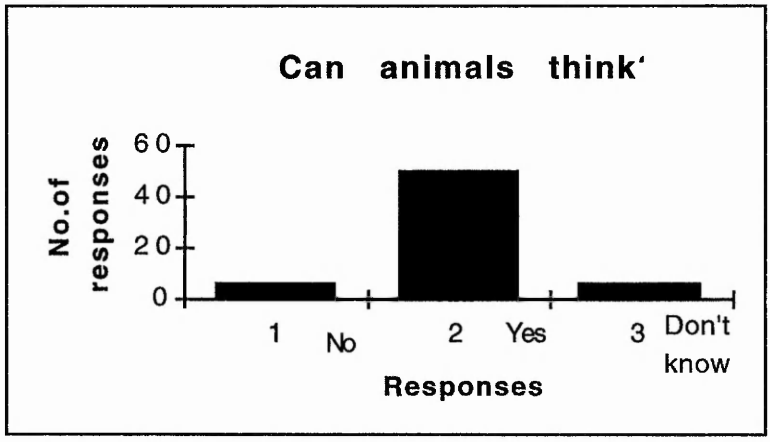
SUMMARY OF RESPONSES TO QUESTION NO.10



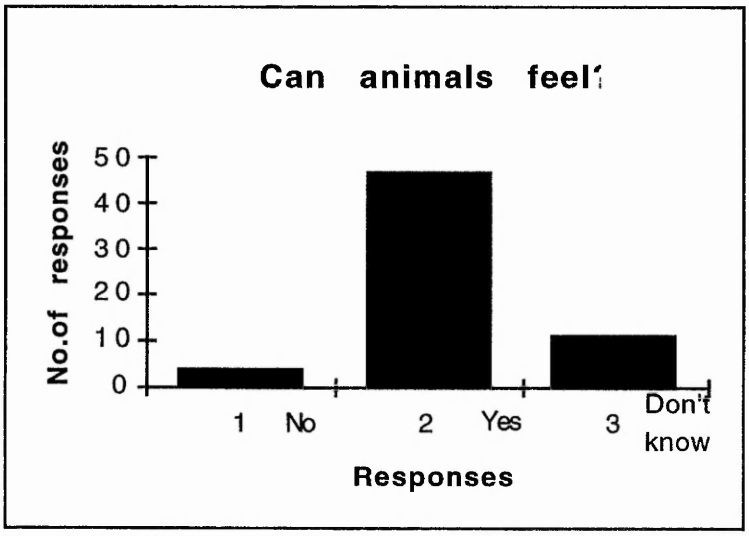
RESPONSES TO **QUESTION NO.11**



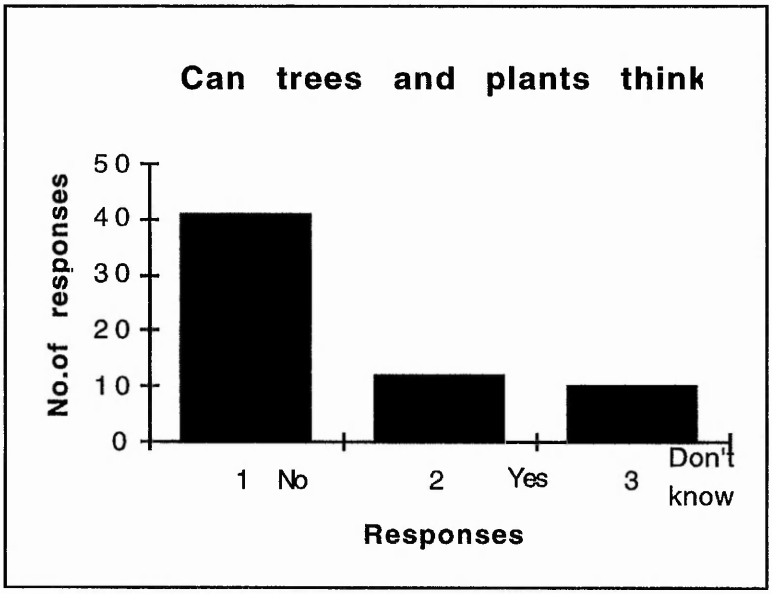
RESPONSES TO **QUESTION NO.12**



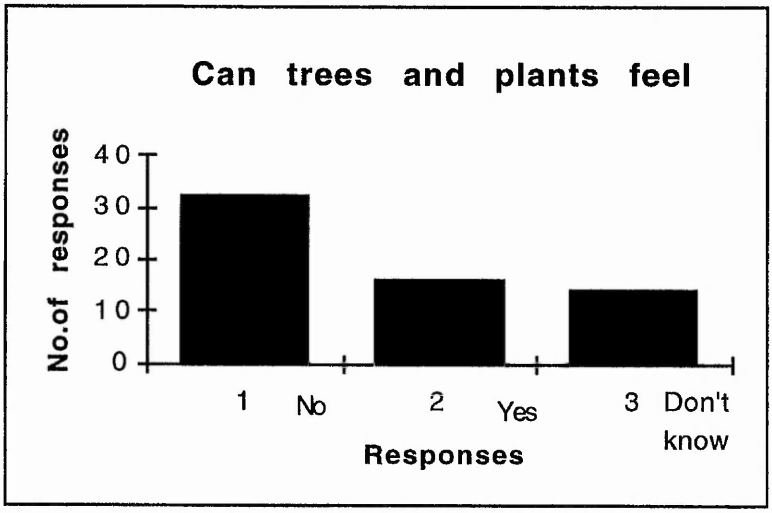
RESPONSES TO **QUESTION NO.13**



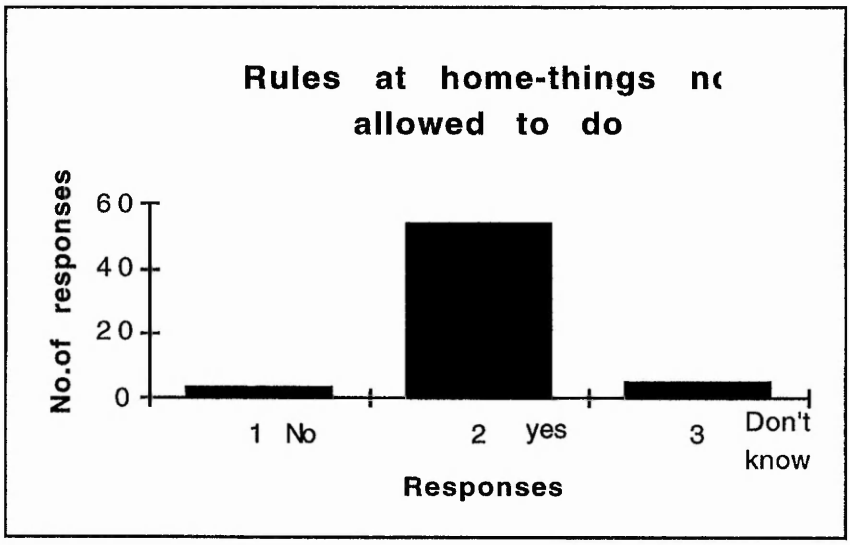
RESPONSES TO **QUESTION NO.14**



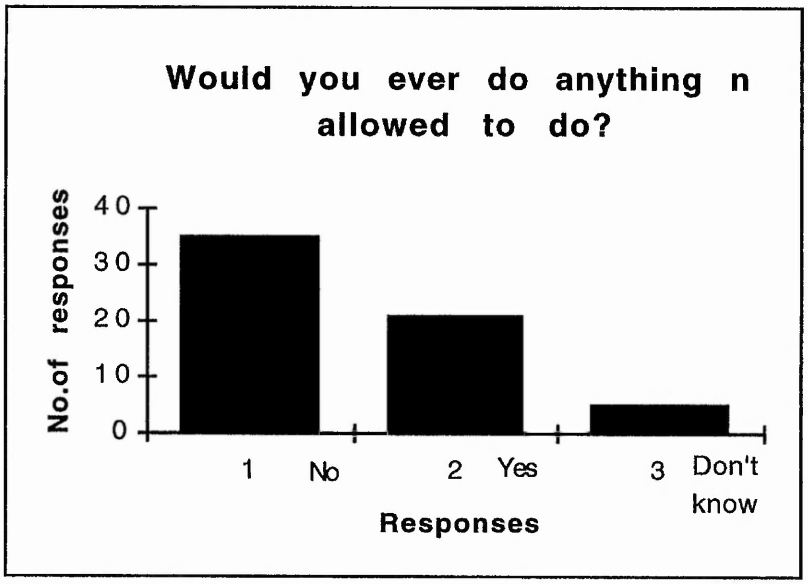
RESPONSES TO **QUESTION NO.15**



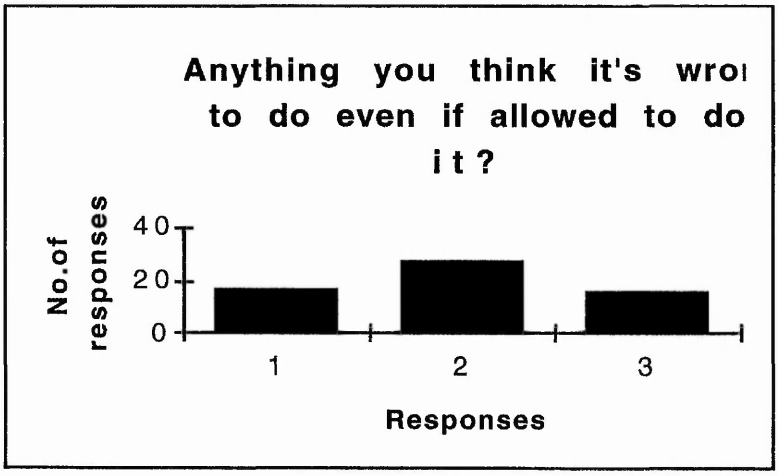
RESPONSES TO **QUESTION NO.16**



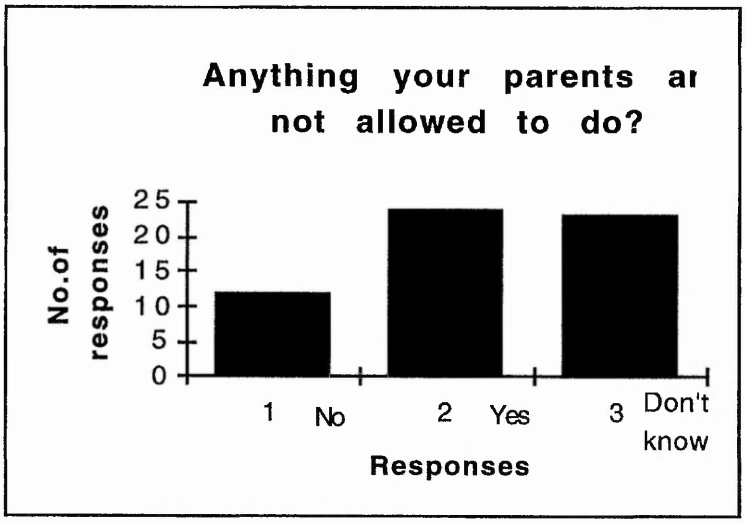
RESPONSES TO **QUESTION NO.17**



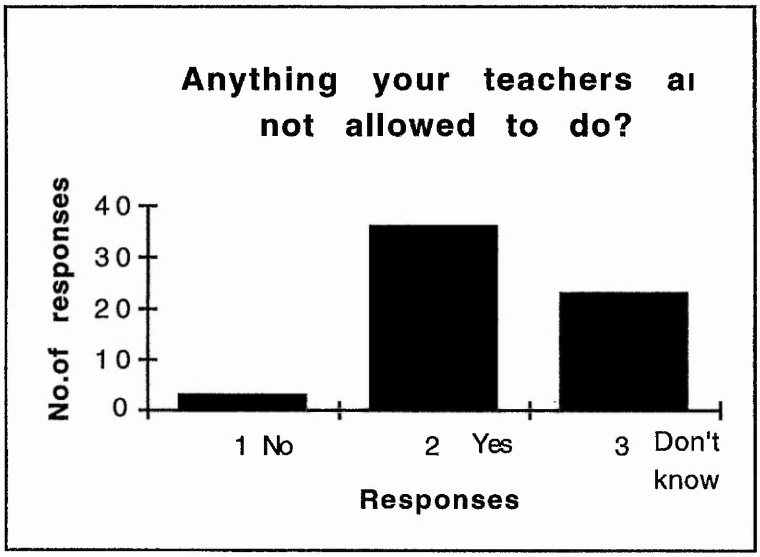
RESPONSES TO **QUESTION NO.18**



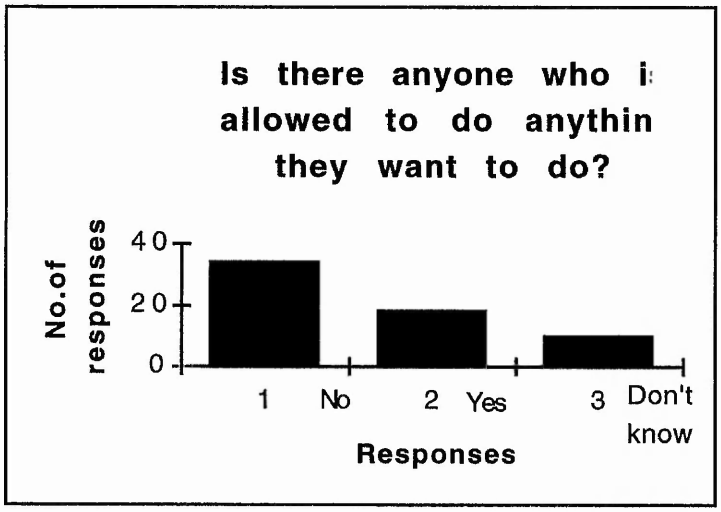
RESPONSES TO **QUESTION NO.19**



RESPONSES TO **QUESTION NO.20**



RESPONSES TO **QUESTION NO.21**



RESPONSES TO **QUESTION NO.22**

SUMMARY	Total
No reason given	7
The captain of the ship/the driver	9
The government	11
The owner of the ship	7
The people who did it	7
The people who made the boat	5
Split - Captain/Gov./Owners	3
The people who own the beach	3
No-one	3
The Queen/the Queen of Scotland	2
The Council	2
The people who put the oil in	2

RESPONSES TO **QUESTION NO.23**

SUMMARY	Total
No reason given	20
Charge more for the games	8
Do not pollute the river	8
Confusing reply eg.ask them to buy one	4
Stop making the games	8

Responses to Question No.24 - Responsibility for Litter
Should both girls be fined?

	Y	N	?	Total
Don't know			3	3
No-one should drop litter	11			11
Only the one who dropped it on purpose		44		44
Lower fine for the one who dropped litter by accident		1		1

Responses to Question Nos.25,26,27 - Influence with friends/parents/teachers

Q.		Yes	No	Don't know
25	Friends	37	18	3
26	Parents	18	36	7
27	Teachers	24	28	7

Responses to Question No.28- Camping Trip

	Y	N	?
Don't know			4
Keep money		49	
Give money to parents	7		

Responses to Question No.29- Kohlberg's 'Heinz Dilemma

Kohlberg's Stage No.	Total
No reason given	14
Stage No.1	3
Stage No.2	0
Stage No.3	10
Stage No.4	17
Stage No.5	13
Stage No.6	1

Responses to Question No.30

USES OF MONEY WON IN COMPETITION	Total
Don't know	14
Save in Bank	9
Buy a horse/animals	6
Buy clothes	4
Buy a house	1
Give to family	4
Buy a car/motorbike	4
Holiday	4
Computer/computer games/toys	3
Birthday/Christmas presents	2
Something useful	1
Give to poor countries/charity	3
Clearing up the earth	1
CHARITY CHOSEN	
Helps children	8
Helps animals	4
Helps old people	2
Helps people who are starving	14

APPENDIX F

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

Research Activity No.4.

APPENDIX F

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

Research Activity No.4.

Pupil No.26

My Perfect World

In my perfect world, I would be the queen or someone who is very important and everyone obeyed me. I would make new rules.

There is to be no more fighting
Most things in the world are free
Everybody had £1,000 a day
Everyone is treated exactly the same
We have 2 days of work and 5 days rest.

In my perfect world, I could control the weather, and fast forward/rewind the programmes I don't like.

I would want everyone to:
be happy,

Pupil No.27

My Perfect World

In my perfect world is like it is at the moment but sports and games are more important.

Pupil No.28

My Perfect World

In my perfect world there would be no war, no greediness, everything like medicine would be free.
Everyone would have a home, a job and a nice family.
There would be no racism, no murdering or killing.
But you have to have some evil in the world because then people would know what evil is so they can try to conquer it, and no smoking.not to steal let everyone share their things, not to steal or burgel. and I would try to give everyone a fair chance and let people say what they think is right. There would be some changes to schools: no tests or exams!

Pupil No.29

My Perfect World

In my perfect world there would be no war, a decent Prime Minister, the government should give money to people who live on the streets to let them have houses, and enough food for everyone to live on.

Pupil No.30

My Perfect World

is a world with peace and lover, no war, no hatred.

Pupil No.31

My Perfect World.

In my perfect world would be very kind and people would share things. I think there should be no queen. I also think there should be no Prime Minister. I really think there should be enough food for everyone and everyone should have a home. I don't think there should be money because we should swap things and everyone shuld have a decent job. I also think that school dinners should be nicer.

Pupil No.32

My Perfect World

If I was to have the world the way I want this is what there would be. No war - every country should be peaceful with no bombs and shooting to worry about. I would also like
Everyone to have a house with a family and everything they need, oh yes and
All animals to be safe not endangered and people not to kill animals for meat and for their skin unless they are very old or ill.

Pupil No.33a

My Perfect World

In my perfect world, there would be,
no fighting, no famine, no drought, peace, no killing, nobody would be poor, nobody would ever be ill, nobody would be poor, somebody who needs a job will have one.
Everybody would have their own house.
Everybody woud have their own money making machine.
Everybody would be able to afford anything.
Everybody would be happy.

Pupil No.33b

My Perfect World

In my perfect world I would have no people poor, no people homeless. No war anywhere and no violence that means no army.
Everyone would be employed if they want to be. Paper would be made from different materials. No people would have a handicap. Schools would be fun and we didn't have emergency services because the world wouldn't need them. No-one would be rich, no-one would be poor all the same. There were no such things as diseases or broken bones.
All houses are ozone friendly.

Pupil No.34

My Perfect World

In my perfect world, I would have no wars, a perfect peace.
I would have no guns.
I would share everything out with all the countries.
Everybody would have jobs and nobody would be left out.
Everybody woud have a home, no hunting or cruelty to animals.
No tax.

Pupil No.35

My Perfect World

In My perfect world I would ban blood sports and make a law so that everyone had to recycle paper and everything was 10 p. I would ban wars.

Pupil No.36

My Perfect World

In my perfect world Everyone would have a wealthy amount of money, a nice car, a nice house. I'd have poaching police anyone caught poaching would receive the death penalty and be hung.
If anyone killed someone they would receive the death penalty and NO war.

Pupil No.37

My Perfect World

In my perfect world there would be laws not to cut down the forests and habitats where the wild animals live. Also trees and countryside would not be ruined by new houses and roads. Deforestation would be changed.
Testing new products on animals would not be allowed if it had any dangerous chemicals in it, it could not be sold as all these chemicals build up in streams and kill good and kind animals.
People would not have to pay as much tax and things sold in shops would be cheaper. I would like my perfect world to be peaceful with all of the countries at peace.

Pupil No.38

My Perfect World

In my perfect world
1)all the money in the world would be taken in and distributed equally among all the people in the world.
2)Everybody would live on a farm being self-supporting and building their homes of wood and riding horses.
3)For there to be no great arguments and for evrybody to be appreciative and grateful.
4)for nobody to feel left out and for everyone to feel wanted.
5)for there to be no war and no killing for everyone to die naturally.

Pupil No.39

My Perfect World

In my perfect world.
If I wanted to change the world I would stop all the wars that are happening and try and give money to the people who really need it.
Then I would stop people killing animals. Not just because I'm a vegetarian but because I don't like people killing animals. I would stop peple eating animals.
I would go back to the past and see my baby brother, because I miss him a lot.
I would change my house and buy a mansion, where we wouldn't have to pay the bills.
I would buy my Mum a nice big red car.
I would buy myself a dog, and my brother whatever he wants, same with my family. I would collect pigs.

Pupil No.40

My Perfect World

I would like the world to have no problems. People could eat when they wanted to and have things when they wanted to and to get rid of things when they wanted to. I would also want to play for Man.U.

Pupil No.41

My Perfect World

In my perfect world I would like to play football for Manchester United and become a professional footballer. I would want no crimes, murders or breaking into houses and one more thing. NO MORE DRUGS

Pupil No.42

My Perfect World

In my perfect world I would like the world with more peace and more people being kind and gentle. Better weather, more Christians and no more crimes.

Pupil No.43

My Perfect World

In my perfect world I would ban smoking. I would ban blood sports. There would be no poor people and enough water for everybody. Money woujld gow on trees like any other fruit. Everybody recycles everything. Nobody was allowed to hit anybody else. No shouting. Every country will be at peace with each other. Father Christmas would be real so every single person would get presents on Christmas.

Pupil No.44

My Perfect World

In my perfect world I would want to stop the wars and fighting. Also stealing. There are some good things what I want to change like when you go to high school you could have summer uniforms and you woujld not get so much home work. School dinners are OK but I wish they were better.
I wish it was a good world where everybody is happy. I wish the hungry people could have good and water. Why can't people be nice.
I wish I could have all the pigs in the world.
!

Pupil No.45

My Perfect World

In my perfect world there would be no poor people, there would be no war and no smoking. In my perfect world there would be enough water for everybody. Nobody would cut down rain forests for paper. Everybody recycles everything they could

Pupil No.46

My Perfect World

IIn my perfect world there would be no war, no money, no school because those people with no money can't pay for food so they would get it for free so would everyone else. Schools woud not be needed because if things are for free you wouldn't need a job to earn money. Everything would have to be environmentally friendly.

Pupil No.47

My Perfect World

In my perfect world, there would be no more wars, money would grow on trees, everybody would have as much food, drink, clothes, warmth. Also nobody would have to go to work, everybody would be equal. No one would be poor, everyone would speak English, nobody would fight or argue, everybody would have a house (if possible approx. the same size) there would be no burglarys, no murder and complete peace. Everyone would love and respect everyone, nobody would make fun of peple, nobody would sell drugs and everyone would be kind and generous. This is my idea of a perfect world.

Pupil No.48

My Perfect World

In My perfect world
No fighting
No starvation
No mistreating one another
No greediness (in money)
No wars
No cruelty to people, animals, environment, anything
No vandalism
There would be a few wrongs,
general mistakes,
arguments,
naughtiness.
There would be happiness
Everybody would get a job
Everybody would be treated as equal. Nobody would have to live in the streets. Orphanages would find jobs for the orphans once they are old enough.

Pupil No.49

My Perfect World

In my perfect world there would be no fighting or wars anywhere. Or there would not be any live exports to other countrys. The people who live on the streets in London would be given a home. The people who are dying in Africa will be helped by nurses. People would build homes for them. I would live in a bigger house with more money so that I had a bigger bedroom than I have now. The government would give more money to people who needed it. Nobody would die and everybody would be friendly to each other.

Pupil No.3

My Ideal World

In my world I would be very rich and sort people's problems out, which are arguing, fighting and running away, and they would come to me for help.

In my world people would be nice, so you could not hit or thump or fight, that would be so nice. In my world, no-one will have any illnesses or diseases they would all go away, and old people will die peacefully.

In my world, people will have money and no-one will be poor, and they would have a home.

In my world, there would be dogs all over, kissing and licking you as you saw them. The dogs would have special powers and they would look after themselves, cleaning themselves up.

Pupil No.4

My Ideal World

In my ideal world children would be off school almost every day, but I still want to learn. I would go on holiday in the Caribbean for a moth because I like the hot weather and would enjoy meeting different people. In my ideal world I would like to get £10 a week for pocket money. I would be able to have my music lounder than full blast. I would be able to go to the Isle of Wight for another week with the school. I would be able to use my Dad's switch card to spend money on clothes, put a couple of hundred pounds in the Bank and other bits and bobs. I would pass my Kawasaki driving test very easily. There would be no pollution and no murdering. If everyone stopped murdering and there was no pollution the world would be a much better place.

Pupil No.5

When My Wish Came True

One day I had to get up for school early to have a shower, I said "I wish there was no school".

That day when I was walking to school I saw a police car zoom by, all the exhaust fumes were coming out, I said "I wish there were no bad people, all the people were nice and I wish there was no pollution."

I got to school and we went swimming, then we did Maths, then Science, then we went home and I said "I wish I lived at Alton Towers."

I woke up the next morning and got ready for school. Oh, I wish we have lots of money. I went to school but there was no school, so I walked home and I saw Fred, the police man and he looked very happy.

"Why are you so happy?" I said.

"Because there's no criminals and no prison everyone's nice and good." he said.

When I got home there wasn't any ordinary home there instead it was Alton Towers. I went in and my parent said,

"We've got one million pounds"

That's how my wishes come true.

Pupil No.6

My Ideal World

One day I had a dream, of course, I was in a day dream at School. I dreamt of a world of my own. I could have anything I wanted. I would have more chocolate than the chocolate factories. I would have more things than anybody, more toys, more pets, more everything.
After school I went home and I went to bed, and I have another dream. I was in a world of my own again. I was a King, a God, the best of the best. I had tons of servants and slaves working for me. I was great. I was the best and when I went into town the peope would kneel before me, Matthew.
My Mum had spoilt my dream, oh well, back to the drawing board.

Pupil No.7

My Ideal World

In my ideal world I would own lots of cars because I like them.
I am very interested in guns. I would like to own a gun store.
There would be no school because II don't like school, it's boring. I would like to do whatever I want.
I would be able to do whatever I like, for instance, going to night clubs and stuff. I would like to own a plane so that I could go anywhere I nt. I would like to own one hundred acres of land because I would like to have a big back yard. I would like to own one hundred million pounds so that I could buy what I liked such as a car park for my cars and motor bikes. I would like to own my own oil rigg to use it for my boilers. I would like to own a sky scraper so that I could have my own office.
I could own as many computers as I liked so that I could play as many computer games as I liked.

Pupil No.9

My Ideal World.

Hi! I'm Seraphine and I'd like to tell you about my Ideal World."
"Everything would be bright and colourful and there would be no more wars and no-one starving. Pollution and litter will be stopped and people would have horse drawn carriages instead of cars.
People wouldn't have to pay tax and bills, and every family would have a swimming pool in their garden and a tree house with a diving board coming from it to the swimming pool and a water flume.
For money people would just have a purse with a permanent note pad inside and would just write the price on the paper. When you are sixteen you can do what you want and go where you like, as long as somebody knows where you are and what you will be doing.
If you wanted to watch a film you would go to video library and ask for the film, and if no-one was renting it you would get out your pen and paper, pay for it, and then go. The films would just come out on video instead of going through the cinemas first
Bikes will have better motors that did not pollute and could have automatic steering and brakes.
Well that was My Ideal World - I hope you agree.

Pupil No.10

My Ideal World.

In my ideal world there would be no miserable weather, it wouldn't be too sunny or too hot.
There would be no need for money because everything would be free.
There would be lots of wild life and animals particularly lots of birds.
There would be no pollution so that the sea would be clean. Most of the motor ways we have now could stay but no more would be built.
People would not be allowed to have cars. Transport could be by nature, using horses, carts or walking.
There would be no hunting allowed, unless it is desperate.
No-one would be more important than another, so that no-one would feel left out. There would be no fighting and arguing because that makes people unhappy.
I would like my world to have lots of lakes, streams and rivers. I would not like to have any zoos because that can be cruel to the animals. It would be nice to have many woods and forests with lots of birds, because this gives other animals a home and they look attractive.
In my world there would b nobody starving, no poor people, no rich people and there would be plenty of things to go around.
There would be no unnecessary use of electricity because it won't always be there. I would want people in my world to care for the environment, not to dominate others, because it doesn't make people very happy if others are bossing them around.
I would like lots of books in my world, but not many computers and T.V.s no more than one T.V. or computer per house, because more than one uses quite a lot of electricity. Crime would not be allowed, and there would be no drugs but there would be lots of hospitals so that people would only die from natural causes like old age, heart attack, there would be no fatal illnesses like cancer.
Everybody would have lots of holidays, going to beaches to give them a rest. Some people could even have a holiday on the moon.
There would be no cruelty to animals.
We would care for everything like animals and people.

Pupil No.11

My Ideal World.

In my ideal world I woud like people to keep the world clean and not to drop litter. I know it's hard for people who have no homes but they would at least find a bin.
If I was to change the world I would have motor bike tracks all over the place for people who like them.
If I could I would change the world a lot by stopping all people from fighting and they would be nice to others, and not fighting all the time.
If I was in charge I would stop people from cutting rain forests down, because it is cruel to the animals who live there.

Pupil No.12

My Ideal World

My ideal world would be if people would stop cutting down rain forests. It would also be good if they had car auctions and motor bike auctions every day. Mind you, it would be better if they ran on electric, so there would be no smoke.
It would be even better if everyone had heated swimming pools, and if we only had to be to school three days a week.
That would be my perfect world.

Pupil No.13

My Ideal World

My ideal world would be all countryside. There would be nice old cottages, clean rivers and lakes. Open cast mining would not be allowed. There would not be as many people in the world and there would be less violence.
My ideal world would have more wild life, woods and forests. People would not be allowed to send animals abroad, and no more animals would be killed.
Everybody would have enough crops.

Pupil No.14

My Ideal World

In my ideal world it would never rain or snow.
There would be no litter or pollution. No one would be bad or murder anyone, and there would be lots of trees and flowers. You would live forever and never get as old as you want to. There would be a swimming pool in everyone's garden, and everyone would be rich.
Nobody would ever get hurt or die, and you could choose any animal you want for a pet, even ones that live in the jungle, or places like Africa and India.

Pupil No.15

My Ideal World

In my ideal world I would own my own horse and there would be no cars just natural travel such as horses and carts. There would be no pollution like litter on streets, and pollution in oceans. The water would not be all dirty and people would not be allowed to drop oil into the sea. There would be no money and everything would be free, because then people who haven't got jobs would be able to have things because they wouldn't be so expensive. Everybody would be able to have whatever they liked, like if some people were out on the streets they would have houses. There wouldn't be any burglaries or any other bad things happening. there wouldn't be any drugs. School would only be once a week so we would still learn something. People who don't go to school wouldn't learn anything so they wouldn't get jobs. There would be no lows, and no Kings and Queens because Kings and Queens make rules and that's not fair. people should be able to do what they want, but if there is no drugs there wouldn't need to be any rules to stop drugs. There would be fields all around, it would be all countryside, and only roads for natural travel.

Pupil No.16

My Ideal World

If I owned the world I would try to stop all wars.
I would give money and clothes to the poor, and more money for people.
I can do something like cooking or looking after more animals, and if it was possible we could have bikes with battery powered motors.
We could have houses for people who have nowhere to live.

Pupil No.17

My Ideal World

In my ideal world there would be no more vandalism.
There would be no more litter, because it can kill animals.
There would be no more pollution because it can kill plants and animals. Factories would not be allowed to let smoke come out of their chimneys.
There would be no more starvation in Africa.
There would be no more cigarettes because it can damage people's health.
This would be my ideal world.

Pupil No.18

My Ideal World

My ideal world would have no robbers or gangsters and it wouldn't have any litter or wars either.
I would also like there to be lovely soft, sandy beaches near the middle of the British Isles so that those who don't live near the seaside can also enjoy the pleasure of sun, sand and surf.
It would be great if childen only had to go to school on the weekend so that the rest of the week would be free to go on holiday and to visit family and friends.

Pupil No.19

My Ideal World

If I had my own world, I would clean up all the rubbish, and all the mess in the world.
I would like all the pets to have a lead on so they don't run into the road and cause a crash.
I would like people to take care of all animals.
I would like more trees to be planted and I would ban all the hunters from killing the foxes.

Pupil No.20

My Ideal World

If I owned the world, I would stop the wars ad shooting, and stop the dogs from going on parks. Everyone would have a house and a swimming pool, and more playgrounds, and a bike with a battery, or a horse and carriage. Everyone would have animals and give money and clothes for the people who are dying and poor.

Pupil No.21

My Ideal World

My ideal world is full of flowers and trees. I would want to be along in my world so there would just be me there.
I would like my world to be like a green island in which there was no pollution. I would not want to have any transport on my island, so there would be no cars, no trains, no buses. I would need a bike to get around my island this doesn't use any petrol or pollute the air.
I would appreciate having a tree with money on it on my island, so that I can buy things from the shop which I would have on my island. I would like to have a shop on my island but I would need to have someone to run this. I could try to run it myself.
Maybe I could have some little robots to run the shop and then I could have a cinema as well with robots to take care of that, then I could go to the cinema every day. I would need to have a McDonalds on my island so that I could eat some hamburgers and fries because I like them best.
I might need to take a break from my island so it would be good to have a long cruise for a month, and the robots could come along too. I would like to go around my world to see all the sights, big mountains and volcanoes.
The robots and I would not want to steal anything so there would be no more crime. Although it would be nice to have a Kawasaki I won't have one because it uses petrol and this pollutes the air.
I would need to have some doctors on my island, but the robots could be the doctors. I would also need some cool sun glasses because the weather will be mostly sunny, warm and there would only be rain in the rain forest. I would need a torch because the lights will go out at eight o'clock to save electricity and I like to read at night. I would need a pen knife to make wooden huts, cutting old trees down with have died.:

Pupil No.22

My Ideal World

On Saturday I won the lottery.
The next morning I woke up I was in a strange little cottage. I looked around, all my clothes were there. I got dressed. I ran into the front room, it was lovely, it looked like a millionaire lived there. I had a look outside, there was a lovely garden, fields all around, a thatched roof, and even roses growing around the door. It was my ideal house. In the field were a lot of horses, sheep, cows and all the animals which live on a farm. A man came running towards me. He gave me some jodhpurs, riding boots, a blouse and a riding jacket. A black horse came running with its tack on. The old man said, "I am Herbert, this fine strapping horse is Black Beauty. It is yours, so is the farm and all the fields." I went to get changed. I went for a lovely ride. When I came back I gave all the other animals a name.
"It is so nice. I will live here forever," I said to Herbert.

Pupil No.23

My Ideal World

If I had my own ideal world it would be like this. People would have to be nice, kind, helpful and pleasant, and people would share things with you and play with you. There are lots of things coming on the news like murders and stranglers, so I wish there would be none of that in my world. I wish they would stop killing animals. I am not bothered about eating meat. Rubbish is not to be on the ground, it is meant to be in a bin because you walk around with all rubbish on the ground and there is hardly anything in the bin.

Pupil No24

My Ideal World

My ideal world, to make the world a better place I wish that there were lovely countrysides and parks, more places to walk your dogs and things in, and that no litter was thrown upon the floors. I wish that you could leave your cars and houses open without any robbers or thieves, and I wish that there was not one bit of pollution anywhere, and no more violence. I wish people would try to be kind to each other and that more people would plant more trees and plants. I wish there were no people without any food and water and somewhere to live and you could help by doing some of these.

Pupil No.25

My Ideal World

Cars would run on batteries so that they don't pollute the atmosphere. There would be special car batteries which you would be able to get from Supermarkets. Motor bikes would run on water so that they wouldn't pollute the atmosphere. Aeroplanes could run on water or special sorts of batteries. There would be special planes to help a plane which was going to crash. It would be able to save the people and stop the other plane from crashing.

People in supermarkets would cut their prices, making them lower. Everyone in the world would use pounds and pence, not francs or other money. There would be a special collection to take in all the other sorts of money.

Everyone would have a job. If people were stupid like stealing cars, they would have more punishment than prison. They would get a year in prison for the first crime, they would have to go to the people and apologise. The next time they stole anything they would have to fix everything then have three years in prison. If they had stolen something they would have to retire at 52.

If anyone wanted to move house they would have to ask permission from the government. They'd send permission to the Council then go through the courts and every Police Station. So that the Police would have a record of where everyone lives.

People who dump cats and dogs would have more punishment, make them take the animals to the RSPCA. If they were moving they would have to ask permission from the Council

People would have to stop shoplifting and stop throwing bricks at windows.

Schools like X--- could continue but not schools like Y---, children would go from X--- to University. They could turn Y----into an Old People's Home

When people take cars to the scrap yard it would have to be checked to make sure it wasn't stolen. Roads would be made wider so there would be no jams.

Before people go out in cars they would have to carry at least six people before they would be allowed to drive. When rockets take off there would have to be at least four people in it at a time. They would have to make one hole through the ozone layer for the rocket to go through so that there would only be one hole.

Before trains could set off they would have to be full before another could take off. Trains would have special batteries, railway lines would be made wider so they wouldn't crash. Pubs would have to be full before anyone else could go in. If anyone was fighting they would have to walk to the Police Station, or make the police fetch them and walk them back and arrest them.

APPENDIX G

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

Research Activity No 4.2 - Group Ideal Worlds

APPENDIX G

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

Research Activity No 4.2 - Group Ideal Worlds

OUR IDEAL WORLD by GROUP No.1

In our ideal world there would be no vandalism. Everyone would give money and clothes to the poor. Fox hunting would be banned, and there would be no pollution or litter, The world would be a peaceful place, with no drugs and lots of houses for the homeless. All dogs would be kept on a leash so that they don't cause any accidents. We would stop using all the world's resources, and no oil would be dropped in the sea again. Everyone in our world would be rich, so there would be no starvation. No-one would be allowed to transport live animals, and we would plant much more trees.

OUR IDEAL WORLD by GROUP NO.2

In our ideal world there would be no more wars, and no-one would starve or pollute the world. We would have lots of excitement with all kinds of adventures such as at Alton Towers which would be free so that everyone could go there whenever they wanted. In our world no-one would be allowed to swear or to murder anyone. There would be no crime so that you could leave things unlocked and they wouldn't be damaged or stolen. We would plant many more trees and plants. Everybody would have enough crops to eat. Open cast mining would no be allowed because it is dangerous and spoils the countryside. If we damage nature we won't be able to survive ourselves. We would abolish money, using a permanent note pad and pencil to make a note of things we buy. We would stop wasting resources, and would use only renewable products. No drugs would be allowed, and there would be no smoking in our world because this would damage your own and your children's health. It is dirty and polluting, and ruins your lungs. Everyone in our world would be kind and co-operative towards each other and to animals which would not be shipped abroad for food, particularly not to those countries which use veal crates. These crates are cruel to the animals.

OUR IDEAL WORLD by GROUP NO.3

In our ideal world there would be no illnesses or diseases. Old people would die peacefully in their sleep. There would be no litter and no murderers. No-one would be poor, everyone would have money and their own home. Everyone would be helpful and pleasant in our world, and there would be no crime. Cutting down the rain forest would not be allowed because this is cruel to the animals who live there.

Research Activity No 4.3: Our Class Ideal World

OUR IDEAL WORLD by Lapwing Class

In our ideal world no-one would be rich and no-one would be poor.
There would be jobs for everyone.
No-one would be mean, and there would be no robberies.
Old people would die peacefully in their sleep.
There would be no litter, and no murderers.
Everyone would be helpful and pleasant in our world.
There would be no crime.
Cutting down the rain forest would not be allowed because this is cruel to the animals who live there.
Fox hunting would be banned.
The world would be a peaceful place.
We would stop using up all the world's resources.
No oil would be dropped into the sea again.
We would plant many more trees and plants.
Everyone would have enough crops to eat.

APPENDIX H

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

Research Activity No 4.4: What needs to happen to create 'Our Ideal World'

APPENDIX H

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

Research Activity No 4.4: What needs to happen to create 'Our Ideal World'

GROUP NO.1 -

Things which would have to happen to create our 'Ideal World'

1.In our ideal world no-one would be rich and no-one would be poor.

People would have to change, they would have to share, they would have to learn not to be nasty or greedy, and would have to change their bad behaviour and bad attitude.

2.In our ideal world there would be jobs for everyone.

People would not have to be greedy by having two jobs, we would need to make more buildings for people to work in. We would need to share jobs and create more sorts of jobs. We could pay everyone the same no matter what job they did there would need to be more variety of selection of jobs for everyone if everyone was rich no-one would need to have a job.

3.In our ideal world no-one would be mean and there would be no robberies.

Everyone would have to stop their bad behaviour. Everyone would have to realise they are wrong and try to change. People would have to respect each other and their property. If anyone is mean we would have to talk to them and lock up anyone who commits a crime until they change their attitude. Shops could fit more alarms. We could have more Police patrolling the streets, and people could fit better burglar alarms.

4.In our ideal world old people would die peacefully in their sleep.

We would need to get rid of illness. We could all try to help the elderly more. No-one would be allowed to kill old people on purpose. Everyone would have to leave old people in peace. We would build more homes for old people. We would develop more medicines for every illness. We could make homes safer for old people so that they won't fall and hurt themselves. We could make life easier for old people making electric wheelchairs and lifts so they could get around their homes. We could make sure that old people do not have to live on their own, everyone would have someone to take care of them.

5.In our ideal world there would be no litter and no murderers.

Everyone could pick up their litter. We would make more litter bins and put them all around the shops. We would cut down on packaging and destroy all weapons. Everyone would have to care about the environment. We could all carry personal alarms to be safer.

6.In our ideal world everyone would be helpful and pleasant.
We would have to stop all bad behaviour. Everyone would have to be good, they would need to be brought up to be kind and helpful, so they would be kind not cruel. Everyone would have to respect each other.
7.In our ideal world there would be no crime.
People would have to think before they committed crime. We would need to get rid of expensive jewels so there wouldn't be anything to steal. We could lock people up for as long as it takes to learn their lesson. If you don't do crime you don't do time.
8.In our ideal world cutting down the rain forests would not be allowed because this is cruel to the animals who live there.
We could stop selling axes and machine axes. We could make it a crime to cut down trees unless you plant another one to replace it. We could stop people going into the forest at night. We could cut down on wood furniture and use only recycled paper. Everyone would need to realise what damage we are doing so that we will all look after rain forests.

GROUP NO.2

Things which would have to happen to create our Ideal World

1.In our ideal world no-one would be rich and no-one would be poor.
1.Rich people could give some of their money to the poor and to charity so that we can begin to share it out
2.We could stop the National Lottery, so that no-one would get rich by winning.
3.We could make all wages the same.
2.In our Ideal world there would be jobs for everyone.
1.If no-one was poor, they wouldn't need to work.
2.We could build larger factories so that there was enough space for everyone to work in.
3.The government could give money to re-open the pits, so miners could leave the jobs they have now and go back in the pits and other people could do those jobs the miners leave.
4.We could help to give people confidence so that they would not be afraid when they go for job interviews.
3.In our Ideal world no-one would be mean, and there would be no robberies.
1.We would need clear rules about how people should behave, like who should go through doors first.
2.We could have cameras in every Bank to catch robbers.
3.We could punish criminals more.
4.We could change prisons so that criminals are kept apart from each other so that they don't learn more about crime whilst they are in prison.
5.We could have a school for thieves to teach them how to be kind.
4.In our Ideal world old people would die peacefully in their sleep.
1.We could stop selling cigarettes so that people wouldn't die of cancer.
2.We could get rid of guns so people wouldn't be shot

3.We could stop drinking so that people won't die from drink.
4.People could use more sun-tan lotion so that they don't get skin cancer.
5 In our ideal world there would be no litter, and no murderers.
1.We could get more bins, and larger bins.
2.We could ban sweets so that we don't have wrappers.
3.We could use things which can burn so that no litter is left.
6. Everyone would be helpful and pleasant in our world.
1.We could help mothers to teach their babies how to behave themselves.

GROUP NO.3

Things which have to happen to create our Ideal World

1.In our ideal world no-one would be rich and no-one would be poor.
1.We could abolish betting and gambling so that no-one would get rich by winning.
2.All wages could be the same so that no-one would be paid more than anyone else.
3.Supermarkets could use big containers for things like sugar and salt and people could take their own small containers to buy what they need and save packaging.
4.We could ban football and save the money which is paid to football players and give that money to the poor.
2.In our ideal world there would be jobs for everyone.
1.People could take turns to do jobs.
2.We would invent more jobs.
3.We could build more factories for people to work in.
3.In our ideal world no-one would be mean, and there would be no robberies.
1.We would rinse people's mouth out with washing up liquid if they swear.
2.We would all try to do something kind - like helping an old person across the road.
3.We could give more punishment to criminals.
4.We could get more security like metal doors for houses and burglar alarms.
4.In our ideal world old people would die peacefully in their sleep.
No responses were given to this issue by this group.
5.In our ideal world there would be no litter, and no murderers.
1.We could have people patrols to catch anyone dropping litter.
2.We could have larger fines for people caught dropping litter.
3.We could have more bins.
6.In our ideal world everyone would be helpful and pleasant.
1.We could have special courses to learn how to be nice and polite.
2.We could build machines to register each time someone swears, and they would have to go to a special centre for punishment.

7.In our ideal world there would be no crime.
1.We could have more punishment.
2.We could punish the criminals by doing the same to them as they have done to the victims.
8.In our ideal world cutting down the rain forest would not be allowed because this is cruel to the animals who live there.
1.We could have a conservation area in each city where trees could not be cut down.
2.For every tree which is cut down we could plant a tree to replace it.
9.In our ideal world fox hunting would be banned.
1.We could ban guns and knives.
10.In our ideal world it would be a peaceful place.
1.We could make deals with countries to supply food if they stop fighting.
2.We could have one special day when noise would be allowed like parties and discos, but noise wouldn't be allowed on any other day.
11.In our ideal world we would stop using up all the world's resources.
1.We could use large containers to save packaging.
2.We could use rationing so that we use less of everything.
3.We could switch off lights, use candles - learn how to make wax ourselves so that we don't have to buy anything.
4.We could change everything to solar power.
5.We could only allow dead trees to be chopped down.
6.We could make sure that every car was filled with passengers for every journey.
7.We could change all batteries to be solar powered.
12.In our ideal world no oil would be dropped into the sea again.
1.We could use rape seed oil
2.We could transport oil by air not sea.
3.We could build solar powered cars.
13.In our ideal world we would plant many more trees and plants.
1.We could ask every house to plant one tree and one plant.
2.We could ask every house to plant five trees.
14.In our ideal world everyone would have enough crops to eat.
1.We could send tomato seed to places where they haven't got any.
2.We could give poor countries money for seeds.
3.We could give poor countries nets to catch fish.

APPENDIX I

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

Research Activity No.5: A Pill to Stop You Dying

APPENDIX I

CHILDREN'S RESPONSES TO DATA COLLECTION ACTIVITIES

Research Activity No.5: A Pill to Stop You Dying

Pupil No	Reasons for NOT taking the pill
1	I would not like to live forever. I would have to pay my bills
2	As I get older I might get bored There would be more people born and they will need more space, the world would be too full of people
3	I want to go to heaven It would be boring on earth all the time Too crowded, there would be no food to eat, no shops because there will be nothing to sell in the shop There will be no room to breathe
4	You would not have your friends, when they die you will be alone If you had cancer and you didn't die people would want to do tests on you
5	You wouldn't have to worry about taking care of yourself because you would never die. I wouldn't take the pill because I don't want to live forever because you would look really old and be watching all the people you love die and it wouldn't be nice
6	It would be too crowded Not enough food and water
7	If you don't die there would be no room for everyone else
8	I could get bored The world would get packed with people If you suffer from a terrible disease you will be suffering all the time People could get more violent because they know you won't die
9	If someone you know has died you wouldn't have someone to be with you. If you got ill, like cancer you wouldn't die
10	I would not take the pill because I would not want to live forever because all your friends would die and you would be left on your own. If everyone took the pill the world would be over-crowded and people would suffer a lot of pain through illnesses.

11 The world would have too many people on the earth and no-one would have any room to move

12 Everybody has to die. The world would be crowded with people, no more graveyards or funerals. You wouldn't go crinkley like old people, no walking sticks, no nursing homes, no zimmer frames.

13 If you did take it and the world got bad and unpleasant you would live through that and you would live your family out. You would see everyone over and over again and would be boring, the world would be horrid because people will have chucked rubbish and will be under ground.

14 I would not like the pill because if I took the pill then in 100 years the whole place would be crowded and I wouldn't be able to move. If you went shopping you would have to go early because if you went late then you wouldn't be able to have any food because it would be all gone.

15 I would not take it because you could have a bad life or you could be ill any you don't die you will be unhappy for ever. The world would be full, no-one will have a good job if you have one of all the jobs will be full up

16 I do not want to live forever because you will get poorly and go through the pain over again. There will be too many people in the world

17 Because some of my friends would die before me and I would be upset. Too many people in the world Too many cars, not enough jobs and food, not enough places t live. The world would be crowded and over polluted. Schools would overfill. Not enough police officers to control crime.

18 No I wouldn't like to take it because I want to go to Heaven and I couldn't imagine living forever. If everyone took the pill in the world there would be thousands more people than there are today.

19 I wouldn't want to take it because I don't really want to live forever. But it would be good if you could take just one bit of the tablet when you were very ill and you would live another year. They would be too many people, they would probably want cars and would pollute the air and make everywhere a mess, and it would cost more money for motor ways.

20 I wouldn't want to take the pill because I don't want to be on the planet when the sun exploded. The world would be too crowded and people and people would have to build more houses on the last bit of countryside so the world would be covered in houses.

.21 I wouldn't like to take this pill because I have relatives and pets who I would like to see in heaven. I would like to see what heaven is like. If lots of people take the tablet the world would get crowded with people and they would need more cars and there would be more pollution. There would be more people to rob and more people to get robbed. Then again there would perhaps be more good people as well to stop crime.

22 No I wouldn't because other people wouldn't have houses to live in because you would be taking over.
Every place would be filled with old people everywhere.

23 No I wouldn't take the pill because other people have to live their life without really old people around them. Everywhere would be crowded with old people.

24 No because it would not be fair because your family might want to go on, and you might get bored of being an old person. If you had that pill more people would stay alive and the world would get crowded.

Pupil No.	Reasons for taking the pill
25	I would like to do what I did do, go on holiday and play. I would like to stay on earth because I will not want to miss anything and I would like to stay with my family and friends. If I did not take the pill I will be very unhappy.
26	I wouldn't die and I'd be able to see what it's like in the future We would be different it we got ill or got a risky disease you would not die from it.
.27	I would like to see what happens in 2000 years time If you got cancer you would live forever
28	If I didn't probably I would miss out on everything and I would miss all my friends, and I would never see my family again

.29 I would take the pill because you can be with your friends and family for ever. If everybody took the pill the world would be packed full of people and everything will be full up.

30 I would take that pill because I want to live forever.

31 Yes, I would like the pill so I do not die and live forever. Everywhere will be crowded so you won't get everywhere the world will be too full.

32 I would take the pill so I can live longer and not leave my friends and family

33 Yes because if people would die for no reason it is not fair on the old folk and people that are not ready. Everyone will be go happy and people will not be sad and everyone will tell others.